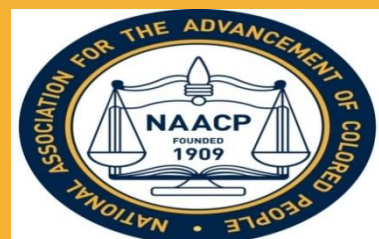




2014

Just Energy Policies: Reducing Pollution and Creating Jobs

National Association for the Advancement of Colored People (NAACP)
Environmental and Climate Justice Program
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Just Energy Policies and Practices Compendium
A State by State Guide to Energy Efficiency and Renewable Energy Policies

National Association for the Advancement of Colored People

4805 Mt. Hope Drive

Baltimore, MD 21215

(410) 580-5777

www.naacp.org

Environmental and Climate Justice Program

410-580-5794

ecjp@naacpnet.org

Lead Author

Jacqui Patterson

Senior Researchers/Authors

Katie Fink, Camille Grant and Sabrina Terry

Assistant Researcher

Rachel Rosenberg and Chris Walker

Content Editing Support

Lisa Hamilton and Rachel Kriegsman

Copy Editors

Carol Ko and Christine Van Dyk

Contents

WHY THE NAACP IS STANDING UP FOR JUST ENERGY POLICIES	5
WELCOME	8
Renewable Portfolio Standards	8
Energy Efficiency Resource Standards.....	8
Net Metering Standards.....	8
Equity in Energy Enterprise Policies.....	9
Local Hire	9
Minority Business Enterprise	9
Financial Incentives for Energy Efficiency and Renewable Energy.....	9
Abbreviations	11
Glossary of Terms.....	13
POTENTIAL FOR ENERGY EFFICIENCY AND CLEAN ENERGY.....	20
ENERGY EFFICIENCY AND CLEAN RENEWABLE ENERGY POTENTIAL	20
Energy Efficiency Potential	21
Renewable Energy Potential	24
Potential By State	27
ENERGY EFFICIENCY AND RENEWABLE ENERGY BENEFITS	32
BENEFITS OF ENERGY EFFICIENCY AND CLEAN RENEWABLE ENERGY	32
BENEFITS OF ENERGY EFFICIENCY	34
BENEFITS OF CLEAN RENEWABLE ENERGY.....	38
Enterprise and Job Potential	39
Asset Development Models	44
Model Standards	48
Renewable Portfolio Standards.....	48
Energy Efficiency Resource Standards	48
Net Metering Standards	48
Local Hire.....	49
Components of Provision.....	49
Minority Business Enterprise.....	49
Components of Provision/Certification	49
SUMMARY OF FINDINGS.....	51
SUMMARY OF FINDINGS.....	51
TABLE 4:Renewable Energy, Energy Efficiency and Equity Policies by State.....	53
Clean Energy and Energy Efficiency Profiles by State	65
STATE ENERGY EFFICIENCY AND RENEWABLE ENERGY POLICY PROFILES	67
SAMPLE PAGE	67
ALABAMA.....	71
ALASKA.....	77
ARIZONA.....	82
ARKANSAS	92
CALIFORNIA	98
COLORADO	124
CONNECTICUT.....	138
DELAWARE.....	147
DISTRICT OF COLUMBIA.....	151
FLORIDA	154

GEORGIA.....	167
HAWAII.....	178
IDAHO.....	183
ILLINOIS.....	191
INDIANA.....	202
IOWA.....	215
KANSAS.....	226
KENTUCKY.....	229
LOUISIANA.....	239
MAINE.....	243
MARYLAND.....	247
MASSACHUSETTS.....	258
MICHIGAN.....	272
MINNESOTA.....	281
MISSISSIPPI.....	303
MISSOURI.....	308
MONTANA.....	319
NEBRASKA.....	326
NEVADA.....	331
NEW HAMPSHIRE.....	337
NEW JERSEY.....	345
NEW MEXICO.....	353
NEW YORK.....	362
NORTH CAROLINA.....	376
NORTH DAKOTA.....	389
OHIO.....	393
OKLAHOMA.....	403
OREGON.....	410
PENNSYLVANIA.....	429
RHODE ISLAND.....	439
SOUTH CAROLINA.....	443
SOUTH DAKOTA.....	452
TENNESSEE.....	458
TEXAS.....	466
UTAH.....	482
VERMONT.....	488
VIRGINIA.....	494
WASHINGTON.....	500
WEST VIRGINIA.....	516
WISCONSIN.....	519
WYOMING.....	529
Conclusion.....	535
APPENDIX.....	540
FEDERAL INCENTIVES.....	54040
ADDITIONAL RESOURCES FOR JUST ENERGY POLICIES.....	54141
Minority Business Enterprise Opportunities.....	54242
FEDERAL MINORITY BUSINESS ENTERPRISE LEGISLATION.....	5444
ENDNOTES.....	5488

WHY THE NAACP IS STANDING UP FOR JUST ENERGY POLICIES

Since 1909, the NAACP has addressed a vast array of civil rights issues including education, employment, housing, civic engagement, health, and criminal justice. Communities of color nationwide are, and have historically been, beset by human and civil rights violations, including disproportionate exposure to pollution, crime, substandard living conditions and more. African Americans who reside near energy production facilities including coal fired power plants, nuclear power plants, or biomass power plants, are more likely to suffer the negative health impacts of prolonged exposure to smog, lead, asbestos, mercury, arsenic, sulfur dioxide, nitrogen oxide and other toxins than any other group of Americans.¹²³⁴

Prolonged exposure, to toxins from these energy production facilities, is tied to birth defects, heart disease, asthma attacks, lung disease, learning difficulties, and even lower property values. Approximately 68% of African Americans live within 30 miles of a coal-fired power plant, which produces the largest proportion of energy compared to any other energy production type. The health conditions associated with exposure to toxins coming from these plants disproportionately affect African Americans. An African American child is three times as likely to be admitted to the hospital and twice more likely to die from an asthma attack than a white American child. Though African Americans are less likely to smoke, they are more likely to die of lung disease than white Americans are.⁵ A 2010 report by the National Research Council (NRC) calculates that particulate matter pollution from U.S. coal-fired power plants is solely responsible for causing approximately 1,530 excess deaths per year. In addition, properties in close proximity to toxic facilities average 15% lower property values.⁶

At the same time, many of the same polluting facilities that affect the daily health and well-being of host communities are major contributors to the greenhouse gases that are driving climate change. Carbon dioxide (CO_2) emissions are the leading cause of climate change and coal-fired power generation accounts for 32% of all CO_2 emissions.⁷ Not only do low-income neighborhoods and communities of color suffer more of the direct health, educational, and economic consequences of these facilities, but also devastating natural disasters such as Hurricanes Katrina and Sandy, along with rising food prices and water shortages, harm low-income people and people of color disproportionately partly due to pre-existing vulnerabilities.

While African Americans are enduring most of the harmful impacts of energy production, they are reaping few of the benefits from the energy sector. According to a 2010 study by the American Association of Blacks in Energy, while African Americans spent \$41 billion on energy in 2009, they only held 1.1% of energy jobs and only gained .01% of the revenue from the energy sector profits.⁸ Therefore, there is both inequity in the incidence of disease and the economic burden for communities of color that host energy production facilities.

African Americans should no longer abide the millstone of the noxious facilities and continue to be overlooked by the energy industry while living in blight. Given that the unemployment rate for African Americans has consistently been nearly twice that of the national average and the average wealth of white Americans is 20 times that of African Americans, it is past time to revolutionize the relationship communities of color have with this multi-billion dollar industry. Leading in a new energy economy serves as pathway out of poor health, poverty and joblessness while establishing a foundation of energy resources and security for generations to come.

The NAACP will continue to build upon its legacy of advocating for equity, economic justice, and environmental justice within the energy sector, especially in the broader context of climate change. The following diagram outlines the NAACP's policy precedence and the foundation for the recommendations we pose to enact change in the energy sector.

NAACP's Just Energy Policy Resolutions

"1977-2012"



Energy Resolution: addresses "the serious world shortage [that] exist in traditional energy sources," and aimed to ensure "the development of adequate energy sources."



Energy and Conservation Committee



Resolution: establishes intergenerational committee to study future economical, educational opportunities that could benefit black youth in the energy industry.

1977

1978

1983



Environmental Protection



Resolution: calls for state and local branches, as well as the assembly of a task force to examine the impacts of waste disposal policies and facilities, such as incinerators, in communities of color.

1990



Environmental Protection



Resolution: calls for state and local branches, as well as the assembly of a task force to examine the impacts of waste disposal policies and facilities in communities of color, such as incinerators.

2001

Fossil Fuel Resolution: calls for President of the United States to roll back cost of fossil fuels and for Congress to enact emergency legislation that halts rising gas costs

2003

2006

2007



NAACP Supports Long-Term, Aggressive Energy Policy to Insulate US Against Future Situations Resolution:



calls on all interested parties to develop long-term strategies to reduce the global demand for gasoline.



NAACP Support for Present and Future Green Jobs Appropriations and Policies:

advocates for the Green Job Act funding and inclusion of African Americans in emerging green energy sector.

2008

2010

2011

2012

Clean Air Act-Greenhouse Gases-Coal Fired Power Plants:

advocates health and sustainable alternatives to the current overreliance on coal for energy.



Energy/Employment Resolution: calls for an aggressive implementation of the affirmative action program at the Dept. of Energy to increase black representation at the agency.



Urban Policy Resolution: requests that federal fiscal assistance be provided for energy efficient housing in central cities suffering from plight and degradation.



Environment and Black Communities:

calls for the EPA to give the highest possible priority to uncontrolled waste sites in predominately-black communities.



Jobs vs. The Environment Myth

Resolution: opposes any efforts that promise jobs to a community of color to coerce residents into accepting a polluting industry in their neighborhood, and demands that environmentally regulated facilities fulfill job promises.



Climate Change and Discriminatory Practices

Resolution: commits to advocating for socially just solutions for the environment and global warming that will reduce racial and ethnic economic disparities.

NAACP in Opposition to Expanded Offshore Drilling Without Adequate Safety Technology and Clean Energy Matters in Place:

supports the exploration of clean energy alternatives, including wind, solar, hydro, and geothermal solutions, in addition to energy conservation and reduction strategies.



Renewable Energy

Resolution: commits to increase community involvement in ensuring that energy related policies and practices do no harm.



The NAACP is committed to working with grassroots community groups, the philanthropic community and large traditional environmental groups as communities become informed and continue to take action on advancing policies and practices to ensure that the US shifts to energy efficiency and clean energy, while strengthening regulations to safeguard communities from polluting facilities.

The NAACP encourages its local and state units to initiate community-based education activities and programs, such as community forums and informational displays in schools, churches, libraries, and neighborhood centers to better inform communities of environmental issues that disproportionately affect communities of color. The Association will support its units in working to improve corporate responsibility in energy production by ensuring that energy is produced in ways that are safe while community economic and energy needs are being met.

The NAACP believes that energy policy can create real public benefits, including millions of good green-collar jobs and building an inclusive green economy strong enough to lift people out of poverty. The NAACP will work to ensure that the many opportunities in the green economy are optimized and mechanisms for equitable access to green enterprise are ingrained in the policy making structure. We will focus on advancing community controlled energy models for local ownership of energy infrastructure and local job creation.

WELCOME

In opening this document, you have made a commitment to understand and advance just energy policies and practices. This energy policy compendium will give you the information you need to stand up for a just energy future. The rapid depletion of Earth's non-renewable resources coincides with increased energy consumption in the United States. With a growing understanding of the harmful impact of fossil fuel-based energy production on communities of color, we believe that it is more important now than ever before that our communities take a stand to move our country to an energy efficient and clean energy future. Our intention in creating this compendium is that it will serve as a resource and will spur states to make sure their energy policies protect communities from harmful energy production processes while simultaneously providing equitable access to economic opportunities in energy efficiency and clean energy.

Community involvement in paving new energy pathways is especially important because our energy system is broken and communities of color are paying the highest price. We hope that you will commit to taking a concerted stand with other communities organizing nationwide, to reform our energy policies and infrastructure. Everyone must do their part to learn and to stay informed about their state's energy policies so that we can collectively move toward an energy efficient and clean energy future.

Focal Policies

The compendium profiles *Renewable Portfolio Standards*, *Energy Efficiency Resource Standards*, and *Net Metering Standards* for each state and also shares detailed information on how to access rebates/loan/grants, etc. for energy efficiency and clean energy.

➤ *Renewable Portfolio Standards*

A Renewable Portfolio Standard (RPS) requires electric utility companies and other retail electric providers to supply a specific minimum amount of customer load with electricity from eligible renewable energy sources. In order to protect community health and well-being, as well as preserve the planet, we must transition to renewable energy. In setting standards for the content of RPS, the NAACP goes further and distinguishes that this must be clean energy, recognizing that not all renewable energy has been proven safe with minimal impact on the environment and communities. Under this definition, we focus on efforts on advancing solar, wind, and geothermal energy.

➤ *Energy Efficiency Resource Standards*

Energy Efficiency Resource Standards (EERS) establish a requirement for utility companies to meet annual and cumulative energy savings targets through a portfolio of energy efficiency programs. Given our current dependence on harmful energy production practices, we should reduce our demand for energy altogether.

➤ *Net Metering Standards*

Net Metering Standards require electric utility companies to provide retail credit for net renewable energy produced by a consumer. Meaning, if the consumer generates more energy from their solar panels or wind turbines than they use, they can sell it back to the utility at the same rate at which they purchase electricity. In order to incentivize clean energy practices at the consumer level, we need to offer the opportunity for revenue-generation for individuals who contribute to the grid through their at-home energy production.

Equity in Energy Enterprise Policies

As stated above, communities of color historically disproportionately have less access to jobs and wealth creation opportunities. As part of the effort to advance just energy policies and practices, it is essential to review state policy provisions to ensure that they foster economic growth for local communities. Two key provisions that can ensure equity in economic opportunities afforded by state policies are ‘*Local Hire*’ and ‘*Minority Business Enterprise*.’

➤ ***Local Hire***

Local Hire is a goal or requirement to hire people who live near their place of work. States achieve this goal is by requiring contractors that are awarded publicly funded projects to recruit a specified proportion of local residents as workers on the project. This provision: 1) ensures that tax dollars are invested back into the local economy; 2) reduces the environmental impact of commuting; 3) fosters community involvement; and 4) preserves local employment opportunities in construction.

➤ ***Minority Business Enterprise***

Minority Business Enterprise is defined as a business that is at least 51% owner-operated and controlled on a daily basis by people who identify with specific ethnic minority classifications, including African American, Asian American, Hispanic American, and Native American. MBEs can be self-identified, but are typically certified by a city, state, or federal agency. The predominant certifier for minority businesses is the National Minority Supplier Development Council. Often publically funded projects set a requirement or goal to source MBEs as suppliers.

Financial Incentives for Energy Efficiency and Renewable Energy

Tables listing each state’s incentives and rebates for energy efficiency and renewable energy are included in each state profile in the compendium. Each incentive has a short description and a hyperlink to more information.

➤ ***Statewide Incentives***

Statewide incentives are generally rebates and loan programs that individuals and businesses may claim according to the provisions of state law. Incentives may also include Local Options enacted by municipal governments.

➤ ***Utility-Specific Incentives***

This section relates to the incentives offered by specific utilities in each state, and in some cases interstate utilities. Some programs are only available to either electric or gas customers of a certain utility. Different programs are available for residential and commercial customers.

➤ ***Local Incentives***

Local incentives are those offered by counties, cities, and towns. Not all states have local incentives.

➤ ***Non-Profit Incentives***

Non-profit incentives are offered by non-profit organizations. These are only available in some states.

ENERGY
EFFICIENCY

SOLAR



WIND



GEOTHERMAL



ABBREVIATIONS

Helps readers understand complex renewable energy and energy efficiency jargon while wading through the important energy policies.

Abbreviations

BCF	Billion Cubic Feet
BPU	Board of Public Utilities
CCAN	Chesapeake Climate Action Network
CCS	Carbon Capture and Storage
CHP	Combined Heat and Power
Co-ops	Cooperative
DEC	Delaware Electric Cooperative
EEP	Energy Efficiency Potential
EERS	Energy Efficiency Resource Standards
GWh	Gigawatt Hour
HB	House Bill
HVAC	Heating, Ventilation, and Air Conditioning
IPL	Interfaith Power and Light
kWh	Kilowatt Hour
kW	Kilowatt
LCV	League of Conservative Voters
LPG	Liquified Petroleum Gas
MBE	Minority Business Enterprise
Munis	Municipality
MW	Megawatt
MWh	Megawatt Hour
PSC	Public Service Commission
PUD	People's Utility District
PV	Photovoltaic
IOU	Investor-Owned Utility
REC	Renewable Energy Certificates
REP	Renewable Energy Potential
RPS	Renewable Portfolio Standard
SB	Senate Bill



GLOSSARY OF TERMS

Assists readers with understanding the terminology used for energy efficiency and renewable energy technologies.

Glossary of Terms

Anaerobic Digestion:	The degradation of organic matter including manure brought about through the action of microorganisms in the absence of elemental oxygen. ⁹
Biodiesel:	A type of biofuel typically made from soybean, canola, or other vegetable oils; animal fats; or recycled grease. Biodiesel can be blended with regular diesel fuel and used in most diesel engines. Some engines can also be modified to run on pure biodiesel. ¹⁰
Biogas:	A type of biofuel that contains methane from landfills, animal waste, sewage, or other decomposing waste materials. Biogas can be burned to produce heat or electricity. Gas resulting from the decomposition of organic matter under anaerobic conditions. The principal constituents are methane and carbon dioxide. ¹¹
Biomass:	Material that comes from living things, including trees, crops, grasses, and animals and animal waste. Some kinds of biomass, such as wood and biofuels, can be burned to produce energy. ¹²
Carbon Footprint:	Amount of carbon dioxide emitted due to the consumption of fossil fuels by a particular person, group, etc.
Census Regions:	Regions in the United States outlined by the United States Census.
CHP/Cogeneration:	Combined heat and power (CHP), also known as cogeneration, is an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source. CHP is not a specific technology but an application of technologies to meet an energy user's needs. CHP systems achieve typical effective electric efficiencies of 50 to 80% -- a dramatic improvement over the average efficiency of separate heat and power. Since CHP is highly efficient, it reduces traditional air pollutants and carbon dioxide, the leading greenhouse gas associated with climate change. ¹³
Clean Coal:	Any technology that may mitigate emissions of carbon dioxide (CO ₂) and other greenhouse gasses that arise from the burning of coal for electrical power. ¹⁴
Clean Energy:	The natural energy processes that can be produced with little to no pollution, such as geothermal power (heat from the earth), solar energy (heat from the sun), and wind power (energy from the wind).
Climate Justice:	Communities of color and/or low-income communities who suffer disproportionately from the negative effects of climate change.
Coal Bed Methane (CBM):	A form of natural gas found along with coal seams underground. The methane is adsorbed to the surface of the coal in a process

Cofiring:	called adsorption, which is the accumulation of gases, liquids, or solutes on the surface of a solid or liquid. Combustion of two different types of materials at the same time. It involves burning biomass, along with coal in traditional power plant boilers. ¹⁵
Concentrated Solar Power:	Solar power from a utility-scale solar power facility in which the solar heat energy is collected in a central location. ¹⁶
Daylighting:	The use of windows and skylights to bring more natural light into a home. It can also refer to architectural design that makes significant use of natural light. ¹⁷
Distributed Generation Technologies:	Power generation at the point of consumption. Generating power on-site, rather than centrally, eliminates the cost, complexity, interdependencies, and inefficiencies associated with transmission and distribution. ¹⁸
Densified Fuel Pellets:	Pellets are created by roasting biomass combined with densification leads to the creation of a very energy-dense fuel carrier. Pellets are lighter, drier, and more stable in storage compared to the biomass, which forms them. ¹⁹
Energy Storage:	Devices or physical media that store energy to perform useful operations later. A device that stores energy is sometimes called an accumulator. ²⁰
Enhanced Geothermal Systems:	Systems used to harness geothermal power located far below ground. The systems first create permeable rock layers through high-pressure water injection, which is heated through contact with newly fractured rocks. Then, the water is then pumped back above ground and used to spin turbine generators. These processes stimulate underground heat production and in essence artificially engineer heat reservoirs. ²¹
Environmental Justice:	The pursuit of prioritizing the voices and the needs of communities of color and/or low-income communities that are routinely targeted to host facilities that have negative environmental and public health impacts.
Ethanol:	An alcohol-based fuel made by fermenting and distilling starch crops, such as corn. ²²
Fuel Cells:	Similar to batteries, fuel cells store energy that can be used to power all sorts of things. Unlike a battery though, fuel cells do not "run out" and do not need to be recharged or replaced. ²³
Geothermal Direct-Use:	Geothermal reservoirs of hot water, which are found a few miles or more beneath the Earth's surface, can be used to provide heat directly. ²⁴

Geothermal Electric:	Geothermal power plants use steam produced from reservoirs of hot water found a few miles or more below the Earth's surface to produce electricity. The steam rotates a turbine that activates a generator, which produces electricity. ²⁵
Geothermal Heat Pumps:	A geothermal heat pump uses the constant below ground temperature of soil or water to heat and cool your home by exchanging heat with the earth through a ground heat exchanger. ²⁶
Hydroelectric:	Generating electricity by harnessing the power of moving water is called hydroelectricity. Hydroelectric power (hydropower) is generated by forcing water that is flowing downstream, often from behind a dam, through a hydraulic turbine that is connected to a generator. The water exits the turbine and is returned to the stream or riverbed. ²⁷
Hydrogen:	A form of energy that has the highest combustion energy per pound that can be used as a fuel. To create hydrogen energy, a process called electrolysis is used to separate hydrogen and oxygen by sending an electric current through water. ²⁸
Hydrokinetic:	Technologies that produce renewable electricity by harnessing the kinetic energy of a body of water, the energy that results from its motion. ²⁹
Hydrothermal Power:	A traditional form of geothermal power that relies exclusively on existing reservoirs lying under permeable rock that are saturated with steam or heated water. ³⁰
Landfill Gas:	A variety of gaseous products found in organic materials when in landfills. Anaerobic bacteria thrives in the oxygen-free environment, resulting in the decomposition of the organic materials and the production of primarily carbon dioxide and methane. Methane is less soluble in water than carbon dioxide and lighter than air, so it is likely to migrate out of the landfill. Landfill gas energy facilities capture the methane and combust it for energy. ³¹
Manure Methane:	Generating methane gas from livestock manure through a two part anaerobic digestion process. ³²
Microturbines:	Microturbines can be used as an option for small scale power generation and can use several different kinds of fuel to generate electricity and hot water, rather than just one or the other. In this way, about 80% of the energy value in the fuel is converted to useful work. ³³
Municipal Solid Waste:	Waste, such as durable goods, nondurable goods, containers and packaging, food scraps, yard trimmings, and miscellaneous inorganic wastes from residential, commercial, institutional, and industrial sources, such as appliances, automobile tires, old

	newspapers, clothing, disposable tableware, office and classroom paper, wood pallets, and cafeteria wastes. Excludes solid wastes from other sources, such as construction and demolition debris, autobodies, municipal sludges, combustion ash, and industrial process wastes that might also be disposed of in municipal waste landfills or incinerators. ³⁴
Net Metering:	Crediting customers for electricity that the customer generates on site in excess of their own electricity consumption. Customers with their own generation offset the electricity they would have purchased from their utility. If such customers generate more than they use in a billing period, their electric meter turns backwards to indicate their net excess generation. Depending on individual state or utility rules, the net excess generation may be credited to their account (in many cases at the retail price), carried over to a future billing period, or ignored. ³⁵
Ocean Thermal:	The conversion of energy arising from the temperature difference between warm surface water of oceans and cold deep-ocean current into electrical energy or other useful forms of energy. ³⁶
Onshore Wind Power:	Wind power generated from wind energy systems on land.
Offshore Wind Power:	Wind power generated from wind energy systems in water.
Photovoltaics:	Materials and devices convert sunlight into electrical energy, and PV cells are commonly known as solar cells. Photovoltaics can literally be translated as light-electricity. ³⁷
Pyrolysis:	Decomposition of a chemical by extreme heat. ³⁸
Recycled Energy:	An energy recovery process of utilizing energy that would normally be wasted, usually by converting it into electricity or thermal energy. Undertaken at manufacturing facilities, power plants, and large institutions such as hospitals and universities, it significantly increases efficiency, thereby reducing energy costs and greenhouse gas pollution simultaneously. ³⁹
Renewable Energy:	Energy generated from natural resources such as sunlight, wind, rain, tides, and geothermal heat, which are reused. ⁴⁰
Rooftop PV:	Solar power obtained from PV systems on rooftops of residential and commercial buildings. ⁴¹
Rural Utility-Scale PV:	Utility-scale solar power defined within rural areas or outside of urban boundaries.
Seawater AC:	Cold seawater is pumped from hundreds of feet below the surface to a cooling station on shore. This station transfers the salt water's coldness to fresh water circulating in a closed loop that carries it to customer buildings. ⁴²

Small Hydroelectric:	A generating system that converts the mechanical energy of running water into electric energy much the same as any larger traditional hydroelectric system. Most of these plants serve a small community. The definition of a small hydro project varies but a generating capacity of up to 10 MW is generally accepted as the upper limit of what can be termed small hydro. ⁴³
Solar HVAC:	Converting solar power into energy to provide heating, ventilation, and air conditioning in buildings. ⁴⁴
Solar Light Pipes:	A proprietary engineered system designed to optimize the collection of daylight delivering even distribution of usable light into a building. ⁴⁵
Solar Photovoltaics:	A system that converts sunlight directly into electricity using cells made of silicon or other conductive materials. When sunlight hits the cells, a chemical reaction occurs, resulting in the release of electricity. ⁴⁶
Solar Pool Heating:	A method to increase the temperature of swimming pool water by using the sun's energy. It is considered a cost-effective method to increase the swimming season by providing heated water. ⁴⁷
Solar Power:	Solar energy converted into power/electricity.
Solar Space Cooling:	Solar absorption technology used in solar cooling demands high temperatures and solar panels capable of producing them. The energy generated by the solar panels is used to separate a tank liquid mixture that includes an absorbent (lithium bromide salt, for instance) and a refrigerant fluid (often water). The refrigerant is then condensed and eventually evaporated to produce the desired cooling effect. ⁴⁸
Solar Space Heat:	Solar space heating systems use air as the working fluid for absorbing and transferring solar energy. The units trap infrared energy in the system, take in cold air from the room, and heat the air within the unit, then pass the heated air into the room, resulting in free heated air for the space. ⁴⁹
Solar Thermal Electric:	Solar thermal electric energy generation concentrates the light from the sun to create heat and that heat is used to run a heat engine, which turns a generator to make electricity. ⁵⁰
Solar Thermal Process Heat:	A system that provides thermal energy without generating electricity. This technology could be used by industrial energy users to supply energy for a process that requires a heat input, like chemical reactions that only take place at high temperatures. ⁵¹
Solar Water Heat:	Solar collectors that heat a home's water without using conventional gas or electric hot water heaters. ⁵²

Synthetic Gas:	Synthetic gas, or syngas, is a gas mixture that comprises of carbon monoxide, carbon dioxide and hydrogen. The syngas is produced due to the gasification of a carbon containing fuel to a gaseous product that has some heating value. ⁵³
Therms:	A unit of heat equivalent to 100,000 British thermal units or 1.055×10^8 joules. ⁵⁴
Tidal Energy:	Significant differences between high and low tide can be harnessed and converted to energy through forcing water through turnbines to activate a generator. ⁵⁵
Urban Utility-Scale PV:	Utility-scale solar power defined within urban boundaries. ⁵⁶
Wave Energy:	Wave power devices extract energy directly from the surface motion of ocean waves or from pressure fluctuations below the surface and converts the energy into electricity. ⁵⁷
Wind Energy:	Energy that is generated when the wind turns the sails of a windmill, which are attached to turbines that generate electricity. ⁵⁸



POTENTIAL FOR ENERGY EFFICIENCY AND CLEAN ENERGY

An overview of energy efficiency and
renewable energy prospects across
the United States



ENERGY EFFICIENCY AND CLEAN RENEWABLE ENERGY POTENTIAL

To effectively promote just energy efficiency and clean energy policies in any state, we must know the potential for energy efficiency and clean energy.

Energy efficiency potential has been studied across the United States. However, while some states have conducted studies about energy efficiency potential, there is not a collection of studies completed for every state. In the next few pages, you will learn about the definition of energy efficiency potential and gain an understanding of energy efficiency potential nationwide.

This section will also provide a definition of renewable energy potential and outline the specific renewable energy sources that the NAACP endorses. Additionally, you will gain a better understanding of your state's potential in the context of the nation, as there is a side by side comparison of renewable energy potential across the states.

Energy Efficiency Potential

Energy Efficiency Potential (EEP) is the amount of energy savings possible from implementing energy efficiency programs and policies. Energy efficiency measures are divided into three sectors: residential, commercial and industrial sector measures, as shown in Figure 1. Despite evidence that clearly shows there is potential for all states in America to become more energy efficient, there is no national energy efficiency standard or policy. However, there have been many advancements in establishing energy efficiency policies and practices in numerous states.

EEP by Sector

If the United States implements nationwide energy efficiency measures, there can be a range of benefits and savings by 2020 through a variety of sectors. The residential sector accounts for 35%, the commercial sector accounts for 25%, and the industrial sector accounts for 40% of the energy efficiency potential in the country. Types of energy efficiency measures within each sector are shown in Figure 1 below.

Residential Sector Measures	Commercial Sector Measures
Efficient air conditioning (central, room, heat pump)	Efficient cooling equipment (chillers, central AC)
Efficient space heating (heat pumps)	Efficient space heating equipment (heat pumps)
Efficient water heating (e.g. heat pump water heaters & solar water heating)	Efficient water heating equipment
Efficient appliances (refrigerators, freezers, washers, dryers)	Efficient refrigeration equipment & controls
Efficient lighting (CFL, LED, linear fluorescent)	Efficient lighting (interior and exterior)
Efficient power supplies for Information Technology and consumer electronic appliances	Lighting controls (occupancy sensors, daylighting, etc.)
Air conditioning maintenance	Efficient power supplies for Information Technology and electronic office equipment
Duct repair and insulation	Water temperature reset
Infiltration control	Efficient air handling and pumps
Whole-house and ceiling fans	Economizers and energy management systems (EMS)
Reflective roof, storm doors, external shades	Programmable thermostats
Roof, wall and foundation insulation	Duct insulation
High-efficiency windows	Industrial Sector Measures
Faucet aerators and low-flow showerheads	Process improvements
Pipe insulation	High-efficiency motors
Programmable thermostats	High-efficiency heating, Ventilation and air conditioning (HVAC)
In-home energy displays	Efficient lighting

Figure 1: Summary of Energy Efficiency Measures
Source: Electric Power Research Institute, 2009

EEP within the United States

There are many benefits that can be afforded to the country as a whole due to the implementation of energy efficiency measures. The inclusive range of benefits provided by potential energy efficiency policies and programs in the United States by 2020 are shown in Table 1. Similarly, Table 2 and 3 show the many benefits that would occur if energy efficiency policies and programs are implemented on the state level. Benefits include, but are not limited to, savings in our annual energy costs (*annual energy savings*), savings in total energy used (*total energy savings*), and savings in statewide electricity costs (*statewide electricity savings*).⁵⁹ The table also features how our natural environment will benefit (*environmental benefits*), the number of jobs that could be created (*job creation*), the impact on communities (*impact on communities of color and/or low-income communities*) and the total monetary savings (*total savings*).

Table 1: Energy Efficiency Potential Benefits by 2020 in the United States	
Reduction in Annual Energy Consumption	23%
Annual Energy Savings	\$130 billion
Total Energy Savings	18.4 quadrillion BTUs in primary energy
Environmental Benefits	Reduction in Greenhouse gas emissions by 1.1 gigatons annually
Job Creation	600,000 - 900,000 in direct and indirect jobs
Impact on Communities of Color and/or Low Income Communities	Numerous benefits that include health and economic benefits. Health benefits include improved air quality leading to reduction in Sick Building Syndrome (poor indoor air quality that causes illnesses) by 20 to 50%, asthma by 8 to 35% and other respiratory illnesses by 26 to 75% - that all disproportionately affect EJ communities. Economic benefits include the average low-income household that spends about 15% of their income on energy bills compared other non-low income households that spend 5% of their income, with energy efficiency programs and policies this percentage drops to 10% among low-income households.
Total Savings	\$1.2 trillion

EEP Across Census Region

The implementation of energy efficiency programs across the nation is essential to reaching the aforementioned benefits. Energy efficiency potential varies across census regions¹, as shown in Figure 2. The South Census region offers the greatest absolute energy efficiency potential, more than twice the Northeast Census region. Although not displayed below, it is important to note that the Northeast exceeds the South as the greatest efficiency potential savings relative to total consumption, due in large part to its high energy efficiency potential in the residential sectors.⁶⁰

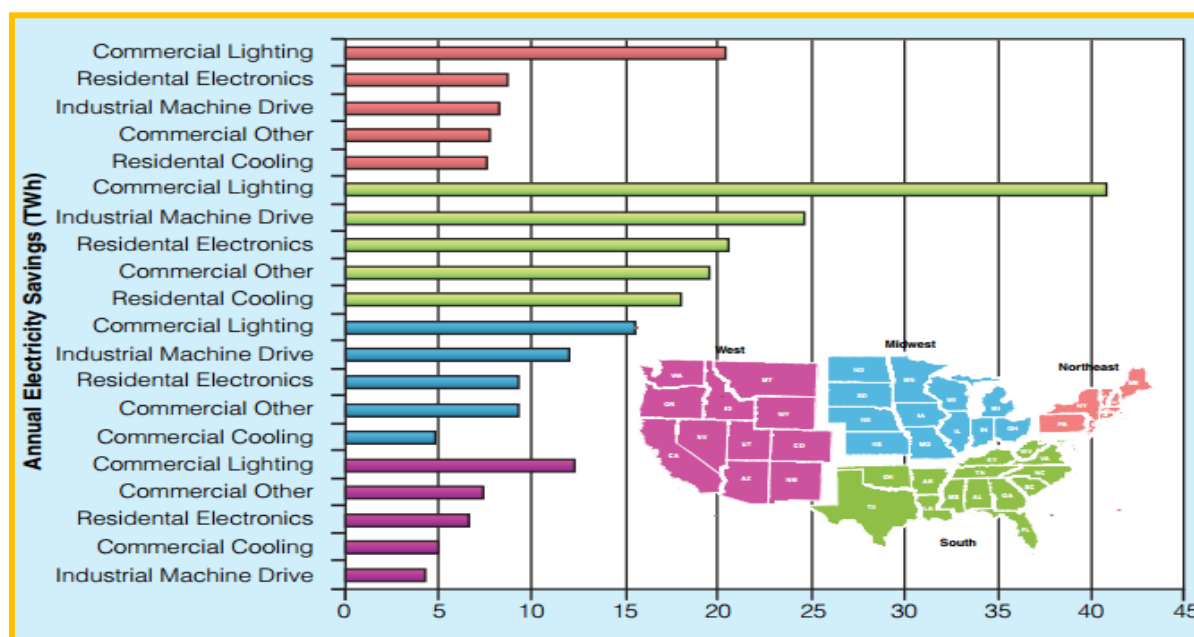


Figure 2: Realistic Achievable Potential by Region and End Use in 2030.

¹Census Regions are as follows: Northeast (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, New Jersey, New York & Pennsylvania), Midwest (Indiana, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota & Wisconsin), South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia & West Virginia), West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington & Wyoming)

EEP in States

Massachusetts is a leading state with a long and successful record of implementing energy efficiency programs for all customer sectors. In 2008, Governor Deval Patrick signed Chapter 169 of the Acts of 2008, an Act Relative to Green Communities. This new law required Massachusetts utility companies to file electric and natural gas utility energy efficiency plans every three years. The *Three-Year Energy Efficiency Plan* that details the energy efficiency potential in the state from 2013 to 2015 adds several initiatives from the previous plan. The Plan makes a bold commitment to serve lower income and working-class communities, incorporates extensive public feedback and targets economically challenged neighborhoods. The Plan also targets Boston and other cities described as “Gateway Cities” by the Commonwealth and Green Communities.⁶¹

Table 2: 2013-2015 Three-Year Energy Efficiency Plan Benefits in Massachusetts	
3 Year Electric Annual Savings	3,705,368 MWh
Statewide Electric Savings	\$188 million
Environmental Benefits	Comparable to taking 403, 407 cars off the road in the state
Job Creation	Energy efficiency has been adding jobs to the state at a 10% growth rate since 2011
Impact on Communities of Color and/or Low Income Communities	Improved focus on the disproportionate effects on EJ communities due to the new partnership between Low-income energy Affordability Network (LEAN) and the Program Administrators to address such issues. Example, their Efficient Neighborhoods + Initiative is intended to provide significant energy saving benefits to customers who live in urban neighborhoods with older housing stock and are often financially constrained from making energy efficiency investments. Efficient Neighborhoods+ will include an enhanced incentive structure designed to make energy efficient improvements more affordable for consumers living in these sometimes harder to reach neighborhoods
Total Savings	\$8.92 billion

In Vermont, the state legislature and Vermont Public Service Board in 2000, created *Efficiency Vermont* to help state residents save energy, reduce energy costs and protect the state’s environment. *Efficiency Vermont* is the nation’s first state-wide “energy efficiency” utility. It is operated by a private non-profit organization, the Vermont Energy Investment Corporation, under an appointment issued by the Vermont Public Service Board. 2011 marked the final year of *Efficiency Vermont’s* three-year, performance-based contract which specified goals to meet high levels of performance and innovation. From the 2009-2011 period, *Efficiency Vermont* met the following energy savings, cost savings and environmental benefits.⁶²

Table 3: 2012-2014 Three-Year Energy Efficiency Plan Potential Benefits in Vermont	
3 Year Electric Annual Savings	320,000 MWh
Statewide Electric Savings	\$188 million
Environmental Benefits	2,040,000 tons of CO2 emissions avoided
Job Creation	From 2012-2031, 1,894 jobs created over those 20 years
Impact on Communities of Color and/or Low Income Communities	The delivery of services through established partnerships with low-income service providers including Low-Income Electricity Efficiency Partnership (LEEP), Vermont Fuel Efficiency Partnership (VFEP), Non-profit Affordable Housing Providers and Vermont Foodbank caters to provided energy efficiency programs within low-income communities and communities of color.
Total Savings	\$271,088,000

Renewable Energy Potential

Renewable Energy Potential (REP) is the estimated annual generating capacity of renewable energy technologies that can be provided for a given region. The NAACP is committed to advancing sources of renewable energy that have been proven to be clean and contribute minimal harm to our communities and environment. These specific types of renewable energy include solar, wind and geothermal energy. As shown in Figure 3, U.S. electricity generation in 2012 consisted of only 12% from renewable energy sources (only 32% of this total is from solar, wind and geothermal sources). Thus, examining renewable energy potential can lead to further expanding this 32% of clean renewables while decreasing the percentage of electricity being generated from harmful energy production processes.

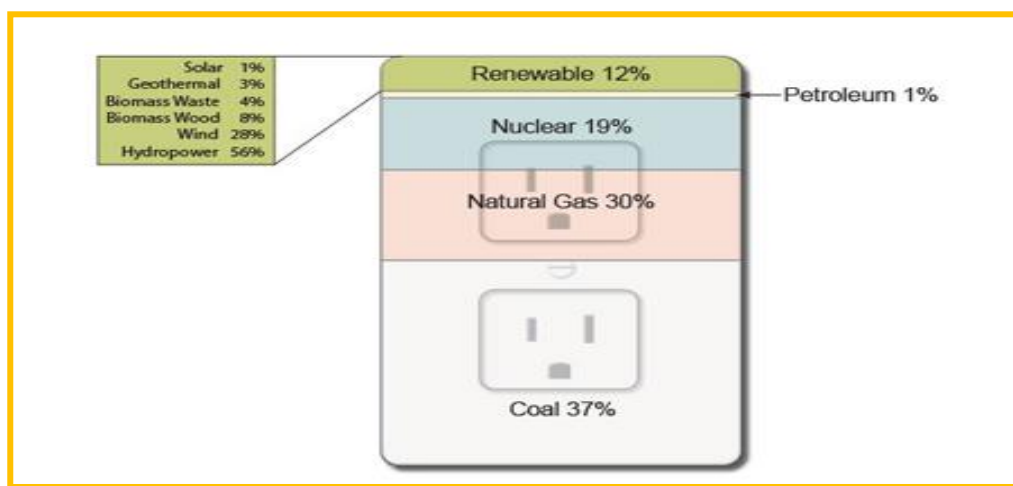


Figure 3: Sources of U.S. Electricity Generation, 2012.
Source: U.S. Energy Information Administration, Electric Power Monthly (March 2013).

REP in the United States

Renewable energy potential varies across the country in large part due to the unique geographic location of regions. For example, the amount of sunshine that each region receives differs. From 2007 to 2012, electricity from renewable sources such as wind, solar and geothermal nearly quadrupled nationally. The increased usage of renewable energy is part of a transition away from coal-burning power plants which harm communities, and toward cleaner, more sustainable sources of power.⁶³ From Figure 4, it is clear that wind energy will be the leader in renewable electricity generation capacity, followed by solar energy and then geothermal energy by 2040.

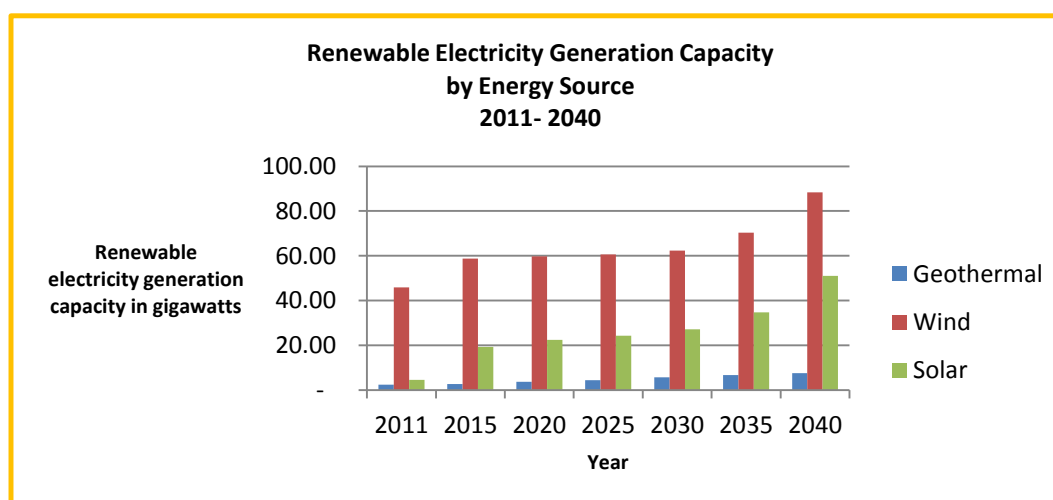


Figure 4: Renewable Electricity Generation Capacity by Energy Source 2011-2040.
Source: U.S. Energy Information Administration

Solar Power

Solar power is growing rapidly in the United States. Solar Photovoltaic or PV systems convert solar energy (energy from the sun) directly into solar power. The capacity of solar PV in the United States multiplied by five from 2009 to 2012.⁶⁴ There are different types of solar energy distribution infrastructure: urban utility-scale PV, rural utility-scale PV, rooftop PV and concentrated solar power.

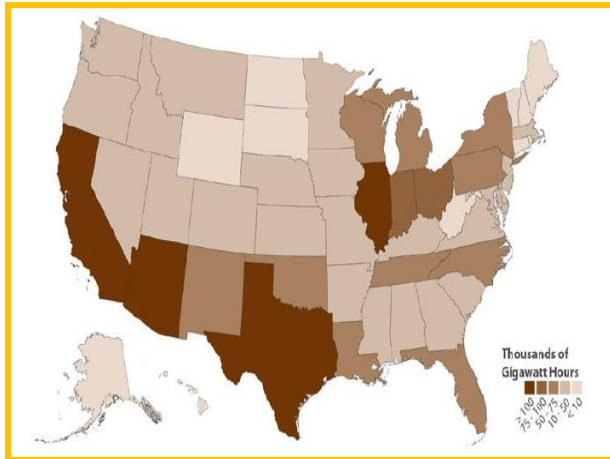


Figure 7: Total estimated technical potential for urban utility-scale photovoltaics in the United States
Source: National Renewable Energy Laboratory

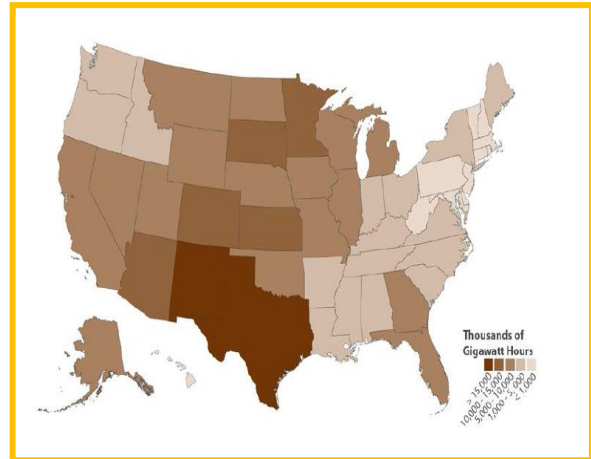


Figure 8: Total estimated technical potential for rural utility-scale photovoltaics in the United States
Source: National Renewable Energy Laboratory

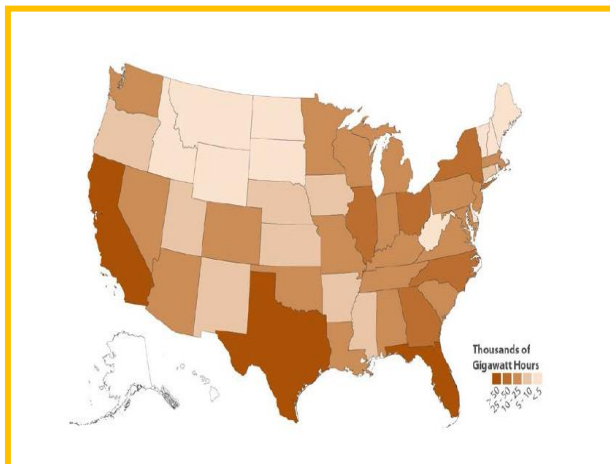


Figure 9: Total estimated technical potential for rooftop photovoltaics in the United States
Source: National Renewable Energy Laboratory

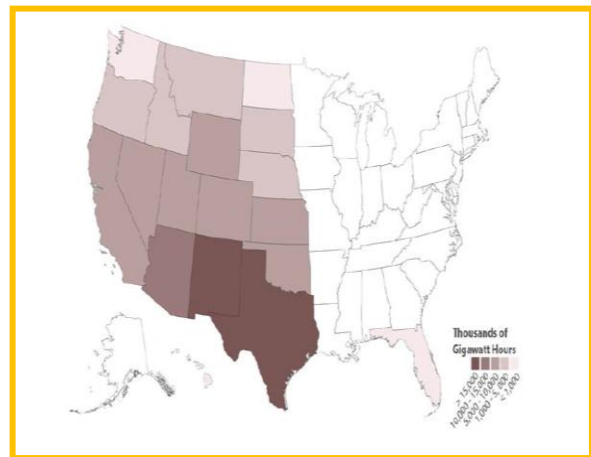


Figure 10: Total estimated technical potential for concentrating solar power in the United States
Source: National Renewable Energy Laboratory

Wind Power

The wind power market has expanded very quickly over a short period of time. Usage has tripled from 2007 to 2012. In 2012, the nation broke a record by installing more than 13,000 megawatts of wind power capacity and investing \$25 billion into the U.S. economy. Wind power is now the leading source of new capacity in the country and represents 42% of total power capacity and surpasses new natural gas capacity. Wind power is generated through wind turbines that can be located onshore (on land) or offshore (in water).

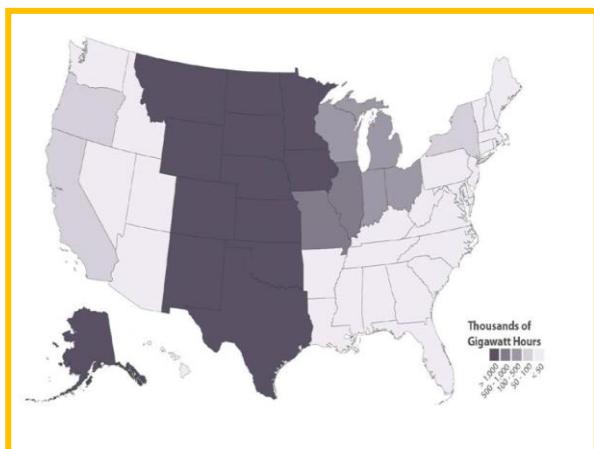


Figure 5: Total estimated technical potential for onshore wind power in the United States
Source: National Renewable Energy Laboratory

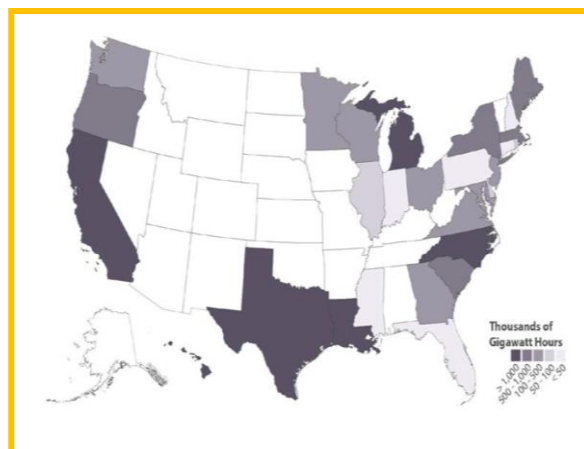


Figure 6: Total estimated technical potential for offshore wind power in the United States
Source: National Renewable Energy Laboratory

Geothermal Power

The market for geothermal energy has significant potential for further growth, though it has not expanded at the same rate as solar and wind energy. Geothermal energy comes from reservoirs of steam and hot water beneath the earth's surface. There are two geothermal energy technologies--hydrothermal power systems and enhanced geothermal systems.⁶⁵ While not equally competitive with wind and solar energy, geothermal power is becoming an increasingly attractive energy source in the United States. The current installed capacity of geothermal energy in the United States is 3,187 megawatts (MW). In the next 50 years, there is potential in the United States to have geothermal energy installed capacity of 10,000 MW.

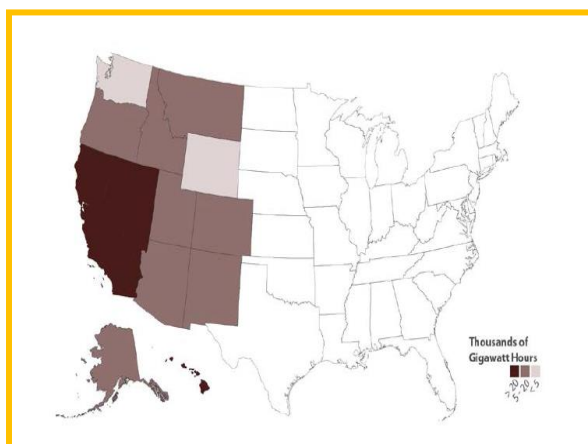


Figure 11: Total estimated technical potential for hydrothermal power systems in the United States
Source: National Renewable Energy Laboratory

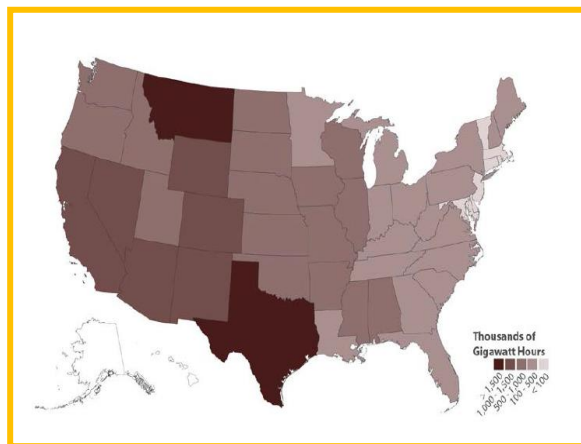


Figure 12: Total estimated technical potential for enhanced geothermal systems in the United States
Source: National Renewable Energy Laboratory

Potential By State

The following table synthesizes the annual renewable energy potential of each state as measured in gigawatt hour (GWh), which is a unit of energy representing one billion (1,000,000,000) watt hours and is equivalent to one million kilowatt hours.⁶⁶ For context, the average annual electricity consumption for a U.S. residential utility customer in 2011 was 11,280 kWh, an average of 940 kilowatt hours (kWh) per month, according to the U.S. Energy Information Administration.⁶⁷ The table also includes the percentage for renewable energy potential by state, the amount of energy generated in each state that could potentially come from such renewable energy sources as urban-utility PV, rural-utility PV, rooftop PV, onshore wind, offshore wind, and enhanced geothermal. This table does not include the potential for concentrated solar and hydrothermal energy sources.

State	Urban-Utility PV Potential	Rural-Utility PV Potential	Rooftop PV Potential	Onshore Wind Energy Potential	Offshore Wind Energy Potential	Enhanced Geothermal Energy Potential	Total Renewable Energy Potential of Net Generation (%)
AL	35,861 GWh	3,706,839 GWh	15,476 GWh	283 GWh	N/A	535,490 GWh	100%++
AK	166 GWh	8,282,976 GWh	n/a	1,373,433 GWh	N/A	15,437 GWh	100%+++
AZ	121,306 GWh	11,867,694 GWh	22,736 GWh	26,036 GWh	N/A	1,239,148 GWh	100%++
AR	121,306 GWh	4,986,389 GWh	8,485 GWh	22,892 GWh	N/A	628,622 GWh	100%++
CA	246,008 GWh	8,855,917 GWh	106,411 GWh	89,862 GWh	2,662,580 GWh	1,344,179 GWh	100%++
CO	43,471 GWh	10,238,084 GWh	16,162 GWh	1,096,036 GWh	N/A	1,251,658 GWh	100%++
CT	7,717 GWh	19,628 GWh	6,616 GWh	62 GWh	26,545 GWh	56,078 GWh	100%+
DE	14,856 GWh	272,333 GWh	2,185 GWh	22 GWh	60,654 GWh	22,813 GWh	100%++
DC	8 GWh	n/a	2,490 GWh	n/a	n/a	693 GWh	100%++
FL	72,787 GWh	5,137,347 GWh	63,987 GWh	34,684 GWh	n/a	374,161 GWh	100%++
GA	43,167 GWh	5,492,183 GWh	43,167 GWh	323 GWh	220,807 GWh	353,206 GWh	100%++
HI	3,725 GWh	38,033 GWh	n/a	7,787 GWh	2,836,735 GWh	n/a	100%+++

State	Urban-Utility PV Potential	Rural-Utility PV Potential	Rooftop PV Potential	Onshore Wind Energy Potential	Offshore Wind Energy Potential	Enhanced Geothermal Energy Potential	Total Renewable Energy Potential of Net Generation (%)
ID	23,195 GWh	3,936,848 GWh	4,051 GWh	44,320 GWh	n/a	993,257 GWh	100%+++
IL	103,552 GWh	8,090,985 GWh	30,086 GWh	649,468 GWh	66,070 GWh	676,056 GWh	100%+++
IN	72,787 GWh	5,137,347 GWh	63,987 GWh	n/a	34,684 GWh	374,161 GWh	100%++
IA	27,092 GWh	6,994,159 GWh	8,646 GWh	1,723,588 GWh	n/a	606,390 GWh	100%+++
KS	31,706 GWh	14,500,149 GWh	8,962 GWh	3,101,576 GWh	n/a	989,676 GWh	100%+++
KY	26,515 GWh	1,823,977 GWh	12,312 GWh	147 GWh	n/a	484,659 GWh	100%++
LA	55,669 GWh	4,114,605 GWh	n/a	935 GWh	1,200,699 GWh	484,271 GWh	100%++
ME	3,216 GWh	1,100,327 GWh	2,443 GWh	28,743 GWh	631,960 GWh	377,075 GWh	100%+++
MD	28,551 GWh	585,949 GWh	n/a	3,632 GWh	200,852 GWh	86,649 GWh	100%++
MA	17,470 GWh	82,205 GWh	11,723 GWh	2,827 GWh	799,344 GWh	92,227 GWh	100%++
MI	50,845 GWh	5,215,640 GWh	23,528 GWh	143,908 GWh	1,739,801 GWh	457,850 GWh	100%++
MN	33,370 GWh	10,792,814 GWh	14,322 GWh	1,428,525 GWh	100,455 GWh	369,785 GWh	100%+++
MS	26,366 GWh	4,981,252 GWh	8,614 GWh	n/a	10,172 GWh	559,056 GWh	100%++
MO	30,549 GWh	5,335,269 GWh	16,160 GWh	689,519 GWh	n/a	835,445 GWh	100%++
MT	11,371 GWh	8,187,341 GWh	2,194 GWh	2,746,272 GWh	n/a	1,647,304 GWh	100%+++
NE	12,954 GWh	9,266,757 GWh	5,337 GWh	3,011,253 GWh	n/a	927,996 GWh	100%+++
NV	24,894 GWh	8,614,454 GWh	10,767 GWh	17,709 GWh	n/a	1,262,175 GWh	100%+++

State	Urban-Utility PV Potential	Rural-Utility PV Potential	Rooftop PV Potential	Onshore Wind Energy Potential	Offshore Wind Energy Potential	Enhanced Geothermal Energy Potential	Total Renewable Energy Potential of Net Generation (%)
NH	3,790 GWh	57,364 GWh	2,299 GWh	5,706 GWh	14,478 GWh	104,314 GWh	100%+
NJ	44,307 GWh	439,774 GWh	15,768 GWh	317 GWh	429,808 GWh	35,230 GWh	100%++
NM	71,356 GWh	16,318,543 GWh	6,513 GWh	1,399,517 GWh	n/a	1,417,978 GWh	100%+++
NY	52,803 GWh	1,492,566 GWh	28,780 GWh	63,566 GWh	614,280 GWh	375,401 GWh	100%++
NC	68,346 GWh	1,492,566 GWh	28,420 GWh	1,269,627 GWh	n/a	375,401 GWh	100%++
ND	4,871 GWh	9,734,448 GWh	1,917 GWh	36,050 GWh	2,537,825 GWh	820,226 GWh	100%+++
OH	86,496 GWh	3,626,182 GWh	30,064 GWh	129,143 GWh	170,561 GWh	495,922 GWh	100%++
OK	50,041 GWh	9,341,920 GWh	12,443 GWh	1,521,652 GWh	n/a	779,667 GWh	100%+++
OR	25,783 GWh	3,740,479 GWh	8,323 GWh	68,767 GWh	962,723 GWh	914,105 GWh	100%+++
PA	56,162 GWh	553,356 GWh	22,215 GWh	8,231 GWh	23,571 GWh	327,341 GWh	100%+
RI	1,788 GWh	13,636 GWh	1,711 GWh	130 GWh	89,115 GWh	11,492 GWh	100%++
SC	33,835 GWh	2,754,973 GWh	14,413 GWh	428 GWh	542,218 GWh	364,105 GWh	100%++
SD	4,574 GWh	10,008,873 GWh	2,083 GWh	2,901,858 GWh	n/a	921,973 GWh	100%+++
TN	50,243 GWh	2,225,990 GWh	19,685 GWh	766 GWh	n/a	428,380 GWh	100%++
TX	294,684 GWh	38,993,582 GWh	78,717 GWh	5,552,400 GWh	1,101,063 GWh	3,030,251 GWh	100%+++
UT	30,492 GWh	5,184,878 GWh	7,514 GWh	31,552 GWh	n/a	939,381 GWh	100%+++
VT	1,632 GWh	54,728 GWh	1,115 GWh	7,796 GWh	n/a	35,617 GWh	100%++

State	Urban-Utility PV Potential	Rural-Utility PV Potential	Rooftop PV Potential	Onshore Wind Energy Potential	Offshore Wind Energy Potential	Enhanced Geothermal Energy Potential	Total Renewable Energy Potential (%) of Net Generation
VA	27,451 GWh	1,882,467 GWh	22,267 GWh	4,589 GWh	361,054 GWh	290,737 GWh	100%++
WA	33,690 GWh	1,738,151 GWh	13,599 GWh	47,250 GWh	488,025 GWh	563,024 GWh	100%++
WV	3,024 GWh	52,694 GWh	4,220 GWh	4,952 GWh	n/a	261,376 GWh	100%+
WI	54,939 GWh	5,042,259 GWh	13,939 GWh	255,266 GWh	317,755 GWh	647,173 GWh	100%++
WY	7,232 GWh	5,727,224 GWh	1,551 GWh	1,653,857 GWh	n/a	1,070,079 GWh	100%+++

+, ++, and +++ signify the degree to which the percentage of energy needs are covered by clean energy potential exceeds 100%.



ENERGY EFFICIENCY AND RENEWABLE ENERGY BENEFITS

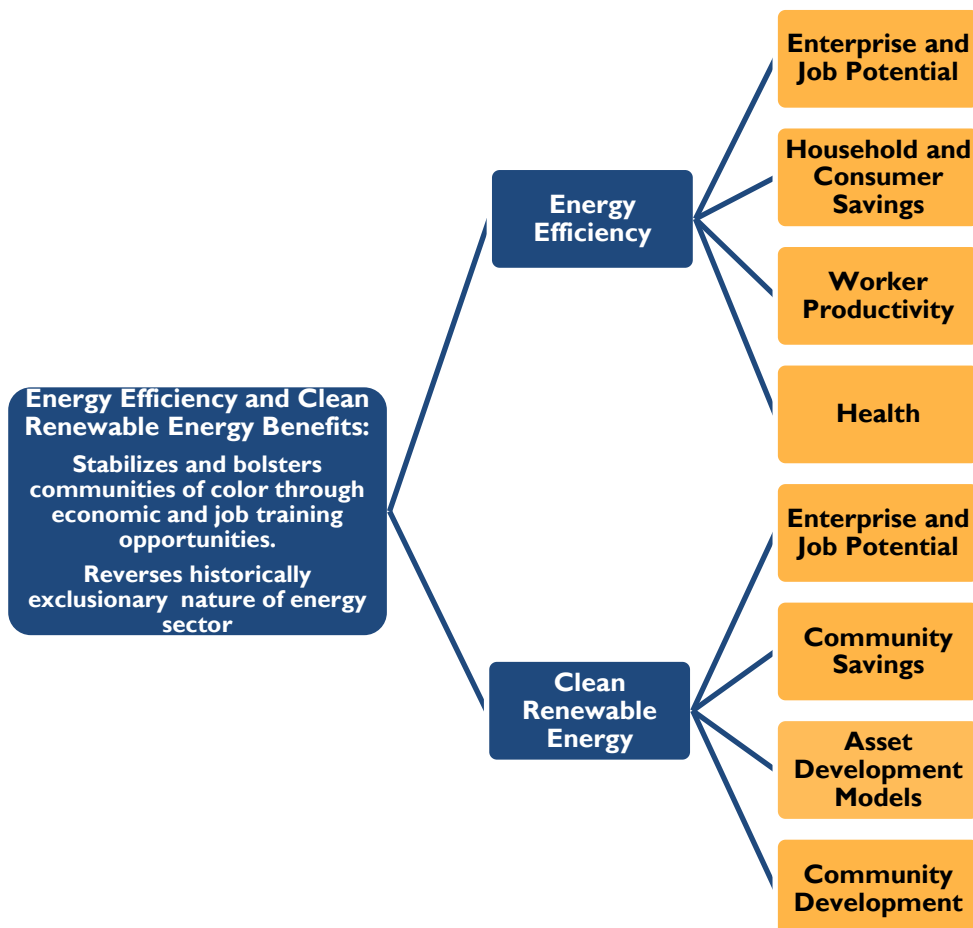
An overview of potential economic, health and other advantages for household consumers, businesses, religious institutions, and communities.

BENEFITS OF ENERGY EFFICIENCY AND CLEAN RENEWABLE ENERGY

There are countless benefits that accompany the potential for energy efficiency and clean renewable energy in the United States. These technologies are transforming the energy sector and providing more opportunities for communities of color to become leaders in a sector where there has been scarce participation to date. Energy efficiency and clean renewable energy benefits are both macro and micro -- they bolster and sustain our domestic economy, as well as strengthen local communities, households and businesses.

Energy efficiency produces a host of economic benefits, including household and consumer savings, worker productivity, and more. Better building materials associated with energy efficiency generate health benefits by improving indoor air quality and creating safeguards for people who are most susceptible to respiratory illnesses. Clean renewable energy benefits similarly increase community savings in the long-term and they offer a tremendous opportunity to develop assets within communities that can be leveraged for more economic and social benefits.

The following diagram further details the benefits of energy efficiency and clean renewable energy as described in this section:



The vast energy efficiency and clean energy potential across the United States comes with significant economic development prospects. By 2020, the potential savings from greater energy efficiency policies and programs total \$1.2 trillion in present value to the U.S. economy.⁶⁸ Recent estimates by The Pew Charitable Trusts have found that global clean energy investments between 2012 and 2018 could total almost \$2 trillion in revenue. Within these six years, clean energy investments can yield a revenue of \$276 billion in the United States.⁶⁹

Yet structural barriers impede equal access to these opportunities. African Americans have a history of imposed limits on economic potential due to discriminatory practices and laws. In February 2013, Brandeis University released a report that examined the wealth divide and showed that while some of these practices stopped and laws were removed, there still exists a large wealth divide between races. The study reported that the wealth gap between African Americans and white Americans in the United States has tripled in the past 25 years.



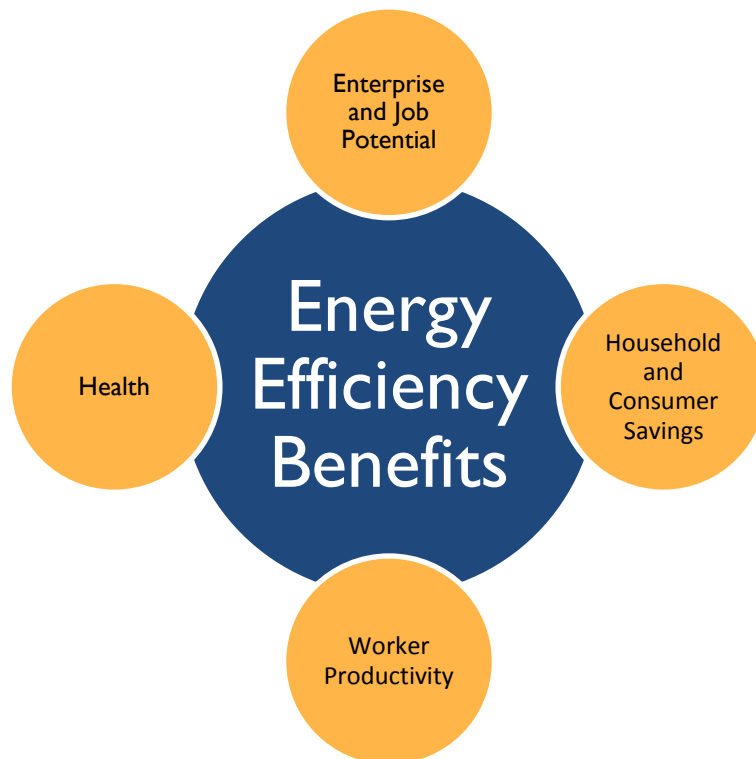
According to the report, “the dramatic gap in household wealth that now exists along racial lines in the United States cannot be attributed to personal ambition and behavior choices, but rather reflects policies and institutional practices that create different opportunities for whites and African-Americans.”⁷⁰

As noted in the introduction, African Americans spent \$41 billion on energy in 2009; they only held 1.1% of energy jobs and only gained .01% of the revenue from the energy sector profits. These numbers tell a stark story of what Dr. Robert Bullard, Dean of the Mickey Leland and Barbara Jordan School of Public Policy at Texas Southern University, describes as, “energy apartheid.” Yet there are numerous job opportunities and potential business ventures within the clean energy sector. The requirements for positions within this sector vary from non-college degree/training jobs to jobs requiring a certain level of credentials/education/certifications. The variety of education and training required within these jobs can help decrease joblessness and allow a pathway out of poverty for people of all education levels within our communities.

As the energy sector transforms and expands, we must ensure that the corresponding job training and employment opportunities are available to communities of color that deserve equal access to engagement in the energy sector. The following overview of specific types of businesses and jobs in energy efficiency and clean energy demonstrates the opportunities to initiate or deepen involvement in the new energy economy.

BENEFITS OF ENERGY EFFICIENCY

Energy efficiency has a diverse range of benefits. New businesses in green construction, energy auditing and recycling create new job and workforce development opportunities. Property owners that invest in energy efficient technology will incur substantial savings in the short and long-term. Buildings with energy efficient technology can also lead to higher work productivity from a reduced Sick Building Syndrome. The following diagram displays the energy efficient benefits described in this section:



Enterprise and Jobs Potential: With the growing energy efficiency potential within the United States, there is great promise for the expansion of businesses and jobs in this sector. There are limitless opportunities for entrepreneurs to be creative and design innovative energy efficiency and clean energy focused enterprises. In addition, the many types of energy efficiency-related jobs currently available are widespread, and these opportunities will only continue to grow.

Types of Energy Efficiency Businesses:

Green Design and Construction: This practice includes developing or redeveloping residential homes and buildings using processes that are environmentally responsible and resource efficient. Green buildings limit their environmental impact by conserving as much energy and water as possible and are constructed with recycled or renewable materials in order to achieve maximum resource efficiency. Green non-residential building alone had an estimated value of \$3 billion in 2005. According to McGraw-Hill Construction, this number will increase to \$120 billion to \$145 billion by 2015. The construction of new large projects such as hospitals and government buildings that are increasingly built to energy efficient standards will cause this number to continue to grow.

Types of Jobs in Green Construction: Green Architects, Environmental Engineers, Green Floorer, Insulation Installation Contractor, Green Roofer, Urban Planner, Green Window Treatment Provider, Older Homes/Buildings Restorer, Green Construction Managers, Green Construction Laborers and Green Construction Equipment Operators, etc.

Potential Job Creation: Green buildings provide for jobs at every professional level and skill set, and the number of jobs is only likely to increase over time. In 2011, there were 487,708 green construction jobs in the United States, which was a 26.4% increase from green construction jobs in 2010.

By the end of 2013, predictions are that there will be 661,000 green construction jobs and that green buildings will support over 7.9 million jobs in a range of occupations.⁷¹

Energy Auditors: Also known as energy rators or energy consultants, these workers calculate how much energy the home/business is using by conducting an energy audit. In addition to producing an audit to give to property owners, they also supply recommendations on how to save money on energy by providing a list of upgrade recommendations on various aspects of the home/business that will improve energy efficiency.

Potential Job Creation: An estimated 1.2 million jobs in the energy auditor arena will be available by 2018.⁷²

Recycling: As another growing industry in the United States, recycling is the process of collecting and processing materials that would otherwise be thrown away as trash. The first step in a recycling business is saving trash that would have been processed in an incinerator or placed in a landfill where energy would have been used to dispose of these “trash” products. Saving energy by avoiding disposal methods is the first reason why recycling is an energy efficient business. Secondly, recovered materials are turned into reusable materials for the creation of new products. This process uses less energy and money through the process of re-using old materials (and not extracting new, raw materials) to create new products. These two measures make recycling an energy efficiency practice. Municipal solid waste can be readily recycled, yet in the United States, only 33% is currently being diverted from disposal.⁷³ If the

United States were to achieve a 75% national waste diversion rate by 2020, there would be a major impact on jobs across the country through the creation of approximately millions of jobs.⁷⁴

Types of Jobs in Recycling: There are three main categories of jobs in recycling. The first is collecting and processing of recyclables to make them available for use in new industrial processes. The second is purchasing secondary materials from the recycling industry. The third is reuse and remanufacturing industries that include directly reusing and/or remanufacturing products for their original use. Each of these three categories contribute to the growing labor force of skilled workers, such as materials sorters, dispatchers, truck drivers, sales representatives and even chemists. Many of these jobs pay above the average national minimum wage and many are in urban areas where jobs are very much needed.

Potential Job Creation: By 2020, with the 75% diversion rate, the recycling industry has the potential to generate 2.3 million total direct jobs.⁷⁵ According to the U.S. Department of Labor's Bureau of Labor Statistics, the average pay for jobs in the recycling industry is about \$19 an hour.⁷⁶

Sample Example: In California, waste recycling and management rank higher on the economic and job creation scale than the state's entertainment industry. The recycling industry in the state employs more than 85,000 people and contributes to \$4 billion in salaries and \$10 billion worth of goods and services each year.⁷⁷ An employee-owned recycling company called Recology located within the city of San Francisco has grown the city's recycling rate to an astounding 80%, which has also helped job growth. Since 2000, Recology has added more than 200 union jobs to the city.

Household Consumer Savings:

While energy efficiency can result in substantial savings to the average household, these savings have an even larger impact on low-income households. As of 2012, the average household making more than \$50,000 spends approximately 9% of its income on energy bills, whereas households that earn less than \$50,000 a year spends 21%, and lower-income families ranging from \$10,000 to \$30,000 spends 24% of their income.⁷⁸ Studies show that investments in energy efficiency will permanently lower energy use in low-income households.⁷⁹ These savings allow these families to allocate this money elsewhere for the needs of their family in areas such as education, food, etc.



Energy efficient senior and supportive housing in San Francisco, CA



Source: Building Energy

Worker Productivity:

The reduction in fossil fuel based energy producing facilities and the increase in energy efficiency upgrades like proper insulation and sealing against air infiltration can lead to the improvement of indoor and outdoor air quality. Improved air quality can reduce symptoms of Sick Building Syndrome (when poor indoor air quality causes respiratory-related illnesses, along with eyes, nose, or throat irritation of the building's occupants) by 20% to 50%, asthma by 8% to 25% and other respiratory illnesses by 26% to 75%.⁸⁰ The reduction in this syndrome, along with other air-quality related illnesses, can further lead directly to increased worker productivity. Sick Building Syndrome (SBS) costs the nation approximately \$60 billion annually in sick days, medical costs and overall reduced productivity. Improved air quality can increase worker productivity by as much as 5% and due to this increased productivity lead to an extra \$37 billion to \$210 billion added to the American economy annually.⁸¹

Health Benefits

Energy efficiency is conducive to improving an overall quality of life if the technologies are used in the home and in the workplace. Energy efficient lighting can improve safety, increase learning, improve social interaction and physical health.⁸² Even certain energy efficiency measures like sealing leaky ducts can help to prevent asthma triggers, such as mold, dust and termites, from disrupting air quality.⁸³ According to the U.S. Office of Minority Health, "African Americans are 30% more likely to have asthma than non-white Hispanics." Energy efficiency is critical to addressing the many ailments (exacerbated arthritis, increased respiratory problems, increased blood pressure) that are associated with poor air quality.⁸⁴ Furthermore, particularly in our current energy landscape, energy efficiency decreases our usage of fossil fuel-based energy production which is harmful to the health and well-being of communities.

BENEFITS OF CLEAN RENEWABLE ENERGY

Like energy efficiency, there are several benefits associated with clean, renewable energy. Wind, solar and geothermal technologies provide ample opportunity for manufacturing and assessment related jobs. More importantly, these technologies can be democratically manufactured, empowering communities to leverage resources to establish and sustain assets locally.



Enterprise and Job Potential

The growing number of states implementing renewable portfolio standards has led to an increased number of potential new businesses centered around renewable energy. If electric utilities fulfill 20% of their electric sales through renewable energy by 2020, 1.9 million jobs can be created across the United States.⁸⁵

To remain consistent, we will focus our analysis on the clean energy sources we are promoting based on our justice and equity analysis: solar, wind, and geothermal.

Types of Clean Energy Businesses:

Wind Power: The rapid growth of wind power, which more than tripled from 2007 to 2012, has led to an increase in the number of wind power-related businesses and jobs. It is estimated that by 2030, 20% of U.S. electricity will be provided by wind power.

Types of Wind Energy Businesses: Wind Energy Manufacturing Facilities, Wind Farms, Wind Energy Research Institutions, Wind Energy Import/Export Businesses, Wind Energy Engineering Firms, Wind Energy Government Organizations and much more!

Types of Wind Energy Jobs: Wind Turbine Monitors, Scientists, Engineers, Engineering Technicians, Wind Turbine Manufacturers (Machinist, Assemblers, Welders, Quality-Control Inspectors, Industrial Production Managers), Researchers, Land Acquisition Specialists, Construction Workers, Construction Equipment Operators and much more!

Potential Job Creation: From 2008 to 2030, 260,000 jobs per year will be created to meet the goal of 20% of U.S. electricity sourced from wind power.⁸⁶

Solar Power: Solar power is significantly expanding in the United States. Solar photovoltaic systems, installed on homes and businesses, as well as in open spaces, is the fastest growing technology in the world. The solar power industry is projected to become a \$15 billion industry by 2020.

Types of Solar Power Businesses: Solar Farms, Solar Manufacturers, Solar Energy Installation Companies, Solar Sales and Distribution Companies, Research Institutions, Solar Energy Government Organizations and much more!

Types of Solar Power Jobs: Solar Installers, Solar Field Technicians, Solar Power Engineers, and Solar Power Project Managers and much more!

Potential Job Creation: By 2016, solar energy could provide for approximately 440,000 jobs in the United States.

Geothermal Power: Geothermal power is also a rapidly growing industry that will only continue to expand as potential geothermal resources are tapped in the United States.

Types of Geothermal Businesses: Mechanical Equipment and Primary Metal Suppliers, General Consultants and Contractors, Drilling and Well Services Firms, Environmental Services Firms, Geothermal Developers, Power Plant Ownership and Operations Firms, and much more!

Types of Geothermal Power Jobs: Welders, Mechanics, Pipe Fitters, Electricians, Geologists, Architects, Surveyors, HVAC Technicians, Aquaculture and Horticulture Specialists, Construction and Drilling Equipment Operators, Excavators and much more!

Potential Job Creation: By 2026, with a projected increase of 2,455 MW in the geothermal industry, 8,764 direct jobs and 21,910 total jobs would be created.⁸⁷

Innovative Businesses: The growth of energy efficiency measures and clean energy technologies can also spur the growth of innovative businesses for creative entrepreneurs.

Example: Robert L. Wallace is an accomplished engineer, entrepreneur and business consultant who is the founder of three companies - BITHGROUP Technologies, Inc., BITHENERGY, Inc. and EntreTeach Learning Systems, LLC. In college, Wallace developed an interest in emerging energy technologies and after working for several companies, he sought out to start his own business. BITHGROUP Technologies, Inc. is a successful information technology services company specializing in wireless engineering, infrastructure IT services, wireless engineering and biometrics. BITHENERGY is an energy engineering and management company that develops and implements energy management, energy efficiency and renewable energy solutions for governments and commercial clients. EntreTeach Learning Systems is an economic and entrepreneurial research firm that produces research reports and books on providing unique solutions for addressing unique challenges facing small, women-owned and minority-owned companies.

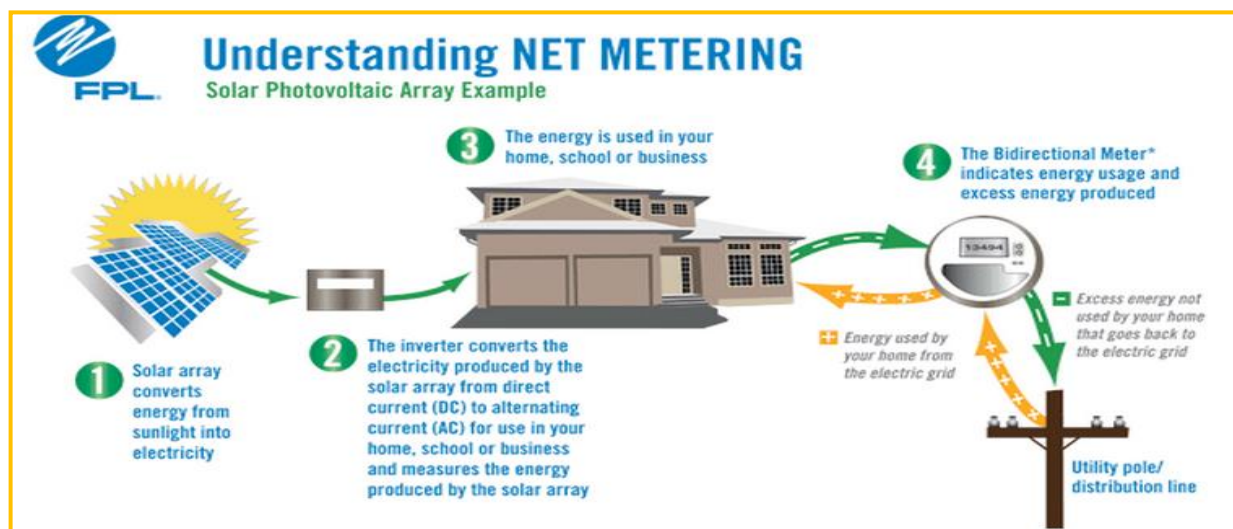


Community Savings

Renewable energy technologies can further lead to huge energy savings, which also means monetary savings. This section will describe how solar, wind and geothermal energy technologies can help homeowners, businessowners and religious institutions save money on their energy bills.

Potential Savings from Renewable Energy Installations:

Renewable energy installations have the potential to allow homeowners, business owners and religious leaders to use energy installations on their property to get returns on their investment through net metering. Net metering is the process that allows a property owner to send excess electricity back to the grid at times when their generation exceeds their own use to receive a credit for the “net excess generation”. The property owner may then use these credits to offset their use of electricity supplied by the utility. Some of these renewable energy technologies are incorporated into new buildings as they are built and others are easily added to existing buildings. Solar hot water systems, PV systems, wind turbines, energy electric systems and geothermal heat pump systems are all technologies that are commercially available for businesses and religious institutions. This process is shown in the “Understanding Net Metering” figure below.



The annual savings that a household can earn depends on the amount of electricity that the household uses and the amount of electricity that the household generates. All net metering customers must pay certain fixed costs to connect to their utility company's electric grid and each public utility company charges different amounts for service.

An example of potential savings of a net metering customer

A residential solar panel system based on an average electric rate of \$.09/kWh in New Orleans:

Fees: \$50 initial meter change fee since solar panels requires a different meter

Solar System Size: 4kW

Potential Monthly Savings: \$35 to \$55

Solar Hot Water Systems: Solar collectors and storage tanks are used to generate and keep hot water for the home. The proper installation of solar water heaters depends on many factors that include solar resource, climate, local building code requirements and safety issues. A qualified solar thermal systems contractor must install the system. Regular maintenance on solar hot water systems averages every 3-5 years.

Cost Savings: While solar hot water systems usually cost more to purchase and install than conventional water heating systems, they are a great long-term investment that could add up to significant savings. On average, if one installs a solar water heater, water heating bills should drop 50% - 80%, as shown in Figure 13. Further, if a solar hot water system is installed in the home, the homeowner is protected from future fuel shortages and price hikes, because the sun is free! When building a new home or refinancing, the cost savings are even more attractive. If one includes the price of a solar water heater in a new 30-year mortgage, it usually amounts to between \$13 and \$20 per month. The federal income tax deduction for mortgage interest attributable to the solar hot water system reduces that by about \$3 - \$5 per month. Therefore, if

fuel savings are more than \$15 per month, the solar investment is profitable immediately. On a monthly basis, one is saving more than one is paying.

PV Systems: Also called solar cells, these systems convert sunlight directly to electricity. Solar panels are used to power homes and businesses and are typically made from solar cells combined into modules that hold about 40 cells. A typical home will use about 10 to 20 solar panels to power the home. These panels can be mounted at a fixed angle facing south, or they can be mounted on a tracking device that follows the sun, allowing them to capture the most sunlight.⁸⁸

Cost Savings: Depending on the size of the roof of the home, the initial investment in solar panel systems will vary. Typically, solar panel systems show a great return on investment after typically four to six years, by decreasing home energy bills and with costs offset by revenue from federal, state and local rebates. The average homeowner saves over \$1,000 per year on electricity by installing panels on the roof.⁸⁹

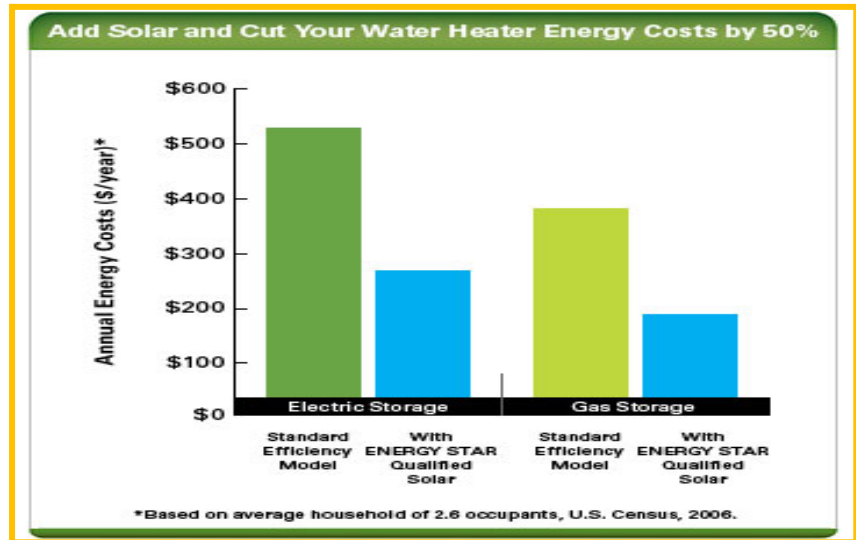


Figure 13: Solar Water Heater Energy Savings
Source: Energy.gov



Figure 14: Photovoltaic solar panels installed on the roof of a home in Boulder, Colorado
Source: NREL.gov

Example Savings and Property Value Increase for a Solar Electric System

Average monthly utility bill	\$100 per month
Estimated system size required	4.48 kW
System cost (at \$9 per watt national average)	\$40,320
Estimated system cost after tax credits and rebates (Colorado)	\$12,544
Estimated first year utility bill savings	\$518 to \$988
Estimated increase in property value	\$10,360*
Estimated monthly payment on system (6.5% Annual Percentage Rate, 30 years)	\$79

*If based on average annual utility savings over 25 years of \$869 to \$1,658, property value increase is \$17,380.

Figure 15: Solar Panel Systems Savings
Source: NREL.gov

Wind Turbines: These are horizontal-axis, upwind machines that have two or three blades. Wind turbines convert kinetic energy in wind into clean electricity. When the wind spins the wind turbine's blades, a rotor captures the kinetic energy of the wind and converts it into rotary motion to drive the generator.

Wind Energy Electric Systems: These systems are made up of a wind turbine mounted on a tower to provide better access to stronger winds because wind speeds increase with height. These systems require: a good wind resource, a building located on at least one acre of land, and local zoning codes that permit wind turbines.

Cost Savings: The initial cost of a wind energy system varies greatly depending on local zoning, permitting and utility interconnection costs. According to the American Wind Energy Association, small wind energy systems can cost anywhere between \$3,000 to \$5,000 for every kilowatt of generating capacity. There is usually a great return on investment, usually within six years.⁹⁰



Figure 16: A small wind electric system called the Jacobs 20-kilowatt turbine can provide electricity for a variety of electrical needs from home heating and lighting to water pumping for livestock. Source: NREL.gov

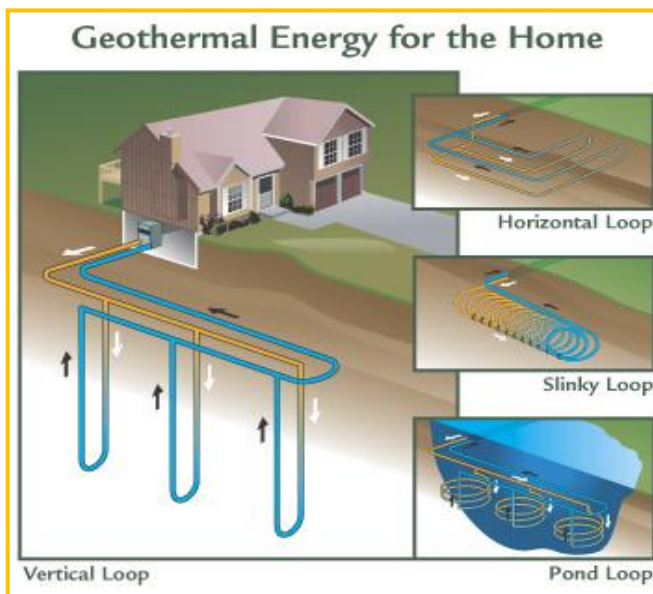


Figure 17: Geothermal Energy System for a House
Source: SurviveClimateChange.com

Geothermal Heat Pump Systems: These systems use the nearly constant temperature of the Earth to heat and cool buildings. These systems consist of three parts that include the ground heat exchanger, the heat pump unit and the air delivery system. The heat exchanger is a system of pipes called a loop that is buried in the shallow ground near the building. Fluid circulates through the pipes to absorb or release heat within the ground. Geothermal heat pumps use much less energy than conventional heating systems because they draw heat from the ground. All areas of the United States have nearly constant shallow-ground temperatures, which are suitable for geothermal heat pumps.⁹¹

Cost Savings: There is a significant initial cost for geothermal systems, but one sees a return on investment within 5 to 10 years. The geothermal systems have a shelf life of 25 years for the inside components and 50+ years for the ground loop.⁹²

Asset Development Models

In addition to residences, businesses and religious institutions, entire communities can benefit through community economic development models of implementing clean energy technologies.

Community-Owned Utility Companies: This approach enables members of a community to come together to finance, own, and operate a clean energy system. Community ownership is typically structured as a community owned Limited Liability Company (LLC), or a cooperative, where the proceeds from the purchase of memberships in the cooperative or LLC are used to pay for the system. Members then recoup their investment as the panel host pays for the power produced by the clean energy system.⁹³

Example of Community-Owned Utility--University Park LLC, in University Park, MD
<http://www.communitypowernetwork.com/node/72>

The University Park (UP) Community Solar LLC is owned and operated by Maryland residents that have developed a solar power generation site in their community. This centralized solar generation site is intended to produce sufficient kilowatt hours (kWh) to replace a significant amount of electricity otherwise purchased from the local utility company, Pepco.

Solar panels were installed on the host site, University Park Church of the Brethren (shown below) on May 21, 2010, by an outside expert, Standard Solar, Inc. With the proceeds from purchases of membership interests, the LLC bought the panels and paid for the installation. The Church has begun to purchase the power produced by the solar panels from the LLC. The LLC also sells its solar renewable energy certificates (SRECs) earned from generating renewable energy.



In addition to reducing their "carbon footprint", the members are part of a project that preserves their environment for future generations, provides a replicable investment model for other communities, and provides a wonderful learning opportunity for the community. The revenue from the solar energy and SRECs sales go to maintaining the solar facility and to operating costs, such as insurance. The revenue also produces a return on investment to members in utility bill savings.

Successes: As of February 28, 2013, the project has generated a total of 70,080 kWh. In April 2012 Pepco paid Solar LLC \$887.31 for the 10,441 kWh of excess power generated in 2011, and provided its customers access to a non-carbon source of electric power.⁹⁴

Figure 18: Installation of solar panels on the University Park Church of the Brethren
 Source: Examiner.com

Worker-Owned Cooperatives: Worker co-ops are businesses that are owned and operated by workers and governed by democratic decision-making. In most instances, all of the workers have equal input on issues like company policies and benefits for employees. Worker input increases the likelihood that there are higher worker safety standards and more attractive benefit packages for employees. Another advantage of cooperatives is that they distribute the surpluses of the business to the workers or co-op members, rather than inequitably diverting profits to executives and shareholders.

Co-op membership provides a unique avenue for asset building for low-income individuals. In the U.S., most families build wealth by buying homes, investing in a business, or saving through employer-sponsored retirement accounts. However, these types of investments are often out of reach for low-wage workers.

Co-owning a business can be a pathway out of poverty and a much more accessible asset building approach for low-wage workers, as co-op members can collectively share the responsibility of acquiring a small business.⁹⁵ The following example illustrates the potential of worker-owned cooperatives bridging the aforementioned “energy apartheid” seen in low-income communities of color.

Example of a Worker-Owned Cooperative: Evergreen Cooperative in Cleveland, OH - <http://evergreencooperatives.com/>

The Evergreen Cooperatives of Cleveland, Ohio are pioneering innovative models of job creation, wealth building, and sustainability. It was launched in 2008 by a working group of Cleveland-based institutions (including the Cleveland Foundation, the Cleveland Clinic, University Hospitals, Case Western Reserve University, and the municipal government). The Evergreen Cooperative Initiative is working to create living wage jobs in six low-income neighborhoods (43,000 residents with a median household income below \$18,500) in an area known as Greater University Circle (GUC). The Evergreen Cooperative has launched three cooperatives so far and plans to launch more. These cooperatives include: Evergreen Cooperative Laundry, Green City Growers Cooperative and Evergreen Energy Solutions. Evergreen’s employee-owned, for-profit companies are based locally and hire locally. They create meaningful green jobs and keep precious financial resources within the Greater University Circle neighborhoods. Worker-owners at Evergreen earn a living wage and build equity in the firms as owners of the business.

Successes: Evergreen Energy Solutions (E2S) is an Evergreen portfolio company that designs, installs and develops PV solar panel arrays for institutional, governmental and commercial markets. Incorporated in 2008, E2S now provides energy efficiency and home performance services to make residential and commercial buildings more energy efficient. The Evergreen Cooperatives are also capturing the attention and interest of officials and philanthropy in a number of other cities seeking to replicate the “Cleveland model” (interested cities include Detroit, Atlanta, Newark, Pittsburgh, Washington, D.C., and a number of cities across Ohio).⁹⁶

Community Economic Development

Clean energy technologies not only benefit individual workers (and their families) within community utility companies and worker-owned cooperatives, it can also benefit the economies of entire communities, especially in communities that lack a major source of economic revenue.

Examples of Community Economic Development from Renewable Energy Technology in Sherman County Oregon and Iowa:

A well-sited wind project or expanding wind manufacturer can provide local worker training programs and add revenue to the local economic base, as well as increase city tax revenues and, in turn, more funding for community schools. Sherman County, a rural region in northern Oregon, got its first wind farm in 2002. Over the last decade, the 11 additional wind farms built have brought the county (which was formerly solely dependent on one crop, wheat) a host of welcome economic and social changes.⁹⁷

Wind Farm Development Benefits Sherman County, OR	
■	\$17.5 million in property taxes and fees
■	Annual payments of up to \$7,800 per turbine to landowners
■	Per capita income increases, from \$18,354 in 2001 to \$52,530 in 2011, to become the highest in the state
■	\$1.8 million grant to school district in 2011 to fund new equipment, classes, and teachers
■	Five-hundred onsite construction jobs
■	Eighty long-term jobs in operation
■	Increased economic activity helps keep small businesses alive
■	Annual check of \$590 to all residents
■	Renewable energy technician training program at Columbia Gorge Community College

In May 2013, Governor Terry Branstad of Iowa announced that MidAmerican Energy would be making a \$1.9 billion investment in wind energy projects that will become the single largest

Jobs created in Iowa from 19,909 MW of new wind development by 2030 Wind energy's economic "ripple effect"			
	Direct Impacts	Indirect and Induced Impacts	Total Impact
New jobs during construction phase (1-2 years)	33,194	30,200	63,401
New jobs during operational phase—long term jobs (20+ years)	5,220	3,791	9,011
Economic Impacts to Iowa from 19,909 MW of new wind development by 2030 Wind energy's economic "ripple effect"			
	Direct Impacts	Indirect and Induced Impacts	
Payment to Landowners per year	\$53 Million		
Local Property Tax Revenue per year	\$89.6 Million		
Benefit to local economy (construction phase 1-2 years)	\$3.75 Billion	\$2.5 Billion	
Benefit to local economy (operational phase 20+ years)	\$422.6 Million/year	\$336 Million/year	

economic investment ever in the state. MidAmerican Energy will add up to 1,050 megawatts of wind generation, consisting of up to 656 new wind turbines in Iowa by the end of 2015. The project will enhance economic development and provide \$360 million or more in additional property tax revenues over the next 30 years. Landowner payments will total \$3.2 million per year. Under the construction plan, the project will be completed at no net cost to the company's customers and will help stabilize electric rates over

the long term by providing a rate reduction totaling \$10 million per year by 2017.⁹⁸

If wind generation in Iowa were increased to 20% of electricity by the year 2030, as shown above, this new standard would create over 63,000 jobs lasting one to two years resulting from wind turbine construction and nearly 9,000 long-term jobs.⁹⁹



Model Standards

Science-based, competitive, yet attainable standards for Renewable Portfolio Standards, Energy Efficiency Resource Standards, and Net Metering Standards that the NAACP recommends all states adopt. This section also delineates ideal components of Local Hire and Minority Business Enterprise provisions.

The NAACP has established recommendations for Renewable Portfolio Standards, Energy Efficiency Resource Standards, and Net Metering Standards to provide guidelines for state energy policies. Based on industry analysis, these standards are rigorous, yet attainable. If adopted nationwide, these policies will help to prevent climate change, as well as protect the well-being of communities. Also, as part of its economic justice and equity agenda, the NAACP advocates for Local Hire and Minority Business Enterprise provisions to better support economic opportunities for African American entrepreneurs, businesses, and communities in the energy sector.

Renewable Portfolio Standards

A Renewable Portfolio Standard (RPS) requires electric utility companies and other retail electric providers to supply a specific minimum amount of customer load with electricity from eligible renewable energy sources.

Recommended Standard

Minimally 25% renewable by 2025

Mandatory/Voluntary

Mandatory

Allowable Sources

Definition includes renewable electric energy sources, which naturally replenish over a human, rather than geological, period. The clean energy sources the NAACP supports are wind, solar, and geothermal.



Energy Efficiency Resource Standards

Energy Efficiency Resource Standards (EERS) establish a requirement for utility companies to meet annual and cumulative energy savings targets through a portfolio of energy efficiency programs.

Recommended Standard

Minimally 2% annual reduction of previous year retail electricity sales

Mandatory/Voluntary

Mandatory

Net Metering Standards

Net Metering Standards require electric utility companies to provide retail credit for net renewable energy produced by a consumer.

Capacity Limit Recommendation

Per System: 2,000 kW (minimally)

Mandatory/Voluntary

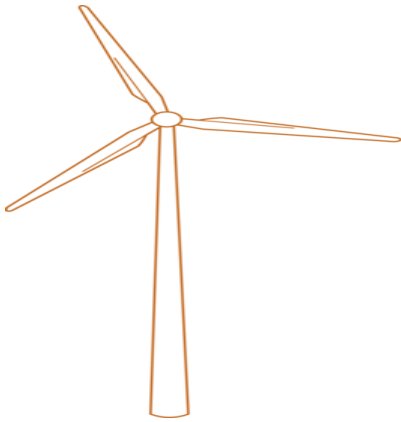
Mandatory

Allowable Sources

Definition includes renewable electric energy sources, which naturally replenish over a human, rather than geological, period. The sources the NAACP supports are wind, solar, and geothermal.

Local Hire

Local Hire is a goal or requirement to hire people who live near their place of work. States achieve this goal by requiring contractors with publicly funded projects to recruit a specified proportion of local residents as workers on the project. *The practice ensures that tax dollars are invested back into the local economy, reduces the environmental impact of commuting, fosters community involvement, and preserves local employment opportunities in construction.*



Components of Provision

- Extra renewable energy credit multipliers for in-state installation and in-state manufactured content;
- Renewable energy credits for a utility providing incentives to build a plant in-state;
- Renewable energy credits for a utility that makes an investment in a plant located in-state;
- Quota for government assisted construction project employers to hire a percentage of workers locally;
- Bidding preferences for companies that hire a percentage of their employees in-state for state-funded public works projects and service contracts.

Minority Business Enterprise

A Minority Business Enterprise is a business that is at least 51% owned, operated, and controlled on a daily basis by people who identify with specific ethnic minority classifications, including African American, Asian American, Hispanic American, and Native American. MBEs can be self-identified, but are typically certified by a city, state, or federal agency. The predominant certifier for minority businesses is the National Minority Supplier Development Council. Often publically funded projects set a requirement or goal to source MBEs as suppliers.

Components of Provision/Certification

The MBE certification process is administered at the state level and may include the following:

- Provide training opportunities;
- Notify MBEs of state business opportunities;
- Set-aside funds for MBEs.

This provision establishes requirements for a certain percentage of the dollar amount spent on construction, professional services, materials, supplies, equipment, alteration, repair, or improvement by a state governmental entity to go toward MBEs.

ENERGY
EFFICIENCY

SOLAR



WIND



GEOTHERMAL



SUMMARY OF FINDINGS

A comparative view of fundamental policies for each state, uplifting the states that are excelling in renewable energy and energy efficiency, and highlighting the states that have room for improvement.

SUMMARY OF FINDINGS

Through analysis of the Renewable Portfolio Standards, Energy Efficiency Resource Standards, Net Metering Standards, and Economic Opportunities for Local Workers and Minority Business Enterprises (MBEs) in each state, this report catalogs the state of our energy landscape, as well as the potential for justice based transformation of our energy infrastructure, policies and practices. Table 4, that follows the below narrative, features the policies of all the states for easy comparison.

In studying the Renewable Portfolio Standards of the 50 states, we found the following:

- 29 states, plus the District of Columbia, have Mandatory Renewable Portfolio Standards, while 9 states have Voluntary Renewable Energy Portfolio Goals.
 - The states with mandatory standards include: Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Hawaii, Illinois, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Washington, and Wisconsin.
 - Out of these 29 states and the District of Columbia, the states that meet or exceed the NAACP recommended standard of 25% by 2025 are: California, Colorado, Connecticut, Hawaii, Illinois, Maine, Minnesota, Nevada, New York, and Oregon.
- The states that have Voluntary Renewable Portfolio Goals are: Alaska, Indiana, North Dakota, Oklahoma, South Dakota, Utah, Vermont, Virginia, and West Virginia.
- Each state could tighten up on their definitions of renewable energy to comply with the NAACP recommended energy sources which are wind, solar, and geothermal, as all state RPS's include sources that are potentially harmful.

In examining the Energy Efficiency Resource Standards of the 50 states, we found the following:

- Eighteen states have Mandatory Energy Efficiency Resource Standards, and 8 states have Voluntary Energy Efficiency Resource Standards.
 - The states with mandatory goals are: Arizona, California, Colorado, Connecticut, Hawaii, Illinois, Indiana, Iowa, Maryland, Massachusetts, Minnesota, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Washington, and Wisconsin.
 - The states with Voluntary Energy Efficiency Resource Goals are: Arkansas, Delaware, Maine, Missouri, Oregon, Texas, Vermont, and Virginia.
- The state standards that are comparable to the NAACP Recommended Standard of 2% annual reduction of previous year retail electricity sales are: Arizona, Delaware, Illinois, Indiana, Massachusetts, New York, and Vermont.

In reviewing the Net Metering Standards of the 50 states, we found the following:

- Net Metering Standards are the most pervasive standards in the United States with 43 states plus the District of Columbia having Mandatory Net Metering Standards, while 3 states have Voluntary Net Metering Goals.
 - The states with Net Metering Standards are: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.
- The states with Voluntary Net Metering Goals are: Idaho, South Carolina, and Texas.
- States that meet or exceed the NAACP recommended standard for Net Metering with a maximum of 2,000 kW or more are: Arizona, California, Colorado, Connecticut,

Delaware, Florida, Maryland, Massachusetts, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, and West Virginia.

In investigating the economic opportunity provisions for local workers and MBEs in energy policies for the 50 states, we found the following:

- Only 9 states had explicit Local Hire provisions within the Renewable Portfolio Standards, Energy Efficiency Resource Standards, and Net Metering Standards.
 - The states with Local Hire Provisions are: Arizona, California, Delaware, District of Columbia, Maine, Massachusetts, Michigan, Minnesota, and Montana.
- There were no states with Minority Business Enterprise provisions specific to energy policies.

TABLE 4: Renewable Energy, Energy Efficiency and Equity Policies by State

(The RPS, EERS and NMS have been converted for easy comparison to the NAACP Recommended Standards)

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
AL	x	x	x	x	x	x	x	x	x	✓
AK		50% by 2025	Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, CHP/Cogeneration, Solar Pool Heating (commercial only), Daylighting (non-residential only), Solar Space Cooling, Solar HVAC, Additional technologies upon approval*, CHP only counts when the source fuel is an eligible renewable energy resource, Anaerobic Digestion, Fuel Cells using Renewable Fuels, Geothermal Direct-Use	x	x	25 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Hydrokinetic, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal	✓	✓
AZ	15% by 2025		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, CHP/Cogeneration, Solar Pool Heating (commercial only), Daylighting (non-residential only), Solar Space Cooling, Solar HVAC, Additional technologies upon approval*, CHP only counts when the source fuel is an eligible renewable energy resource, Anaerobic Digestion, Fuel Cells using Renewable Fuels, Geothermal Direct-Use	Starting in 2011, utilities must save 1.25% of their 2010 electricity sales. The requirement ramps up over time to a reach annual reduction rate of 2.5% in 2020.		No limit		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, HP/Cogeneration, Hydrogen, Biogas, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels	✓	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
AR	x	x	x		0.25% annual reduction in 2011, 0.50% annual reduction in 2012 and 0.75% annual reduction in 2013-2014, increasing to 0.9% in 2015	25/300 kW				
CA	33% by 2020		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Municipal Solid Waste, Energy Storage, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Biodiesel, Fuel Cells using Renewable Fuels	Varies by utility		1,000/5,000 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Microturbines using Renewable Fuels, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines	x	✓
CO	30% by 2020		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Recycled Energy, Anaerobic Digestion, Fuel Cells using Renewable Fuels	Electricity sales and demand reduction of 5% of 2006 electricity sales by 2018 (annual reduction rates of 1.14% in 2012; 1.35% in 2015; and 1.68% in 2020)		IOU customers: 120% of a customer's average annual consumption; Municipality and co-op customers: 25 kW for non-residential; 10 kW for residential systems		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Fuel Cells, Municipal Solid Waste, Biogas from manure methane production or as a byproduct of the anaerobic digestion of biosolids and animal waste, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels	✓	✓
CT	27% by 2020		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Low Renewables, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels	Starting in 2010, annual reduction rate of 1%		2,000 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels	✓	x

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
DE	25% by 2026		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels		From 2007 to 2015, annual reduction rate of 2.5% (1.67% for natural gas)	25/100/2,000 kW		Photovoltaics, Wind, Biomass, Hydroelectric, Fuel Cells, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels	✓	✓
DC	20% by 2020		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Solar Space Cooling, Cofiring, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels	✗	✗	1,000 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Fuel Cells using Renewable Fuels, Microturbines	✓	✓
FL		X (single utility--7.5% by 2015)	Photovoltaics, Landfill Gas, Wind, Biomass, Municipal Solid Waste		X (Pending policy--From 2010 to 2019, .4% annual reduction rate)	2,000 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, CHP/Cogeneration, Hydrogen, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal	✗	✓
GA	✗	✗	✗	✗	✗	10/100 kW		Photovoltaics, Wind, Fuel Cells, Fuel Cells using Renewable Fuel	✗	✓
HI	40% by 2030		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, Municipal Solid Waste, CHP/Cogeneration, Hydrogen, Seawater AC, Solar AC, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Ethanol, Methanol, Biodiesel, Fuel Cells using Renewable Fuels	In 2009, 4,300 GWh reduction in electricity use by 2030 (net reduction of 30% of projected 2030 sales, (annual reduction rate of 1.4%)		100 kW		Photovoltaics, Wind, Biomass, Hydroelectric, Small Hydroelectric	✗	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
ID	x	x	x	x	x		Varies by utility	Varies by utility	x	✓
IL	25% by 2025-2026		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Anaerobic Digestion, Biodiesel	2.0% reduction of 2008 electricity sales by 2015 and the electricity sales reduction percentage holds at 2.0% for every year thereafter		40 kW		Photovoltaics, Wind, Biomass, Hydroelectric, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines	x	✓
IN		10% by 2025	Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Geothermal Heat Pumps, Municipal Solid Waste, Hydrogen, Nuclear, Coal Bed Methane, Clean Coal, Fuel Cells using Renewable Fuels, Geothermal Direct-Use	0.3% reduction of 2009 sales for 2010. Annual requirements increase to 2.0% reduction of prior year's energy sales by 2019		1,000 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Fuel Cells, Hydrogen, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	✓
IA	105 MW (2%)		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Anaerobic Digestion	Varies by utility		500 kW		Photovoltaics, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Small Hydroelectric	x	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
KS	20% by 2020		Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	x	25/200 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	✓
KY	x	x	x	x	x	30 kW		Photovoltaics, Wind, Biomass, Hydroelectric, Biogas, Small Hydroelectric	x	✓
LA	x	x	x	x	x	25/300 kW		Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines	x	✓
ME	40% by 2017		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Tidal Energy, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies		20% reduction of electricity and natural gas sales by 2020 (annual reductions of 1% FY2014-2015, rising to 1.9% in FY2016); 0.2% annual reduction in natural gas	660 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric, Tidal Energy, Fuel Cells using Renewable Fuels	✓	✓
MD	20% by 2022		Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels	From 2007 to 2015, 1.88% annual reduction rate		2,000 kW		Photovoltaics, Wind, Biomass, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
MA	22.1% by 2020		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Renewable Fuels, Fuel Cells using Renewable Fuels	Electricity savings: 1.4% in 2010, 2% in 2011 2.4% in 2012, and 2.6% in 2015--Natural gas savings: 0.63% in 2010, ramping up to 1.14% in 2015		60/1,000/2,000/ 10,000 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies	✓	✓
MI	10% by 2015		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Coal-Fired w/CCS, Gasification, Anaerobic Digestion, Tidal Energy, Wave Energy	1% annual reduction of previous year retail electricity sales by 2012		150 kW		Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy	✓	✓
MN	25% by 2025		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Hydrogen, Co-Firing, Anaerobic Digestion	1.5% reduction of previous 3-year average retail electric sales by 2010		40 kW		Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Other Distributed Generation Technologies	✓	✓
MS	x	x	x	x	x	x	x	x	✓	✓
MO	15% by 2021		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric		From 2009, 1.24% annual reduction rate by 2020, additional 1.9% each year thereafter	100 kW		Solar Thermal Electric, Photovoltaics, Wind, Hydroelectric, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
MT	15% by 2015		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Compressed Air Energy Storage (From Eligible Renewables), Anaerobic Digestion, Fuel Cells using Renewable Fuels	x	x	50 kW; 10 kW for cooperatives		Solar Thermal Electric, Photovoltaics, Wind, Hydroelectric, Geothermal Electric, Fuel Cells, Small Hydroelectric, Fuel Cells using Renewable Fuels	✓	✓
NE	x	x		x	x	25 kW		Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Small Hydroelectric	x	✓
NV	25% by 2025		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Waste Tires (using microwave reduction), Energy Recovery Processes, Solar Pool Heating, Anaerobic Digestion, Biodiesel, Geothermal Direct-Use	x	x	1,000 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Small Hydroelectric	x	✓
NH	24.8% by 2025		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Geothermal Heat Pumps, CHP/Cogeneration, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Renewable Fuels, Biodiesel, Fuel Cells using Renewable Fuels, Microturbines	x	x	1,000 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, CHP/Cogeneration, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Renewable Fuels, Biodiesel, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies	x	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
NJ	20.38% by 2021		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels	x	x	No Limit		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Anaerobic Digestion, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels	x	✓
NM	20% by 2020		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Zero emission technology with substantial long-term production potential, Anaerobic Digestion, Fuel Cells using Renewable Fuels	8% of 2005 total retail kilowatt-hour sales by 2020 (average less than 1% reduction each year)		80 MW		Photovoltaics, Wind, Small Hydroelectric, Other Distributed Generation Technologies	x	✓
NY	29% by 2015		Solar Water Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Ethanol, Methanol, Biodiesel, Fuel Cells using Renewable Fuels	From 2008 to 2015, annual reduction rate of 1.88%		10/25/500/ 1,000/2,000 kW		Photovoltaics, Wind, Biomass, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines	✓	✓
NC	12.5% by 2021		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, CHP/Cogeneration, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy	0.75% annual reduction of prior year sales since 2012, rising to 0.83% annual reduction of prior year sales by 2021		1,000 kW		Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels	x	✓
ND		10% by 2015	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Hydrogen, Electricity from Waste Heat, Anaerobic Digestion	x	x	100 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric	x	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
OH	12.5% by 2024		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Waste Heat, Energy Storage, Clean Coal, Coal Mine Methane, Advanced Nuclear, Anaerobic Digestion, Fuel Cells using Renewable Fuels, Microturbines	From 1% annual electric sales reduction beginning in 2014, to 2% after 2019 resulting in 22% cumulative reductions by the end of 2025		No limit		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines	✓	✓
OK		15% by 2015	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies	×	×	100 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric	×	✓
OR	25% by 2025		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Hydrogen, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal	×	Electricity: annual reduction of 1% in 2013-2014 Natural Gas: annual reduction of 0.4% in 2014	25/2,000 kW (no limit specified for Ashland customers)		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels	✓	✓
PA	18% by 2021 for renewable and alternative sources		Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Geothermal Heat Pumps, Municipal Solid Waste, CHP/Cogeneration, Waste Coal, Coal Mine Methane, Coal Gasification, Anaerobic Digestion, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies	Electricity Savings of 1% by May 31, 2011 and 3% by May 31, 2013		50/3,000/5,000 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Waste Coal, Coal-Mine Methane, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies	×	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
RI	16% by 2020		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Biodiesel, Fuel Cells using Renewable Fuels	Varies by utility		5,000 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Small Hydroelectric, Ocean Thermal, Fuel Cells using Renewable Fuels	✓	✓
SC	x	x	x	x	x		Varies by utility	Varies by utility	x	✓
SD		10% by 2015	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Hydrogen, Electricity Produced from Waste Heat, Anaerobic Digestion	x	x	x	x	x	x	✓
TN	x	x	x	x	x	x	x	x	x	✓
TX	5,880 MW (5%) by 2015		Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, Tidal Energy, Wave Energy, Ocean Thermal		30% reduction in annual growth in demand in 2013 and thereafter		Varies by utility	Varies by utility	x	✓
UT		20% by 2025	Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Hydrogen, Coal Mine Methane, Compressed Air Energy Storage, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal	x	x	25/2,000 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Hydrogen, Waste Gas and Waste Heat Capture or Recovery, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
VT		20% by 2017	Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Fuel Cells using Renewable Fuels		From 2012-2014 1.9% annual reduction	20/500/2,200 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	✓
VA		15% of 2007 sales by 2025	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Energy from Waste, Anaerobic Digestion, Tidal Energy, Wave Energy		From 2006 to 20022, .63% annual reduction	20/500 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Small Hydroelectric, Tidal Energy, Wave Energy	x	✓
WA	15% by 2020		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Biodiesel	Varies by utility		100 kW		Solar Thermal Electric, Photovoltaics, Wind, Hydroelectric, Fuel Cells, CHP/Cogeneration, Small Hydroelectric, Fuel Cells using Renewable Fuels	x	✓
WV		25% by 2025	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, Other Non-Renewable Alternative Energy Resources, Anaerobic Digestion, Small Hydroelectric, Biodiesel, Fuel Cells using Renewable Fuels	x	x	25/50/500/2,000 kW		Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Small Hydroelectric, Renewable Fuels, Fuel Cells using Renewable Fuels	x	✓

State	Renewable Portfolio Standards		Allowable Sources	Energy Efficiency Resource Standards		Net Metering Standards		Allowable Sources	Local Hire Provision	Minority Business Enterprise
	Mandatory	Voluntary		Mandatory	Voluntary	Mandatory	Voluntary			
WI	10% by 2015		Solar Water Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, Municipal Solid Waste, Solar Light Pipes; Biomass Thermal; Densified Fuel Pellets; Pyrolysis; Synthetic Gas; Biogas, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels	For 2011-2014, .66% annual reduction within the three year period		20/100 kW		Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric, Other Distributed Generation Technologies	✓	✓
WY	x	x	x	x	x	25 kW		Photovoltaics, Wind, Biomass, Hydroelectric, Small Hydroelectric	x	✓

Clean Energy and Energy Efficiency Profiles by State

The following are the comprehensive energy profiles for each of the 50 states, including the District of Columbia. Each profile is a snapshot of the current energy efficiency and renewable energy policies in place. The profiles also include the clean energy generation potential for each state; specifically, a state's ability to harness solar, wind and geothermal energy based on its natural resources and geographic location. Also included in the profiles are the incentives for energy efficiency and clean energy in each state, including tax rebates, grants, loans, etc.



STATE ENERGY EFFICIENCY AND RENEWABLE ENERGY POLICY PROFILES

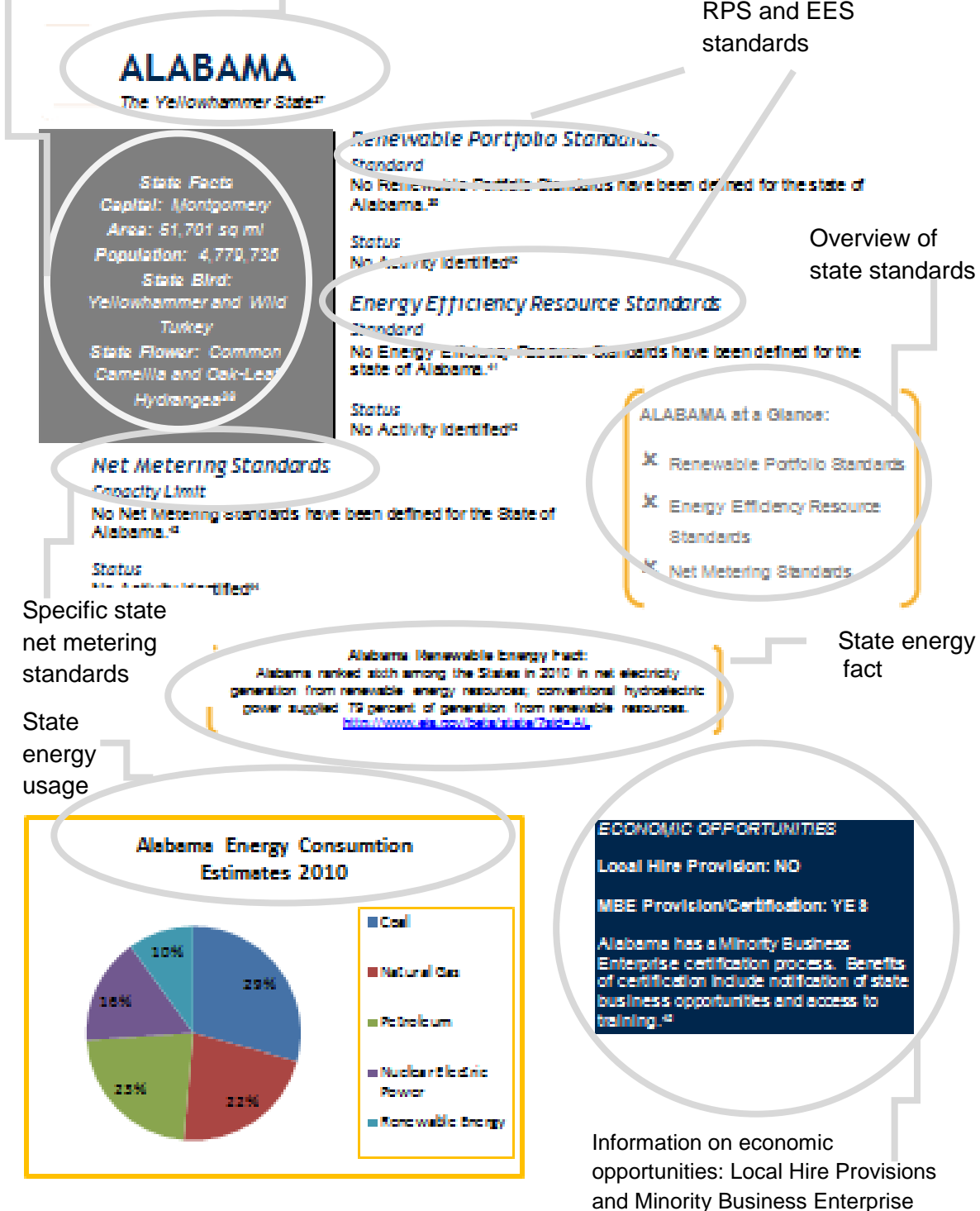
SAMPLE PAGE

State statistics
and fun facts

State name

Specific state
RPS and EES
standards

Overview of
state standards



Information on economic
opportunities: Local Hire Provisions
and Minority Business Enterprise

Sample Page—Detailed Descriptions

The three main standards featured on every state page are the Renewable Portfolio Standards, Energy Efficiency Resource Standards, and Net Metering Standards. The specific details of each standard can be found below:

Renewable Portfolio Standards

1. Policy Name and Date

- a. Ex: Energy Bill, 2009

2. Standard

- a. Options:
- i. No Renewable Portfolio Standards have been defined for the state.
 - ii. States will define their RPS in terms of percentages (%) or megawatt hours (MWh) that their state will commit to produce energy from renewable energy sources by a certain year.

3. Mandatory/Voluntary

- a. Is the Renewable Portfolio Standard mandatory or voluntary?

4. Status

- a. Options:
- i. No Activity Identified.
 - ii. RPS is currently pending/in development.

5. Allowable Sources

- a. List of sources that are accepted as qualifying as defined as renewable, thus making the source eligible to be counted towards achieving the standard.

Energy Efficiency Resource Standards

1. Policy Name and Date

- a. Ex: Energy Bill, 2009

2. Standard

- a. Options
- i. No Energy Efficiency Resource Standards have been defined.
 - ii. States define their RPS in terms of cumulative electricity savings or an annual reduction rate.

3. Status

- a. Options:
- i. No Activity Identified.
 - ii. The current status of the EERS, including “currently pending/under development”.

4. Mandatory/Voluntary

- a. Options:
- i. Mandatory
 - ii. Voluntary

Net Metering Standards

1. **Capacity Limit**

a. *Options:*

i. Per system and Entire State

1. Per system: Features the capacity limit in units of power that generate electricity called kilowatts (kW) of individual net metering systems (systems that generate electricity using eligible renewable energy resources) within residential homes or small facilities.
2. Entire State: Features the capacity limit in units of power that generate electricity called kilowatts (kW) of Net Metering Systems within the entire State. Once this limit is reached, net metering will not be available to new customers.

2. **Mandatory/Voluntary**

a. *Options:*

- i. Mandatory
- ii. Voluntary

3. **Allowable Sources**

- a. List of renewable resources that are accepted as qualifying as eligible for net metering

Example Page: Clean Energy Potential

Background

Describes background information on the state's clean energy potential resources.



Solar: Describes the urban utility-scale PV potential, rural utility-scale PV potential, rooftop PV potential and concentrated solar power potential within the state.*

Wind: Describes the onshore wind power potential and offshore wind power potential within the state.*

Geothermal: Describes the geothermal power potential and the enhanced geothermal energy systems potential within the state.*

**The potential for solar, wind and geothermal in each state is cited according to the potential GWh of generation and the percentage of their potential generation of the state's total net generation.*



ALABAMA

*The Yellowhammer State*¹⁰⁰

State Facts

Capital: Montgomery

Area: 51,701 sq mi

Population: 4,779,736

State Bird:

Yellowhammer and Wild Turkey

State Flower: Common Camellia and Oak-Leaf Hydrangea¹⁰¹

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Alabama.¹⁰²

Status

No Activity Identified¹⁰³

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Alabama.¹⁰⁴

Status

No Activity Identified¹⁰⁵

ALABAMA at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✗ Net Metering Standards

Net Metering Standards

Capacity Limit

No Net Metering Standards have been defined for the State of Alabama.¹⁰⁶

Status

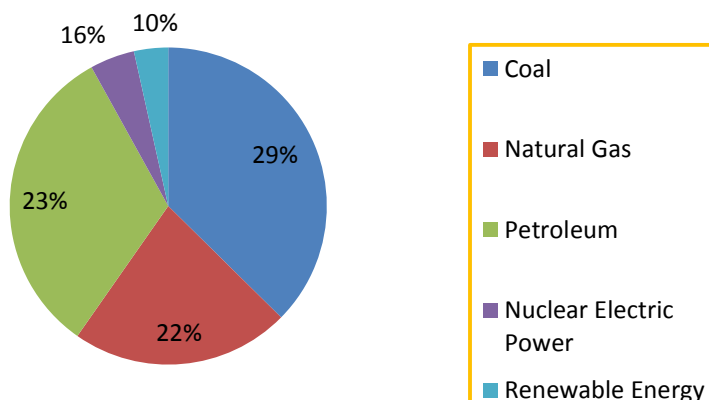
No Activity Identified¹⁰⁷

Alabama Energy Fact:

Alabama ranked sixth among the States in 2010 in net electricity generation from renewable energy resources; conventional hydroelectric power supplied 79 percent of generation from renewable resources.

<http://www.eia.gov/state/print.cfm?sid=AL>

Alabama Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Alabama has a Minority Business Enterprise certification process. Benefits of certification include notification of state business opportunities and access to training.¹⁰⁸

Clean Energy Potential in Alabama

Background

Alabama produced 51% of its electricity from coal in 2008. Nearly 80% of its coal was imported at a net cost of \$1.39 billion, giving Alabama ratepayers the second highest electricity bills in the country.¹⁰⁹

Pioneer Green Energy currently plans to build an 18 MW (.056 of total net generation) wind farm in Cherokee County and an 80 MW (.26% of total net generation) wind farm in Etowah County.



Solar: Alabama has urban utility-scale PV potential of producing 35,861 GWh (23.56% of total net generation), rural utility-scale PV potential of producing over 3,706,839 GWh (100% of total net generation), and rooftop PV potential of producing 15,476 GWh (10% of total net generation).

Wind: Onshore wind power potential is 283 GWh (.18% of total net generation).

Geothermal: The enhanced geothermal energy systems potential is 535,490 GWh (over 100% of total net generation) in the state.¹¹⁰

Incentives in Alabama

Type	Incentives	Description
Statewide	Alabama SAVES Revolving Loan Program	The Alabama Department of Economic and Community Affairs (ADECA) offers funds to businesses and industries for retrofitting existing facilities.
	Biomass Energy Program	Businesses receive up to \$75,000 in interest subsidy payments to help defray the interest expense on loans to install approved biomass projects. Technical assistance is also available.
	Local Government Energy Loan Program	Through a public-private partnership with Power South, Alabama's Local Government Energy Loan Program offers zero-interest loans to local governments, K-12 schools, and public colleges and universities for renewable energy systems and energy efficiency improvements that will eventually have a payback through utility savings.
	Personal Wood-Burning Heating System Tax Deduction	This statute allows individual taxpayers a deduction for the purchase and installation of a wood-burning heating system.
Utility-Specific	Alabama Gas Corporation - Residential Natural Gas Rebate Program	Alabama Gas Corporation (Alagasco) offers various rebates to its residential customers who replace older furnaces, water heaters, cook tops, ranges and clothes dryers with new, efficient equipment.

Type	Incentives	Description
Utility-Specific	Alabama Power - Residential Heat Pump and Weatherization Loan Programs	Alabama Power offers low-interest loans to residential customers to purchase and install new heat pumps and a variety of weatherization measures.
	Central Alabama Electric Cooperative - Residential Energy Efficiency Rebate Program	Central Alabama Electric Cooperative, a Touchstone Electric Cooperative, offers the Touchstone Energy Home Program. Touchstone Energy Homes with a dual-fuel or geothermal heat pump qualify for rebates up to \$1,200.
	Cherokee Electric Cooperative - Residential Energy Efficiency Loan Programs	Cherokee Electric Cooperative offers loans to residential customers for making energy efficiency improvements.
	Cullman Electric Cooperative - Energy Efficient Homes Program	Cullman Electric Cooperative offers rebates to residential customers that make certain energy efficiency improvements to newly constructed, all electric homes.
	Cullman Electric Cooperative - Energy Conservation Loan Program	This program provides members a loan for insulation or storm windows. Maximum loan is \$2,000, payable up to 36 months at a rate of 8%.
	Dixie Electric Cooperative - Residential Energy Efficiency Loan Program	Dixie Electric Cooperative, a Touchstone Electric Cooperative, offers the Energy Resources Conservation (ERC) loan to residential customers who pursue energy efficiency measures.
	Sand Mountain Electric Cooperative - Residential Heat Pump Loan Program	The Sand Mountain Electric Cooperative offers a heat pump loan program to eligible residential members.

Type	Incentives	Description
Utility-Specific	<u>South Alabama Electric Cooperative - Residential Energy Efficiency Loan Program</u>	The Energy Resources Conservation Loan (ERC) helps members of the cooperative cover the cost of labor and materials for energy conservation measures on existing structures.
	<u>TVA - Energy Right Solutions for Business</u>	TVA offers the Energy Right Solutions Program to commercial and industrial facilities.
	<u>TVA - Green Power Providers</u>	Tennessee Valley Authority (TVA) and participating power distributors of TVA power offer a performance-based incentive program to homeowners and businesses for the installation of renewable generation systems from the following qualifying resources: PV, wind, hydropower, and biomass.
	<u>TVA - Mid-Sized Renewable Standard Offer Program</u>	The Tennessee Valley Authority (TVA) now complements the small generation Green Power Providers Program by providing incentives for mid-sized renewable energy generators between 50 kW and 20 MW to enter into long-term price contracts.
	<u>TVA Partner Utilities - Energy Right New Homes Program</u>	The Tennessee Valley Authority (TVA) Energy Right New Homes Plan provides incentives for all electric, energy efficient new homes by offering graduated rebates for new homes.

Type	Incentives	Description
Utility-Specific	TVA Partner Utilities - Energy Right Water Heater Program	The Tennessee Valley Authority (TVA) Energy Right Water Heater Program promotes the installation of high efficiency water heaters in homes and small businesses.
	TVA Partner Utilities - In-Home Energy Evaluation Pilot Program	The Tennessee Valley Authority (TVA) Energy Right In-Home Energy Evaluation Pilot Program encourages the installation of energy efficiency improvements in existing single-family dwellings.
	TVA Partner Utilities - Energy Right Heat Pump Program	The Tennessee Valley Authority (TVA) Energy Right Heat Pump Program provides financing to promote the installation of high efficiency heat pumps in homes and small businesses.
	Wiregrass Electric Cooperative - H2O Plus Program	Through the H2O Plus Program, qualified Wiregrass customers can receive a free high-efficiency water heater.
Local	WISE Home Energy Program	The WISE Home Energy Program provides up to \$750 in energy efficiency rebates for homeowners in Cullman, Madison, Jefferson, Shelby, Morgan, Limestone and Lawrence counties.

ALASKA

The Last Frontier State¹¹¹



Renewable Portfolio Standards

Policy Name and Date

House Bill 306,
June 16, 2010

Standard

50% renewable by 2025

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat

Pumps, CHP/Cogeneration, Solar Pool Heating (commercial only), Daylighting (non-residential only), Solar Space Cooling, Solar HVAC, Additional technologies upon approval*, CHP only counts when the source of fuel is an eligible renewable energy resource, such as Anaerobic Digestion, Fuel Cells using Renewable Fuels, Geothermal Direct-Use¹¹³

ALASKA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

State Facts

Capital: Juneau
Area: 590,693 sq mi
Population: 710,231
State Bird: Willow Ptarmigan
State Flower: Alpine Forget-Me-Not¹¹²

Alaska Energy Fact

Alaska was one of eight States in 2011 generating electricity from geothermal energy sources.

<http://www.eia.gov/beta/state/?sid=AK>

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Alaska.¹¹⁴

Status

No Activity Identified.¹¹⁵

Net Metering Standards

Capacity Limit

Per System: 25 kW
Entire State: 1.5% of average retail demand

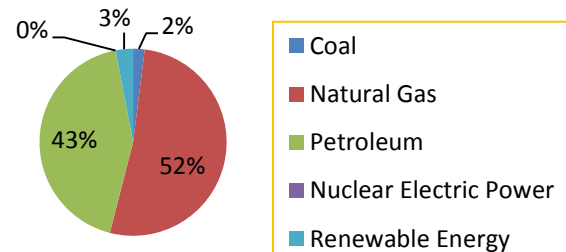
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Hydrokinetic, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal¹¹⁸

Alaska Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

The Alaska National Interest Lands Conservation Act (Public Law 487, December 2, 1980) provided for the establishment of an Alaska local hire program for land conservation organizations.¹¹⁶

MBE Provision/Certification: YES

The Department of Environmental Conservation's Alaska Clean Water Fund & Alaska Drinking Water Fund revolving loan project are required to comply with EPA regulations concerning the use of Disadvantaged Business Enterprises (DBEs).¹¹⁷

Alaska's Department of Transportation certifies DBEs for federally assisted projects.

Clean Energy Potential in Alaska

Background

Alaska has some of the best wind resources in the nation and receives more sunlight during the summer than the equator. In 2011, Alaska was one of eight states generating electricity from geothermal energy sources and it continues to be a leader in producing geothermal energy sources, due to the abundance of volcanoes and hot springs.¹¹⁹



Solar: Alaska has urban utility-scale PV potential of producing 166 GWh (2.46% of total net generation) and rural utility-scale PV potential of producing 8,282,976 GWh (100% of total net generation).

Wind: Onshore wind power potential is 1,373,433 GWh (100% of total net generation). There are several wind farms under construction throughout the state at this time.

Geothermal: The potential for hydrothermal power in the state is 15,437 GWh (over 100% of total net generation).¹²⁰

Incentives in Alaska

Type	Incentives	Description
Statewide	Association Loan Program	With this loan, the Alaska Housing Finance Corporation (AHFC) will fund homeowners' associations (HOAs) common area improvements.
	Energy Efficiency Interest Rate Reduction Program	The Alaska Housing Finance Corporation (AHFC) offers interest rate reductions to homebuyers purchasing new and existing homes with 5 Star and 5 Star Plus energy ratings.
	Energy Efficiency Revolving Loan Fund Program	This program is administered by the Alaska Housing Finance Corporation (AHFC) and offers loans to schools, the University of Alaska, state government, and municipal governments for energy efficiency improvements.
	Home Energy Rebate Program	Under the Home Energy Rebate Program, homeowners who want to make their own energy efficiency improvements on their home can receive a rebate for some of their expenditures.
	Local Option - Property Tax Exemption for Renewable Energy Systems	Alaska enacted legislation in June 2010 to authorize municipalities to pass ordinances that exempt residential renewable energy systems from taxation.

Type	Incentives	Description
Statewide	Power Project Loan Fund	Created by the Alaska State Legislature and administered by the Alaska Energy Authority, this fund provides loans to electric utilities, regional electric utilities, municipalities, regional and village corporations, village councils, and independent power producers.
	Renewable Energy Grant Program	The grant program is intended to provide assistance to utilities, independent power producers, local governments, and tribal governments for feasibility studies, reconnaissance studies, energy resource monitoring, and work related to the design and construction of eligible facilities.
	Second Mortgage Program for Energy Conservation	Alaska Housing Finance Corporation (AHFC) offers loans of up to \$100,000, with a repayment term of 15 years, to qualified borrowers through the Second Mortgage for Energy Conservation program.
	Small Building Material Loan	The Alaska Housing Finance Corporation (AHFC) offers a Small Building Materials Loan for applicants to complete or renovate property located within a "small community", as defined in the AHFC glossary.

Type	Incentives	Description
Utility-Specific	<u>Golden Valley Electric Association - Commercial Lighting Retrofit Rebate Program</u>	Business \$ense is a Golden Valley Electric Association (GVEA) program designed to increase the efficiency with which energy is used on GVEA's system.
	<u>Golden Valley Electric Association - Residential Energy Efficiency Rebate Program for Builders</u>	Golden Valley Electric Association's (GVEA) Builder \$ense program targets homebuilders who install electrical energy efficiency measures during construction of residential buildings.
	<u>Golden Valley Electric Association - Sustainable Natural Alternative Power (SNAP) Program</u>	Golden Valley Electric Association's (GVEA) SNAP program encourages members to install renewable energy generators and connect them to the utility's electrical distribution system by offering an incentive payment based on the system's production on a dollar per kilowatt-hour (\$/kWh) basis.



ARIZONA

*The Grand Canyon State*¹²¹

State Facts

Capital: Phoenix
Area: 113,991 sq mi
Population: 6,392,017
State Bird: Coues' Cactus Wren
State Flower: Saguaro Cactus Blossom¹²²

Renewable Portfolio Standards

Policy Name and Date
 AAC R14-2-1801 et seq., August 14, 2007

Standard
 15% renewable by 2025

Mandatory/Voluntary
 Mandatory

ARIZONA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Arizona Energy Fact

In 2011, 9% of Arizona's net electricity generation came from renewable resources, primarily from the Glen Canyon and Hoover Dams.

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, CHP/Cogeneration, Solar Pool Heating (commercial only), Daylighting (non-residential only), Solar Space Cooling, Solar HVAC, additional technologies upon approval*, CHP only counts when the source fuel is an eligible renewable energy resource, Anaerobic Digestion, Fuel Cells using Renewable Fuels, Geothermal Direct-Use¹²³

Energy Efficiency Resource Standards

Policy Name and Date

Arizona Administrative Code - Title 14, Chapter 2, Article 24, August 2010

Standard

In 2009, the Arizona Corporation Commission (ACC) ordered that all investor-owned utilities must achieve 1.25% annual electricity savings starting in 2011, ramping up to 2% beginning in 2013. This energy efficiency resource standard, (EERS), will ultimately result in 22% cumulative savings by 2020.

Mandatory/Voluntary

Mandatory¹²⁶

Net Metering Standards

Capacity Limit

Per System: No capacity limit specified.
 However, any system must be sized to meet part or all of a customer's electric load and may not exceed 125% of a customer's total connected load.
 Entire State: No limit Specified

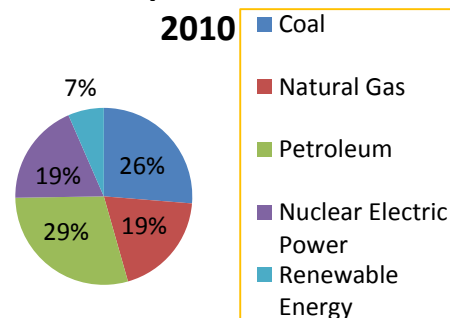
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, HP/Cogeneration, Hydrogen, Biogas, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels¹²⁷

Arizona Energy Consumption Estimate 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

Extra credit multipliers may be earned for in-state solar installation and in-state manufactured content. If a utility makes an investment in a solar electric manufacturing plant located in-state or provides incentives for a plant to locate in the state, the utility can acquire RECs for the main RPS tier equal to the capacity of the panels produced multiplied by 2,190 hours.¹²⁴

MBE Provision/Certification: YES

The Arizona Department of Transportation, City of Phoenix, and the City of Tucson certify DBE firms.¹²⁵

Clean Energy Potential in Arizona

Background

Arizona has consistently sunny skies for solar power, wind-blown plains and deserts for turbines, and underground heat that is desirable for geothermal energy.¹²⁸

Arizona utilities are currently engaging in groundbreaking experimentation in storing solar energy during the day to be used at night.



Solar: Arizona has urban utility-scale PV potential of producing 121,306 GWh (1.08% of total net generation), rural utility-scale PV potential of producing 11,867,694 GWh (over 100% of total net generation), rooftop PV potential of producing 22,736 GWh (29.34% of total net generation) and concentrated solar power of producing 12,544,334 GWh (over 100% of total net generation).

Wind: Onshore wind power potential in the state is 26,036 GWh (23.3% of total net generation).

Geothermal: Hydrothermal power potential in Arizona is 8,330 GWh (7.4% of total net generation) and enhanced geothermal systems potential is 1,239,148 GWh (over 100% of total net generation).¹²⁹

Incentives in Arizona

Type	Incentives	Description
Statewide	Energy Equipment Property Tax Exemption	Arizona's property tax exemption was established in June 2006 (HB 2429) and originally applied only to "solar energy devices and any other device or system designed for the production of solar energy for on-site consumption." HB 2332, signed in July of 2009, expanded the exemption to include other renewable energy technologies, as well as combined heat and power systems, and energy efficient building components.
	Non-Residential Solar & Wind Tax Credit (Corporate)	The tax credit, which may be applied against corporate or personal taxes, is equal to 10% of the installed cost of qualified "solar energy devices" and applies to taxable years beginning January 1, 2006 and extending through December 31, 2018.
	Non-Residential Solar & Wind Tax Credit (Personal)	The tax credit, which may be applied against corporate or personal taxes, is equal to 10% of the installed cost of qualified "solar energy devices" and applies to taxable years beginning January 1, 2006 and extending through December 31, 2018.
	Property Tax Assessment for Renewable Energy Equipment	Renewable energy equipment owned by utilities and other entities operating in Arizona is assessed at 20% of its depreciated cost for determining property tax.

Type	Incentives	Description
Statewide	Qualifying Wood Stove Deduction	This incentive allows Arizona taxpayers to deduct the cost of converting an existing wood fireplace to a qualifying wood stove.
	Renewable Energy Business Tax Incentives	SB 1403, signed in July of 2009, created tax incentives intended to draw renewable energy product manufacturers to Arizona.
	Renewable Energy Production Tax Credit (Corporate)	Senate Bill 1254 of 2010 created a tax credit for electricity produced by certain renewable resources.
	Renewable Energy Production Tax Credit (Personal)	Senate Bill 1254 of 2010 created a tax credit for electricity produced by certain renewable resources.
	Residential Solar and Wind Energy Systems Tax Credit	Arizona's Solar Energy Credit is available to individual taxpayers who install a solar or wind energy device at the taxpayer's Arizona residence.
	Solar and Wind Equipment Sales Tax Exemption	Arizona provides a sales tax exemption for the retail sale of solar energy devices and for the installation of solar energy devices by contractors.
Utility-Specific	APS - Renewable Energy Incentive Program	Through the Renewable Incentive Program, Arizona Public Service (APS) offers customers who install various renewable energy systems the opportunity to sell the renewable energy credits (RECs) associated with the energy generated to APS.
	APS - Energy Efficiency Solutions for Business	APS Solutions for Business incentives help businesses increase energy efficiency and reduce energy use.

Type	Incentives	Description
Utility-Specific	APS - Solutions for Business Financing	APS and National Bank of Arizona have collaborated to offer low-interest financing to all customers qualifying for energy efficiency incentives under the Solutions for Business Program.
	Electric District No. 3 - Solar Rebate Program	Electric District No. 3 of Pinal County (ED3) provides incentives for their residential and business customers to invest in photovoltaics (PV).
	Mohave Electric Cooperative - Renewable Energy Incentive Program	Mohave Electric Cooperative provides incentives for its customers to install renewable energy systems on their homes and businesses.
	Mohave Electric Cooperative - Heat Pump Rebate Program	Mohave Electric Cooperative offers rebates for installation of energy efficient heat pumps.
	Southwest Gas Corporation - Smarter Greener Better Solar Water Heating Program	Southwest Gas Corporation provides a financial incentive for its customers to install solar water heating systems.
	Southwest Gas Corporation - Combined Heat and Power Program	Southwest Gas Corporation (SWG) offers incentives to qualifying commercial and industrial facilities who install efficient Combined Heat and Power Systems (CHP).
	Southwest Gas Corporation - Commercial High-Efficiency Equipment Rebate Program	Southwest Gas Corporation (SWG) offers rebates to commercial customers in Arizona who purchase energy efficient natural gas equipment.

Type	Incentives	Description
Utility-Specific	Southwest Gas Corporation - Residential and Builder Efficiency Rebate Program	Southwest Gas Corporation (SWG) offers rebates to residential customers in Arizona who purchase and install energy efficient natural gas tankless water heaters, clothes dryers, windows, attic insulation and floor insulation.
	SRP - EarthWise Solar Energy Incentive Program	SRP's EarthWise Solar Energy Program provides incentives to its residential and commercial customers to purchase PV or solar water heating systems.
	SRP - PowerWise Business Solutions Energy Efficiency Rebate Program	SRP Business Solutions is a program designed to help SRP business customers manage energy usage and increase the energy efficiency of participating facilities.
	SRP - Residential Energy Efficiency Rebate Program	SRP's Residential Energy Efficiency Rebate Program is designed to encourage residential SRP customers to utilize energy efficient appliances and measures at home.
	Sulphur Springs Valley EC - SunWatts Rebate Program	The SunWatts Program offers home and business owners two different incentive options.
	Sulphur Springs Valley EC - Residential Energy Efficiency Rebate	SSVEC's residential rebate program offers a \$500 rebate for the installation of 15 SEER or higher electric heat pumps and a \$200 rebate for the installation of 16 SEER or higher dual-fuel heat pumps.

Type	Incentives	Description
Utility-Specific	Sulphur Springs Valley EC - SunWatts Loan Program	Sulphur Springs Valley Electric Cooperative (SSVEC) has a loan program that allows its members to finance a portion of a photovoltaic (PV) or small wind system.
	Sulphur Springs Valley EC - Residential Energy Efficiency Loan Program	SSVEC offers the Member Loan Program to residential customers to improve the energy efficiency of eligible homes.
	TEP - Renewable Energy Credit Purchase Program	Tucson Electric Power (TEP) created the SunShare Program in 2001 to encourage residential and business customers to install new photovoltaic (PV) equipment.
	TEP - Commercial Energy Efficiency Rebate Program	TEP's Large and Small Business Programs are for making a variety of energy efficient improvements to already existing facilities. TEP's Commercial New Construction program provides rebates for non-residential members for designing and constructing new energy efficient facilities.
	TEP - Contractor Energy Efficiency Rebate Program	Tucson Electric Power (TEP) offers rebate programs for residential customers who install energy efficient equipment in existing homes.
	TEP - Small Business Energy Efficiency Rebate Program	TEP's Small Business Program encourages contractors to install selected high-efficiency lighting, HVAC and refrigeration measures for TEP small business customers.

Type	Incentives	Description
Utility-Specific	Trico Electric Cooperative - SunWatts Incentive Program	Through the SunWatts Program, Trico Electric Cooperative offers residential and business customers a rebate for installing photovoltaic (PV) systems and solar water heaters.
	UES - Renewable Energy Credit Purchase Program	Through the Renewable Incentive Program, UniSource Energy Services (UES) offers customers who install various renewable energy sources the opportunity to sell the credits associated with the energy generated to UES.
	UES - Commercial Energy Efficiency Rebate Program	UniSource Energy Services (UES) offers the Commercial Energy Solutions Program for non-residential electric customers to upgrade existing equipment with more energy efficient measures.
	UES (Electric) - Residential Efficiency Program	UniSource Energy Services (UES) offers rebates to electric customers for the installation of air conditioners and heat pumps, as well as offering gas customers incentives on energy efficient equipment.
	UES (Gas) - Commercial Energy Efficiency Rebate Program	UniSource Energy Services (UES) offers the Commercial Energy Solutions Program for non-residential gas customers to install energy efficient equipment.
	UES (Gas) - Residential Efficiency Program	UniSource Energy Services (UES) offers rebates to gas customers for the purchase and installation of energy efficient equipment and measures.

Type	Incentives	Description
Utility-Specific	UniSource Energy - Contractor Energy Efficiency Rebate Program	UniSource Electric Power offers rebate programs for residential customers who install energy efficient equipment in existing homes.
Local	City of Chandler - Expedited Plan Review for Green Buildings	The mayor and city council of Chandler, AZ adopted Resolution 4199 in June 2008, establishing incentives for green building in the private sector.
	City of Phoenix - Energize Phoenix Residential Incentives	The city of Phoenix was awarded a \$25 million federal grant from the U.S. Department of Energy Better Buildings Neighborhood Program and the American Recovery and Reinvestment Act (ARRA) to launch the Energize Phoenix program in partnership with Arizona State University and with support from Arizona Public Service.
	City of Phoenix - Energize Phoenix Commercial Incentives	Through a partnership with Arizona State University and Arizona Public Service (APS), the City of Phoenix is providing incentives for businesses located along a 10-mile stretch of the Metro light rail to improve the energy efficiency of their buildings.
	City of Scottsdale - Green Building Incentives	Scottsdale's Green Building Program, established in 1998, was the first such program in Arizona with an emphasis on residential home construction.

Type	Incentives	Description
Local	City of Tucson - Permit Fee Credit for Solar Energy Systems	The City of Tucson passed Resolution No. 20193 on September 27, 2005, to encourage the installation of solar energy systems throughout the city.
	Town of Buckeye - Green Building Incentive	Buckeye's Green Home Building Program was adopted by Town Council on May 6, 2008 and encourages sustainable construction for residential dwellings.

ARKANSAS

The Nature State¹³⁰



Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Arkansas.¹³²

Status

No Activity Identified¹³³

Energy Efficiency Resource Standards

Policy Name and Date

Arizona Administrative Code - Title 14, Chapter 2, Article 24, December 2010

Standard

0.25% annual reduction in 2011, 0.50% annual reduction in 2012 and 0.75% annual reduction in 2013-2014, increasing to 0.9% in 2015

Mandatory/Voluntary

Voluntary¹³⁴

ARKANSAS at a Glance:

- ✗ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: 300 kW for non-residential; 25 kW for residential
Entire State: No Limit Specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Microturbines using Renewable Fuels, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines¹³⁵

Arkansas Energy Fact

Biomass supplied all of Arkansas' non-hydroelectric renewable energy resources for electricity generation in 2010. <http://www.eia.gov/beta/state/?sid=AZR>

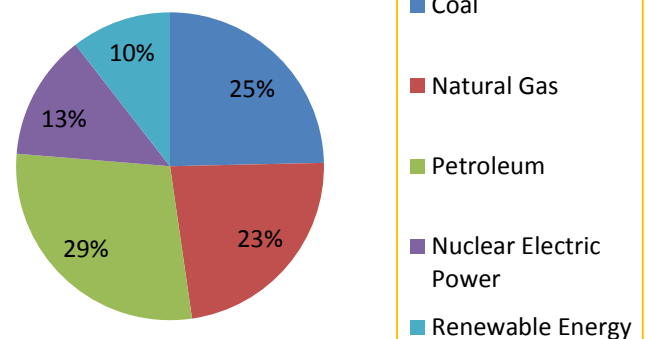
ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Act 1456 of 2003 creates a certification process for MBEs. Benefits of certification include notifications of opportunities to do business with state agencies and special trainings.¹³⁶

Arkansas Energy Consumption Estimates 2010



Clean Energy Potential in Arkansas

Background

Arkansas is home to the University of Arkansas at Fayetteville, which hosts the National Center for Reliable Electric Power Transmission. NCREPT does extensive research on the high voltage transmission side of the power sector. Through its critical research, NCREPT has the potential to produce game changing analysis that will enable significant expansion in renewable energy usage.

Solar, wind and geothermal energy sources remain largely untapped in Arkansas and could provide important opportunities for economic growth.¹³⁷



Solar: Arkansas has urban utility-scale PV potential of producing 121,306 GWh (100% of total net generation), rural utility-scale PV potential of producing 4,986,389 GWh (100% of total net generation), rooftop PV potential of producing 8,485 GWh (13.9% of total net generation).

Wind: Onshore wind power potential is 22,892 GWh (37.5% of total net generation).

Geothermal: Enhanced geothermal systems potential is 628,622 GWh (over 100% total net generation).¹³⁸

Incentives in Arkansas

Type	Incentives	Description
Statewide	Small Business Revolving Loan Fund	The Arkansas Department of Environmental Quality (ADEQ) offers low-interest loans to small businesses to institute pollution control measures required by state or federal law, or to institute pollution prevention and waste reduction measures.
	Sustainable Building Design Revolving Loan Fund	The Arkansas Energy Office granted the Arkansas Building Authority \$11,370,000 to administer a loan program to state buildings incorporating new energy efficiency measures budgeted over \$250,000. Funds are available on a continuing basis.
	Wind Energy Manufacturing Tax Incentive	With the passage of HB 2230 (2009) in April 2009, the Arkansas Legislature expanded a tax incentive for manufacturers of windmill blades or components.
Utility-Specific	AEP SWEPCO - Commercial and Industrial Energy Efficiency Rebate Programs	AEP's Commercial & Industrial Standard Offer Program (C&I SOP) pays incentives to service providers who install energy efficiency measures in commercial or industrial facilities that are located within AEP's Arkansas service territories.
	AEP SWEPCO - Residential Energy Efficiency Rebate Program	SWEPCO Arkansas offers a variety of rebates to residential customers in its service territory. Eligible equipment includes central ac units, heat pumps, insulation, air sealing, duct sealing, windows, window film, water heaters, equipment insulation and light fixtures.

Type	Incentives	Description
Utility-Specific	CenterPoint Energy (Gas) - Residential Heating and Hot Water Rebates	CenterPoint Energy offers gas heating and water heating equipment rebates to its residential customers.
	CenterPoint Energy (Gas) - Business Gas Heating Rebates	The Commercial and Industrial Prescriptive program offers rebates for the installation of energy efficient furnaces, boilers, water heaters, and cooking equipment.
	Empire District Electric - Commercial & Industrial Energy Efficiency Rebates	The Empire District Electric Company offers a Commercial/Industrial Prescriptive Rebate Program to its non-residential customers in Arkansas who purchase certain high-efficiency equipment for eligible facilities.
	Empire District Electric - Residential Energy Efficiency Rebate Program	Empire District Electric Company (EDEC) offers rebates to residential customers for energy audits, weatherization measures, central air conditioning systems, and energy efficient home appliances.
	Entergy Arkansas - CitySmart Energy Efficiency Program	The CitySmart Program is an energy efficiency program designed to provide financial incentives to public sector, K-12 schools, and higher education customers for the installation of a wide range of energy efficiency measures that provide energy savings in eligible facilities.
	Entergy Arkansas - Commercial and Industrial Energy Efficiency Programs	Entergy Arkansas has several programs to help commercial and industrial customers increase the energy efficiency of eligible facilities.

Type	Incentives	Description
Utility-Specific	Entergy Arkansas - Residential Energy Efficiency Programs	Entergy Arkansas offers the Residential Energy Solutions Program to help residential customers understand and make energy efficiency improvements in participating homes.
	First Electric Cooperative - Home Improvement Loans	The Home Improvement Loan Program allows members to borrow between \$500 and \$15,000 for energy efficiency home improvements associated with heat pumps, First Electric products and portable home generators.
	North Arkansas Electric Cooperative, Inc - Residential Energy Efficiency Loan Program	The N.A. Electric Cooperative provides low interest rates for energy efficiency improvements in the home through the Energy Resource Conservation (ERC) Loan Program.
	OGE - Commercial Energy Efficiency Rebate Programs	Oklahoma Gas and Electric (OGE) offers lighting, HVAC, motor and other custom rebates to commercial customers in Arkansas to improve the energy efficiency of their facilities.
	Ozarks Electric Cooperative - Residential Energy Efficiency Loan Program	Ozarks Electric Cooperative, a Touchstone Energy Cooperative®, offers the Energy Resource Conservation (ERC) Loan Program to residential members to help make energy efficiency improvements in eligible homes.
	SourceGas - Commercial and Industrial Energy Efficiency Rebate Program	The SourceGas energy efficiency programs are available to all commercial and industrial SourceGas customers in Arkansas.

Type	Incentives	Description
Utility-Specific	SourceGas - Residential Energy Efficiency Rebate Program	SourceGas offers various incentives for high efficiency home heating and water heating equipment.



CALIFORNIA

The Golden State¹³⁹

State Facts

Capital: Sacramento

Area: 158,608 sq mi

Population: 37,253,956

State Bird: California

Valley Quail

State Flower: California

Poppy¹⁴⁰

Renewable Portfolio Standards

Policy Name and Date

CA Executive Order S-21-09, April 12, 2011

Standard

33% renewable by 2020

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Municipal Solid Waste, Energy Storage, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Biodiesel, Fuel Cells using Renewable Fuels¹⁴¹

California Energy Fact

In 2011, California ranked third in the nation in conventional hydroelectric generation, first in net electricity generation from other renewable energy resources, and first as a producer of electricity from geothermal energy.

<http://www.eia.gov/state/?sid=CA>

Energy Efficiency Resource Standards

Policy Name and Date

Assembly Bill 2021, July 31, 2008

Standard

Varies by utility

Mandatory/Voluntary

Mandatory¹⁴²

Net Metering Standards

Capacity Limit

Per System: 1,000 kW; 5,000 kW for systems owned by, operated by, or on property under the control of, a local government or university
Entire State: 5% of aggregate customer peak demand (statewide limit of 112.5 MW for fuel cells)

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Fuel Cells, Municipal Solid Waste, Biogas from manure methane production or as a byproduct of the anaerobic digestion of biosolids and animal waste, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels¹⁴⁶

CALIFORNIA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

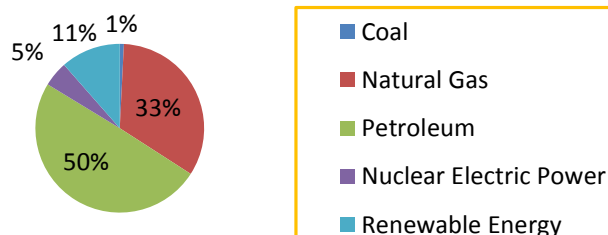
In California, voters approved a Clean Energy Job Creation Fund that will direct up to \$550 million each year into energy efficiency and renewable energy projects on public buildings like solar panels on school roofs.¹⁴³

San Francisco's 1998 First Source program requires that for all government assisted construction projects; employers must make a good faith effort to hire Economically Disadvantaged Residents referred by San Francisco's Workforce Development System.¹⁴⁴

MBE Provision/Certification: YES

California requires 15% of the dollar amount spent on construction, professional services, materials, supplies, equipment, alteration, repair, or improvement by a state governmental entity to go towards Minority Business Enterprises.¹⁴⁵

**California Energy Consumption
Estimates 2010**



Clean Energy Potential in California

Background

Public support for rooftop solar and investments by major companies are on track to push renewable energy generation beyond California's targets by 2020.

California has consistently sunny skies for solar power, wind-blown plains and deserts for turbines, and underground heat that is desirable for geothermal energy.¹⁴⁷



Solar: California has urban utility-scale PV potential of 246,008 GWh (100% of total net generation), rural utility-scale PV potential of 8,855,917 GWh (over 100% of total net generation), and rooftop PV potential of 106,411 GWh (52.1% of total net generation) and concentrated solar power potential of 8,490,916 GWh (over 100% total net generation).

Wind: Onshore wind power potential is 89,862 GWh (44% of total net generation) and offshore wind power potential is 2,662,580 GWh (over 100% of total net generation).

Geothermal: The hydrothermal power potential is 130,921 GWh (64% of total net generation) and enhanced geothermal systems potential is 1,344,179 GWh (over 100% total net generation).¹⁴⁸

Incentives in California

Type	Incentives	Description
Statewide	California Solar Initiative - Solar Thermal Program	AB 1470 of 2007 authorized the creation of a \$350 million incentive program for solar water heating systems.
	California Solar Initiative - Single-Family Affordable Solar Housing (SASH) Program	The California Solar Initiative (CSI) provides financial incentives for installing solar technologies through a variety of smaller sub-programs.
	California Solar Initiative - PV Incentives	In January 2006, the California Public Utilities Commission (CPUC) adopted a program -- the California Solar Initiative (CSI) -- to provide more than \$3 billion in incentives for solar-energy projects with the objective of providing 3,000 megawatts (MW) of solar capacity by 2016.
	California Solar Initiative - Multi-Family Affordable Solar Housing (MASH) Program	The Multifamily Affordable Solar Housing (MASH) Program provides higher incentives to offset the project costs of installing solar on multi-family affordable housing buildings in California.
	California Solar Initiative - Low-Income Solar Water Heating Rebate Program	The California Public Utilities Commission (CPUC) voted in October 2011 to create the California Solar Initiative (CSI) Thermal Low-Income Program for single and multi-family residential properties.
	CEC - New Solar Homes Partnership	Launched on January 2, 2007, the New Solar Homes Partnership (NSHP) is a 10-year, \$400 million program to encourage solar in new homes by working with builders and developers to incorporate into homes, high levels of energy efficiency and high-performing solar systems.

Type	Incentives	Description
Statewide	Energy Efficiency Financing for Public Sector Projects	Cities, counties, public care institutions, public hospitals, public schools and colleges, and special districts in California can apply for low-interest loans from the California Energy Commission for energy efficiency projects in their facilities.
	Energy Upgrade California	The Energy Upgrade California Program serves as a one-stop shop for California homeowners who want to improve the energy efficiency of their homes.
	Feed-In Tariff	All investor-owned utilities and publicly owned utilities with 75,000 or more customers must make a standard feed-in tariff available to their customers.
	Partial Sales and Use Tax Exemption for Agricultural Solar Power Facilities	California provides a partial exemption of the state's sales and use tax for farm equipment and machinery.
	Property Tax Exclusion for Solar Energy Systems	Section 73 of the California Revenue and Taxation Code allows a property tax exclusion for certain types of solar energy systems installed between January 1, 1999, and December 31, 2016.
	Sales and Use Tax Exclusion for Advanced Transportation and Alternative Energy Manufacturing Program	SB 71 of 2010 established a sales and use tax exclusion (STE) for eligible projects on property utilized for the design, manufacture, production or assembly of advanced transportation technologies or alternative source (including energy efficiency) products, components or systems.

Type	Incentives	Description
Statewide	School Facility Program - Modernization Grants	The School Facility Program (SFP) provides funding assistance to school districts for the modernization of school facilities.
	Self-Generation Incentive Program	Initiated in 2001, the Self-Generation Incentive Program (SGIP) offers incentives to customers who produce electricity with wind turbines, fuel cells, various forms of combined heat and power (CHP) and advanced energy storage.
Utility-Specific	Alameda Municipal Power - Solar Photovoltaics Rebate Program	Alameda Municipal Power offers an incentive program to customers who install solar photovoltaic (PV) systems.
	Alameda Municipal Power - Commercial Energy Efficiency Rebate Program	Alameda Power and Telecom offers financial incentives for its commercial customers to install a range of energy efficient equipment and measures.
	Alameda Municipal Power - Commercial New Construction Rebate Program	Grants are available for design assistance, which includes analysis, building modeling, and research. Rebates are available for proposed buildings that exceed Title 24 by at least 10%. Rebates are available for individual systems within a building, including HVAC and lighting.
	Alameda Municipal Power - Residential Energy Efficiency Rebate Program	Alameda Municipal Power (AMP) has multiple programs in place to help encourage its customers to adopt energy efficient equipment and practices in their homes.

Type	Incentives	Description
Utility-Specific	<u>Alameda Municipal Power - Residential Energy Efficiency Grant Program</u>	Alameda Municipal Power (AMP) offers a grant to help residential customers with electric heat to weatherize their homes.
	<u>Anaheim Public Utilities - PV Buydown Program</u>	Anaheim Public Utilities offers a rebate to its residential and business customers who install a solar photovoltaic (PV) system.
	<u>Anaheim Public Utilities - Commercial & Industrial New Construction Rebate Program</u>	Anaheim Public Utilities (APU) offers commercial, industrial, and institutional customers the New Construction Incentives Program to offset construction and installation costs of energy efficient improvements and equipment.
	<u>Anaheim Public Utilities - Commercial Energy Efficiency Rebate Programs</u>	Anaheim Public Utilities (APU) offers several Business Efficiency Incentives Programs to commercial facilities interested in energy efficiency.
	<u>Anaheim Public Utilities - Green Building Rebate Program</u>	Anaheim Public Utilities (APU) offers commercial, industrial, residential, and institutional customers the Green Building Incentives Program to offset construction, installation and upgrade costs of energy efficient equipment.
	<u>Anaheim Public Utilities - Residential Home Efficiency Rebate Program</u>	Upon request, Anaheim Public Utilities will perform a free home efficiency inspection, in which they will recommend energy saving improvements, rebates and provide some free energy saving devices.

Type	Incentives	Description
Utility-Specific	<u>Anaheim Public Utilities - Small Business Energy Management Assistance Program</u>	The Small Business Energy Management System Program provides participating customers with free electrical energy use evaluations, retrofit funding, and installation assistance.
	<u>Anaheim Public Utilities - Low-Interest Energy Efficiency Loan Program</u>	Anaheim Public Utilities offers low-cost financing for energy efficiency measures through the State Assistance Fund for Enterprise, Business and Industrial Development Corporation (SAFE-BIDCO).
	<u>Azusa Light & Water - Solar Partnership Program</u>	Azusa Light & Water provides rebates to customers who install photovoltaic (PV) systems through the utility's Solar Partnership Program.
	<u>Burbank Water and Power - Residential and Commercial Solar Support Program</u>	Burbank Water and Power (BWP) offer customers either an up-front capacity-based rebate for photovoltaic (PV) systems, or a production-based incentive (PBI) with a maximum payment of \$400,000 per year.
	<u>Burbank Water and Power - Energy Solutions Business Rebate Program</u>	Burbank Water and Power offers a rebate to business customers for installing energy efficient equipment in eligible facilities.
	<u>Burbank Water and Power - Green Building Incentive Program</u>	The U.S. Green Building Council is a non-profit organization that promotes the design and construction of buildings that are environmentally responsible, profitable, and healthy places to live and work.

Type	Incentives	Description
Utility-Specific	Burbank Water and Power - Residential Energy Efficiency Rebate Program	Burbank Water and Power (BWP) offers the Home Rewards Rebate Program, which provides incentives to residential customers for installing energy efficient equipment in eligible homes.
	Burbank Water and Power - Business Bucks Energy Efficiency Grant Program	Burbank Water and Power (BWP) offer the Business Bucks Grant Program to its small and mid-sized business customers for installation of energy efficient equipment.
	City of Gridley Utilities - PV Buy Down Program	City of Gridley is providing rebates of \$2.80/W for their customers installing PV systems.
	City of Healdsburg - PV Incentive Program	Through the City of Healdsburg's PV Buy-down Program, residential and commercial customers are eligible for rebates on qualifying grid-connected PV systems.
	City of Lompoc Utilities - PV Rebate Program	City of Lompoc Utilities provides rebates to its electric customers who purchase and install photovoltaic (PV) systems.
	City of Lompoc Utilities - Commercial Energy Efficiency Rebate Program	City of Lompoc Utilities offers rebates to commercial customers for the purchase and installation of energy efficient lighting, clothes washers, dishwashers, replaced refrigerators, new refrigerators, LED exit signs and custom rebates.
	City of Lompoc Utilities - Residential Energy Efficient Appliance Rebate Program	City of Lompoc Utilities (CLU) offers incentives to its residential customers for upgrading the energy efficiency of home appliances.

Type	Incentives	Description
Utility-Specific	City of Palo Alto Utilities - PV Partners	The City of Palo Alto Utilities (CPAU) PV Partners Program offers incentives to customers that install qualifying PV systems.
	City of Palo Alto Utilities - Solar Water Heating Program	City of Palo Alto Utilities is offering incentives for their residential, commercial and industrial customers to install solar water heating systems in their homes and facilities with a goal of 1,000 new systems in the city by 2020.
	City of Palo Alto Utilities - Commercial Energy Efficiency Rebate Program	City of Palo Alto Utilities, through the Commercial Advantage Program and several separate offerings, provides incentives for commercial customers to replace old equipment with new, more efficient equipment.
	City of Palo Alto Utilities - New Construction Residential Rebate Program	The City of Palo Alto encourages homebuilders in Palo Alto to build more efficient residences than is required by state and local codes and ordinances.
	City of Palo Alto Utilities - Smart Energy Rebate Program	City of Palo Alto Utilities offers incentives to residential customers to increase the energy efficiency of homes through the Smart Energy Rebate Program.
	City of Palo Alto Utilities - Commercial and Non-Profit Efficiency Loan Program	City of Palo Alto Utilities (CPAU) provides 0% loans to business and non-profit customers to offset the need for upfront energy efficiency investments in qualifying facilities.

Type	Incentives	Description
Utility-Specific	City of Palo Alto Utilities - Palo Alto CLEAN (Clean Local Energy Accessible Now)	City of Palo Alto Utility's Clean Local Energy Accessible Now (CLEAN) Program provides fixed payments for electricity produced by approved photovoltaic systems over a fixed period.
	City of Shasta Lake Electric Utility - PV Rebate Program	City of Shasta Lake Electric Utility is providing rebates to their customers for the purchase of photovoltaic (PV) systems.
	Corona Department of Water & Power - Solar Partnership Rebate Program	Corona Department of Water & Power is providing rebates for residential and commercial photovoltaic (PV) systems.
	Glendale Water and Power - Solar Solutions Program	The Solar Solutions program provides all customer groups with an incentive to install photovoltaic (PV) systems on their homes and buildings.
	Glendale Water and Power - Energy Efficiency Appliance Rebate Program	Glendale Water and Power (GPW) offers the Smart Home Energy and Water Saving Rebate Program that includes several incentives for residential customers to improve the energy efficiency of participating homes.
	Glendale Water and Power - Solar Solutions Program	The Solar Solutions Program provides all customer groups with an incentive to install photovoltaic (PV) systems on their homes and buildings.

Type	Incentives	Description
Utility-Specific	Glendale Water and Power - Large Business Energy Efficiency Program	Glendale Water and Power (GWP) offers a rebate to its medium and large business customers with electric bills of more than \$3,000 per month (electric usage of 250,000 kWh annually ~ \$36,000 per year) to encourage energy efficiency through the Large Business Incentive Program.
	Glendale Water and Power - Small Business Energy Efficiency Rebate Program	Glendale Water and Power offers incentives to small business customers (monthly electric bill is less than \$3,000) to encourage energy efficiency through the Smart Business Energy Saving Upgrade Program.
	Hercules Municipal Utility - PV Rebate Program	Hercules Municipal Utility offers a \$2.25-per-watt AC rebate (2012 rebate level) to its residential and commercial customers who purchase and install solar photovoltaic (PV) systems smaller than 10 kilowatts (kW).
	Hercules Municipal Utility - Residential Energy Efficiency Rebate Program	Hercules Municipal Utility provides financial incentives for its residential members to increase the energy efficiency of participating homes.
	IID Energy - PV Solutions Rebate Program	Through the PV Solutions Rebate Program, Imperial Irrigation District (IID) provides rebates to its residential and commercial customers who install grid-tied photovoltaic systems.

Type	Incentives	Description
Utility-Specific	IID Energy - Commercial Rebate Program	Imperial Irrigation District (IID) offers incentives to its commercial customers to encourage the adoption of energy efficient technologies.
	IID Energy - New Construction Energy Efficiency Program	IID's New Construction Energy Efficiency Program (NCEEP) is a non-residential new construction and renovation energy efficiency program that combines an integrated design process with financial incentives.
	IID Energy - Residential Energy Efficiency Rebate Program	Imperial Irrigation District Energy offers incentives to residential customers to encourage energy efficiency.
	LADWP - Solar Incentive Program	The Solar Incentive Program has 10 phases with declining incentive levels as certain installed megawatt (MW) targets are met.
	LADWP - Non-Residential Custom Performance Program	Los Angeles Department of Water and Power offers incentives to non-residential customers for the installation of energy saving measures, equipment, or systems that exceed Title 24 or minimum industry standards.
	LADWP - Residential Energy Efficiency Rebate Program	Los Angeles Department of Water and Power (LADWP) offers a variety of rebates for energy efficient equipment used in homes through the Consumer Rebate Program.
	LADWP - Feed-in Tariff (FiT) Program	LADWP is providing a Feed-in Tariff (FiT) Program to support the development of renewable energy projects in its territory.

Type	Incentives	Description
Utility-Specific	<u>Lodi Electric Utility - Residential Energy Efficiency Rebate Program</u>	Lodi Electric Utility (LEU) offers several residential energy efficiency programs, including the Appliance Rebate Program and the Home Improvement Rebate Program.
	<u>Merced Irrigation District - PV Buydown Program</u>	Merced Irrigation District (MID) offers its residential, commercial and non-profit customers a rebate for installing solar electric photovoltaic (PV) systems on their homes and offices.
	<u>Modesto Irrigation District - Photovoltaic Rebate Program</u>	Modesto Irrigation District offers a photovoltaic rebate program for all of their electric customers.
	<u>Modesto Irrigation District - Commercial Energy Efficiency Rebate Program</u>	Modesto Irrigation District's Commercial Power Saver Rebate Program offers incentives to commercial, industrial, and agricultural customers for the purchase and installation of qualifying energy efficient products.
	<u>Modesto Irrigation District - Commercial New Construction Rebate Program</u>	The MPower Business New Construction Rebate Program is available to commercial, industrial, or agricultural customers that presently or will receive electric service from MID.
	<u>Lodi Electric Utility - Residential Energy Efficiency Rebate Program</u>	Lodi Electric Utility (LEU) offers several residential energy efficiency programs, including the Appliance Rebate Program and the Home Improvement Rebate Program.

Type	Incentives	Description
Utility-Specific	Modesto Irrigation District - Custom Commercial Energy Efficiency Rebate Program	The MPower Custom Rebate Program is available to larger commercial, industrial or agricultural customers that replace existing equipment or systems with high efficiency equipment.
	Modesto Irrigation District - New Home Energy Efficiency Rebate Program	Modesto Irrigation District's MPower New Home Program provides incentives to builders and homeowners for designing and building energy efficient homes.
	Modesto Irrigation District - Residential Energy Efficiency Rebate Program	Modesto Irrigation District's Home Rebate Program offers residential customers cash rebates for the purchase and installation of qualifying energy efficient products installed in existing homes.
	Moreno Valley Electric Utility - Solar Electric Incentive Program	Moreno Valley Electric Utility provides rebates to its electric customers for the purchase of photovoltaic (PV) systems.
	Pacific Power - PV Rebate Program	Pacific Power is providing rebates to their customers who install photovoltaic (PV) systems on their homes and facilities.
	Pacific Power - Energy FinAnswer	Pacific Power's Energy FinAnswer Program provides incentives to help customers improve the efficiency of their existing facilities and build new facilities that are significantly more efficient than code.

Type	Incentives	Description
Utility-Specific	Pacific Power - FinAnswer Express	Pacific Power's FinAnswer Express Program includes incentives and technical assistance for lighting, HVAC and other equipment upgrades that increase energy efficiency and exceed code requirements in commercial and industrial facilities.
	Pacific Power - Home Energy Savings Program For Builders	Pacific Power provides an incentive to homebuilders in California to build energy efficient houses through the Energy Star New Homes Program.
	Pacific Power - Residential Energy Efficiency Rebate Programs	Pacific Power offers the Home Energy Savings Program for their residential California customers to improve the efficiency of their homes.
	Pasadena Water and Power - Solar Power Installation Rebate	Pasadena Water & Power (PWP) offers its electric customers a rebate for photovoltaic (PV) installations, with a goal of helping to fund the installation of 14 megawatts (MW) of solar power by 2017.
	Pasadena Water and Power - Commercial Energy Efficiency Rebate Program	Pasadena Water & Power offers the Energy Efficiency Partnering (EEP) program for its non-residential customers to save energy in facilities.

Type	Incentives	Description
Utility-Specific	Pasadena Water and Power - Residential Energy Efficiency Rebate Program	Pasadena Water and Power (PWP) offers rebates to residential customers on a wide variety of energy efficient technologies, including: Clothes Washers, Refrigerators, Lighting Fixtures, Ceiling/Attic/Roof Fans, Central/Room A/C, Heat Pumps, and Programmable Thermostats.
	PG&E - California Advanced Homes Incentives	Pacific Gas & Electric (PG&E) offers an incentive to homebuilders to build homes, which exceed 2008 Title 24 standards by 15%.
	PG&E - Multi-Family Residential Energy Efficiency Rebates	Through the Rebates for Multi-Family Properties Program, PG&E offers prescriptive rebates for owners and managers of multi-family properties of two or more units.
	PG&E - Non-Residential Energy Efficiency Rebates	Pacific Gas and Electric Company (PG&E) offers rebates and other incentives to businesses and non-residential customers to increase their energy efficiency.
	PG&E - Residential Energy Efficiency Rebate Programs	Pacific Gas and Electric Company (PG&E) offers a variety of rebates for residential customers who install energy efficient equipment in eligible homes.
	PG&E (Gas) - Multi-Family Residential Energy Efficiency Rebates	Through the Rebates for Multi-Family Properties Program, PG&E offers prescriptive rebates for owners and managers of multi-family properties of two or more units.

Type	Incentives	Description
Utility-Specific	PG&E (Gas) - Non-Residential Energy Efficiency Rebates	Pacific Gas and Electric Company (PG&E) offers rebates and other incentives to non-residential natural gas customers to increase energy efficiency.
	PG&E (Gas) - Residential Energy Efficiency Rebate Programs	Pacific Gas and Electric Company (PG&E) offers rebates for residential gas customers who install energy efficient furnaces or water heaters in homes.
	Plumas-Sierra REC - PV Rebate Program	Plumas-Sierra REC offers an incentive for its customers to install photovoltaic (PV) systems on homes and businesses.
	Plumas-Sierra REC - Residential Energy Efficiency Rebate Program	Plumas-Sierra Rural Electric Cooperative (PSREC) offers several financial incentives for residential customers to improve the efficiency of their homes by upgrading to energy saving appliances and equipment.
	Redding Electric - Earth Advantage Rebate Program	The Earth Advantage Rebate Program was designed to offer rebates to residential and business customers of Redding Electric Utility (REU) for solar PV, solar thermal, and geothermal heat pump systems.
	Redding Electric - Residential and Commercial Energy Efficiency Rebate Program	Redding Electric Utility offers a variety of financial incentives for energy efficiency through its Earth Advantage Rebate Program.

Type	Incentives	Description
Utility-Specific	<u>Riverside Public Utilities - Non-Residential PV Incentive Program</u>	The non-residential photovoltaic (PV) rebate program provides financial incentives to Riverside Public Utilities' business customers to install qualifying PV systems on their facilities.
	<u>Riverside Public Utilities - Residential PV Incentive Program</u>	The Residential Photovoltaic (PV) System Rebate Program provides incentives to Riverside Public Utilities customers who purchase and install qualifying photovoltaic systems on their homes.
	<u>Riverside Public Utilities - Commercial Energy Efficiency Rebate Program</u>	Riverside Public Utilities (RPU) offers a wide variety of rebates to commercial customers who wish to increase the efficiency of eligible facilities.
	<u>Riverside Public Utilities - Energy Efficiency Construction Incentive</u>	Riverside Public Utilities' (RPU) Commercial New Construction Incentives are designed to encourage owners/developers to invest in energy efficient designs in new construction, building expansion and major retrofit projects.
	<u>Riverside Public Utilities - Residential Energy Efficiency Rebate Program</u>	Riverside Public Utilities offers an incentive for residential customers to upgrade the efficiency of a variety of equipment within eligible homes.
	<u>Riverside Public Utilities - Energy Efficiency Technology Grant Program</u>	Riverside Public Utilities (RPU) offers two Energy Technology Grant Programs to help foster the development of innovative solutions to energy problems.

Type	Incentives	Description
Utility-Specific	Roseville Electric - Solar Rebate Program	Roseville Electric has implemented solar rebate programs in order to meet the three statewide goals in Senate Bill 1: to install 3,000 megawatts (MW) of distributed solar PV by the end of 2016, to establish an industry in which solar energy systems are a viable mainstream option in 10 years, and to place solar energy systems on 50% of new homes within 13 years.
	Roseville Electric - Commercial Energy Efficiency Rebate Program	Roseville Electric offers incentives to its commercial customers to increase the efficiency of existing facilities.
	Roseville Electric - Residential Energy Efficiency Rebate Program	Roseville Electric offers incentives to its residential customers that encourage energy efficient improvements and equipment upgrades in eligible homes.
	Roseville Electric - Residential New Construction Rebate Program	Roseville Electric provides financial incentives to encourage local builders to construct energy efficient homes that incorporate solar resources.
	Savings by Design (Offered by five Utilities)	In conjunction with the California Department of Public Utilities, Savings by Design offers services and incentives to help owners and designers of commercial buildings raise energy performance.
	SCE - California Advanced Homes Incentives	Southern California Edison offers an incentive for homebuilders to build homes that exceed 2008 Title 24 standards by 15%.

Type	Incentives	Description
Utility-Specific	SCE - Multi-Family Residential Energy Efficiency Programs	Southern California Edison (SCE) offers prescriptive rebates to multi-family properties for lighting, HVAC technologies, water heaters, ceiling fans, appliances, window improvements, and insulation upgrades.
	SCE - Non-Residential Energy Efficiency Programs	Southern California Edison (SCE) offers incentives for non-residential customers, regardless of size and energy usage.
	SCE - Residential Energy Efficiency Rebate Program	Southern California Edison (SCE) offers a rebate program specifically encouraging energy savings for SCE customers who own a detached single-family home.
	SCE - Non-Residential On-Bill Financing Program	The SoCalGas On-Bill Financing (OBF) Program offers qualified business customers 0% financing from \$5,000 to \$100,000 per meter for qualifying natural gas equipment.
	SDG&E - California Advanced Homes Incentives	SDG&E offers an incentive for homebuilders to build homes that exceed 2008 Title 24 standards by 15%.
	SCE - Multi-Family Residential Energy Efficiency Programs	Southern California Edison (SCE) offers prescriptive rebates to multi-family properties for lighting, HVAC technologies, water heaters, ceiling fans, appliances, window improvements, and insulation upgrades.

Type	Incentives	Description
Utility-Specific	SDG&E - Residential Efficiency Rebate Program	Residential electric customers of San Diego Gas and Electric (SDG&E) are eligible for point-of-sale or mail-in rebates on energy efficient clothes washers, home insulation, room air conditioners, water heaters, and pool motors and controllers.
	SDG&E (Electric) - Energy Efficiency Business Rebates	San Diego Gas & Electric (SDG&E) offers incentive programs for businesses looking to improve their energy efficiency.
	SDG&E (Electric) - Multi-Family Residential Efficiency Program	Multi-family residential building owners and property managers in the San Diego Gas and Electric (SDG&E) territory are eligible for rebates on energy efficient, clothes washers, insulation, room air conditioners, water heaters and lighting products.
	SDG&E (Gas) - Energy Efficiency Business Rebates	SDG&E offers incentive programs for businesses looking to improve their energy efficiency.
	Silicon Valley Power - Solar Electric Buy Down Program	Silicon Valley Power (SVP) offers incentives for the installation of new grid-connected solar electric (photovoltaic or PV) systems.
	Silicon Valley Power - Commercial Energy Efficiency Rebate Program	Silicon Valley Power (SVP) offers a variety of rebates to its business customers, capped at a maximum total incentive of \$500,000 per customer per year.

Type	Incentives	Description
Utility-Specific	Silicon Valley Power - Residential Energy Efficiency Rebate Program	Silicon Valley Power offers rebates to residential customers for the purchase of a variety of energy efficient products.
	SMUD - Non-Residential PV Incentive Program	SMUD offers cash incentives to commercial, industrial, and non-profit customers who install solar photovoltaic (PV) systems.
	SMUD - PV Residential Retrofit Buy-Down	SMUD offers an incentive of \$0.35 per watt (W) AC to residential customers who install grid-connected photovoltaic (PV) systems.
	SMUD - Solar Water Heater Rebate Program	The Sacramento Municipal Utility District's (SMUD) Solar Domestic Hot Water Program provides rebates and/or loan financing to customers who install solar water heating systems.
	SMUD - Commercial Energy Efficiency Rebate Program	Sacramento Municipal Utility District (SMUD) offers a wide array of incentives for its commercial customers to increase the energy efficiency of their facilities.
	SMUD - Residential Energy Efficiency Rebate Program	Sacramento Municipal Utility District (SMUD) offers incentives for its residential customers to purchase and install energy efficient equipment and measures for the homes.
	SMUD - Residential Solar Loan Program	The Sacramento Municipal Utility District's (SMUD) Residential Loan Program provides 100% financing to customers who install solar water heating systems.

Type	Incentives	Description
Utility-Specific	SMUD - Residential Solar Loan Program	The Sacramento Municipal Utility District's (SMUD) Residential Loan Program provides 100% financing to customers who install solar water heating systems.
	SMUD - Commercial Energy Efficiency Loan Program	Sacramento Municipal Utility District offers low-interest loans to help commercial customers finance energy efficient equipment in eligible facilities.
	SMUD - Residential Energy Efficiency Loan Program	Sacramento Municipal Utility District offers financing to help residential customers finance energy efficient home improvements.
	SoCalGas - California Advanced Homes Incentives	Southern California Gas Company (SoCalGas) offers an incentive for homebuilders to build homes, which exceed 2008 Title 24 standards by 15%.
	SoCalGas - Custom Non-Residential Energy Efficiency Program	Southern California Gas Company (SoCalGas) offers non-residential customers incentive programs to encourage energy efficiency.
	SoCalGas - Multi-Family Residential Rebate Program	Southern California Gas Company (SoCalGas) provides incentives to encourage the owners and managers of multi-family residential buildings to increase their energy efficiency.
	SoCalGas - Non-Residential Energy Efficiency Rebate Programs	Southern California Gas Company (SoCalGas) offers non-residential customer rebates to encourage energy efficiency.

Type	Incentives	Description
Utility-Specific	SoCalGas - Residential Energy Efficiency Rebate Programs	The Southern California Gas Company (SoCalGas) Home Energy Efficiency Rebate Program offers cash rebates on qualifying energy efficiency upgrades or improvements made to single family homes, multi-family apartments, or attached residential units (maximum of four).
	SoCalGas - Non-Residential On-Bill Financing Program	The SoCalGas On-Bill Financing (OBF) Program offers qualified business customers 0% financing from \$5,000 to \$100,000 per meter for qualifying natural gas equipment.
	SoCalGas - Residential Energy Efficiency Loan Program	The SoCalGas offers The Home Energy Upgrade Financing (HEUF) program to its residential customers interested in making energy efficient improvements to their homes.
	Truckee Donner Public Utility District - Energy Conservation Rebate Program	Truckee Donner Public Utility District (TDPUD) offers incentives for customers to improve the energy efficiency of homes and businesses.
	Truckee Donner Public Utility District - Photovoltaic Buy Down Program	As required by Senate Bill 1 of 2006, Truckee Donner PUD incentive levels will step down annually during the 10-year program.
	Turlock Irrigation District - Residential Energy Efficiency Rebate Program	Turlock Irrigation District (TID) offers a residential rebate program for customers who install energy efficient equipment in eligible homes.
	Turlock Irrigation District - PV Rebate	Turlock Irrigation District (TID) offers an incentive program to their customers who install solar photovoltaic (PV) systems.

Type	Incentives	Description
Utility-Specific	Ukiah Utilities - PV Buydown Program	Through Ukiah Utilities' PV Buydown Program, residential and commercial customers are eligible for a \$1.40 per-watt AC rebate on qualifying grid-connected PV systems up to a maximum system size of 1 MW.
Local	City of San Diego - Sustainable Building Expedited Permit Program	In 2002, the City of San Diego passed a Resolution R-298001, which amended the Sustainable Building Policy to allow for expedited permitting for sustainable buildings.
	City of San Francisco - Commercial Efficiency Rebates	Businesses in San Francisco's PG&E territory can receive equipment rebates, a detailed energy analysis, and the discounted installation of a variety of energy efficiency technologies through San Francisco's Energy Watch Program.
	City of San Francisco - Residential Efficiency Rebates	Single-family homeowners in San Francisco's PG&E territory can receive Green Home Assessments, providing detailed reports showing energy loss, heat tests, and a list of improvements that will achieve the energy savings goals for San Francisco's Home Improvement & Performance Program.
	City of San Francisco - Solar Energy Incentive Program	The City and County of San Francisco, through the San Francisco Public Utilities Commission (SFPUC), are providing incentives to residents and businesses who install photovoltaic (PV) systems on their properties.

Type	Incentives	Description
Local	City of Santa Monica - Expedited Permitting for Green Buildings	The City of Santa Monica allows for priority plan check processing for building projects that are registered with the U.S. Green Building Council for certification under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.
	County of San Bernardino - Green Building Incentive	The program includes a number of incentives to encourage residents, builders, and businesses to adopt more sustainable practices.
	San Diego County - Green Building Program	The County of San Diego has a Green Building Incentive Program designed to promote the use of resource efficient construction materials, water conservation and energy efficiency in new and remodeled residential and commercial buildings.
	Marin Clean Energy - Feed-In Tariff	Assembly Bill 117, passed in 2002, allows communities in California to aggregate their load and to procure electricity from their own preferred sources.
	Marin County - Wood Stove Replacement Rebate Program	The County of Marin has created a rebate program to encourage homeowners to remove or replace non-EPA certified wood-burning heaters (wood stoves and fireplace inserts) with cleaner burning stoves or gas insert replacements.

COLORADO

The Centennial State¹⁴⁹

Renewable Portfolio Standards

Policy Name and Date

House Bill 1001, March 22, 2010

Standard

Investor-owned utilities: 30% by 2020

Electric cooperatives: 20% by 2020, including solar carve-out for rural co-ops

Municipal utilities serving more than 40,000 customers: 10% by 2020

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Recycled Energy, Anaerobic Digestion, Fuel Cells using Renewable Fuels¹⁵¹

COLORADO at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

House Bill 07-1037, May 22, 2007

Standard

Electricity sales and demand reduction of 5% of 2006 electricity sales by 2018 (annual reduction rates of 1.14% in 2012; 1.35% in 2015; and 1.68% in 2020)

Mandatory/Voluntary

Mandatory¹⁵²

Colorado Energy Fact

Colorado's photovoltaic capacity of 91 megawatts was the fifth largest in the United States in 2011.

<http://www.eia.gov/beta/state/?sid=CO>

Net Metering Standards

Capacity Limit

IOU customers: 120% of a customer's average annual consumption;

Municipality and co-op customers: 25 kW for non-residential; 10 kW for residential systems

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Recycled Energy, Small Hydroelectric, Fuel Cells using Renewable Fuels¹⁵³

ECONOMIC OPPORTUNITIES

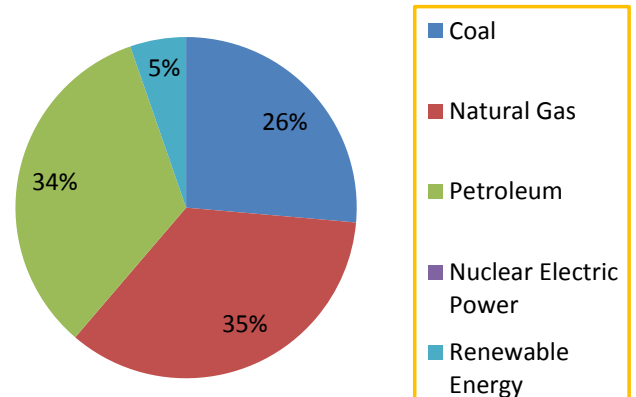
Local Hire Provision: YES

Senate Bill 1 creates a 3% bidding preference for companies that hire at least 90% of their employees from Colorado for state-funded public works projects and service contracts.¹⁵⁴

MBE Provision/Certification: YES

Colorado's Department of Transportation certifies MBEs for federally assisted projects.

Colorado Energy Consumption Estimates 2010



Clean Energy Potential in Colorado

Background

Colorado is on the leading edge of community solar initiatives with new projects going online in Aurora (498kW) and Boulder(500kW) in 2013.

Colorado has consistently sunny skies for solar power, wind-blown plains and deserts for turbines, and underground heat that is desirable for geothermal energy.¹⁵⁵



Solar: Colorado has urban utility-scale PV potential of 43,471 GWh (85% of total net generation), rural utility-scale PV potential of 10,238,084 GWh (100% of total net generation), rooftop PV potential of 16,162 GWh (31.86% of total net generation) and concentrated solar power potential of 9,154,524 GWh (100% total net generation).

Wind: For onshore wind power generation, there is a potential of 1,096,036 GWh (100% of total net generation).

Geothermal: The potential for hydrothermal power in the state is 8,954 GWh (17.65% of total net generation) and enhanced geothermal systems potential is 1,251,658 GWh (over 100% total net generation).¹⁵⁶

Incentives in Colorado

Type	Incentives	Description
Statewide	Direct Lending Revolving Loan Program	The Colorado Energy Office is using money allocated to the state from the Federal American Recovery and Reinvestment Act of 2009 to provide financing to "eligible and extraordinary projects that promote energy efficiency or renewable energy".
	Local Option - Sales and Use Tax Exemption for Renewable Energy Systems	Colorado enacted legislation in April 2007 (SB 145), to authorize counties and municipalities to offer property or sales tax rebates or credits to residential and commercial property owners who install renewable energy systems on their property.
	Local Option - Property Tax Exemption for Renewable Energy Systems	Colorado enacted legislation in April 2007 (SB 145), to authorize counties and municipalities to offer property or sales tax rebates or credits to residential and commercial property owners who install renewable energy systems on their property.
	Property Tax Exemption for Residential Renewable Energy Equipment	For Colorado property taxation purposes, renewable energy systems as defined under § 40-1-102 (11), C.R.S., that are used to produce two (2) megawatts or less of electricity are classified as personal property and assessed by the county assessor.

Type	Incentives	Description
Statewide	Renewable Energy Property Tax Assessment	Photovoltaic (PV) and wind energy facilities with a capacity of 2 megawatts (MW) AC or less are assessed locally for property taxes. Renewable energy systems with a capacity greater than 2 MW are assessed for property taxes by the State Assessed Properties Section of the Division of Property Taxation.
	Sales and Use Tax Exemption for Renewable Energy Equipment	Colorado exempts from the state's sales and use tax all sales, storage, and use of components used in the production of alternating current electricity from a renewable energy source.
Utility-Specific	Atmos Energy (Gas) - Energy Efficiency Rebate Program	Atmos Energy offers the Excess is Out Program for its residential and commercial customers in Colorado.
	Black Hills Energy - On-Site Solar PV Rebate Program	Black Hills Energy (formerly Aquila) has an On-Site Solar PV Rebate Program, which provides incentives for its customers to install photovoltaic (PV) systems on their homes and facilities.
	Black Hills Energy (Electric) - Commercial Energy Efficiency Program	Black Hills Energy offers multiple programs for its Colorado commercial and industrial customers to save electricity in their facilities.
	Black Hills Energy (Electric) - Residential Energy Efficiency Program	Black Hills Energy (BHE) offers rebates for residential Colorado customers who purchase energy efficient residential equipment.

Type	Incentives	Description
Utility-Specific	<u>Black Hills Energy (Gas) - Commercial Energy Efficiency Program</u>	Black Hills Energy offers multiple programs for Colorado commercial and industrial customers to save natural gas in eligible facilities.
	<u>Black Hills Energy (Gas) - Residential Energy Efficiency Program</u>	Black Hills Energy (BHE) offers a variety of rebates for residential Colorado customers who purchase and install energy efficient natural gas appliances, heating equipment and insulation materials.
	<u>City of Aspen - Energy Assessment Rebate Program</u>	The City of Aspen encourages interested residents and businesses to increase the energy efficiency of homes and offices through the Energy Assessment Program.
	<u>Colorado Natural Gas - Energy Efficiency Rebate Program</u>	Colorado Natural Gas offers the Excess is Out Program for residential and commercial customers in Colorado.
	<u>Colorado Springs Utilities - Renewable Energy Rebate Program</u>	Through its Renewable Energy Rebate Program, Colorado Springs Utilities (CSU) offers a rebate to customers who install grid-connected solar-electric (PV) systems, wind systems, and solar water heaters.
	<u>Colorado Springs Utilities - Commercial Energy Efficiency Rebate Program</u>	The Colorado Springs Utilities (CSU) Business Energy and Water Efficiency Rebate Program offers a variety of incentives to business customers who upgrade evaporative cooling, HVAC, irrigation, lighting, motors, windows, toilets and urinals in participating facilities.

Type	Incentives	Description
Utility-Specific	Colorado Springs Utilities - Energy Efficient Builder Program	The Colorado Springs Utilities (CSU) Energy Efficient Builder Program offers an incentive to builders who construct ENERGY STAR® qualified homes within the CSU service area.
	Colorado Springs Utilities - Residential Energy Efficiency Rebate Program	Colorado Springs Utilities offers a variety of energy and water efficiency incentives to its residential customers through the Residential Rebate Program.
	Delta-Montrose Electric Association - Commercial Energy Efficiency Rebate Program	Delta-Montrose Electric Association (DMEA) offers a variety of rebates to commercial customers, who upgrade to energy efficient equipment.
	Delta-Montrose Electric Association - Residential Energy Efficiency Rebate Program	Delta-Montrose Electric Association (DMEA) offers a variety of rebates for customers who buy energy efficient appliances and equipment.
	Empire Electric Association - Commercial Energy Efficiency Credit Program	Empire Electric Association provides rebates for its commercial customers who upgrade to energy efficient lighting, HVAC equipment, and motors.
	Empire Electric Association - Residential Energy Efficiency Credit Program	Empire Electric Association provides financial incentives to its residential consumers who upgrade to energy efficient appliances and HVAC equipment.

Type	Incentives	Description
Utility-Specific	Estes Park Light and Power Department - Commercial and Industrial Energy Efficiency Rebate Program	Estes Park Power & Light, in conjunction with the Platte River Power Authority, provides businesses incentives for new construction projects and existing building retrofits.
	Fort Collins Utilities - Commercial and Industrial Energy Efficiency Rebate Program	Fort Collins provides businesses incentives for new construction projects and existing building retrofits.
	Fort Collins Utilities - Home Efficiency Program	Fort Collins Utilities (FCU) provides rebates for customers living in existing single-family homes who pursue energy efficiency projects.
	Fort Collins Utilities - Residential and Small Commercial Appliance Rebate Program	Fort Collins Utilities offers a number of appliance and recycling rebates to residential and small commercial customers.
	Fort Collins Utilities - Residential On-Bill Financing Program	Fort Collins offers its residential customers low-interest loans that may be used to finance a variety of projects including adding insulation, replacing a furnace, upgrading water and space heating systems, and improving building envelope measures.
	Holy Cross Energy - WE CARE Renewable Energy Generation Rebate Program	Holy Cross Energy's WE CARE (With Efficiency, Conservation And Renewable Energy) Program offers a \$1.50-per-watt DC incentive for renewable energy generation using wind, hydroelectric, photovoltaic, biomass or geothermal technology.

Type	Incentives	Description
Utility-Specific	<u>Holy Cross Energy - WE CARE Commercial Energy Efficiency Rebate Program</u>	Holy Cross Energy, a Touchstone Energy Cooperative, offers a wide variety of prescriptive rebates for energy efficient equipment purchased by its commercial customers.
	<u>Holy Cross Energy - WE CARE Residential Energy Efficiency Rebate Program</u>	Holy Cross Energy offers a rebate for energy efficiency to residential customers/homeowners.
	<u>La Plata Electric Association - Energy Efficient Equipment Rebate Program</u>	La Plata Electric Association (LPEA) offers a variety of rebates for members to improve the efficiency of homes and facilities.
	<u>La Plata Electric Association - Renewable Generation Rebate Program</u>	La Plata Electric Association (LPEA) offers a one-time rebate, not to exceed the cost of the system, to residential and small commercial customers who install a photovoltaic (PV), wind or hydropower facility.
	<u>Longmont Power & Communications - Commercial and Industrial Energy Efficiency Rebate Program</u>	Longmont Power & Communications, in conjunction with the Platte River Power Authority, provides businesses incentives for new construction projects and existing building retrofits.
	<u>Longmont Power & Communications - Residential and Commercial Appliance Rebate Program</u>	Longmont Power & Communications offers an incentive for its residential and commercial customers to install energy efficient washing machines and dishwashers.

Type	Incentives	Description
Utility-Specific	<u>Loveland Water & Power - Commercial and Industrial Energy Efficiency Rebate Program</u>	Loveland Water & Power, in conjunction with the Platte River Power Authority, provides businesses incentives for new construction projects and existing building retrofits.
	<u>Loveland Water & Power - Home Energy Audit Rebate Program</u>	Loveland Water & Power (LWP) is providing an incentive for customers living in single-family detached homes or attached townhouses that wish to upgrade the energy efficiency of eligible homes.
	<u>Loveland Water & Power - Refrigerator Recycling Program</u>	Loveland Water & Power is providing an incentive for customers to recycle older, working refrigerators.
	<u>Morgan County REA - Efficiency Credit/Rebate Programs</u>	Morgan County REA (MCREA), in conjunction with Tri-State Generation and Transmission Association, provides financial incentives for all ratepayers to improve the energy efficiency of homes and facilities.
	<u>Mountain View Electric Association, Inc. - Energy Efficiency Credit Program</u>	Mountain View Electric Association, Inc. (MVEA) and Tri-State Generation and Transmission Association Inc., MVEA's power supplier, will pay credits to MVEA customers who install qualifying energy efficiency equipment and appliances, or pursue large-scale facility lighting upgrades.
	<u>Loveland Water & Power - Commercial and Industrial Energy Efficiency Rebate Program</u>	Loveland Water & Power, in conjunction with the Platte River Power Authority, provides businesses incentives for new construction projects and existing building retrofits.

Type	Incentives	Description
Utility-Specific	Poudre Valley REA - Photovoltaic Rebate Program	Poudre Valley REC is providing rebates to their residential customers who install photovoltaic (PV) systems on their homes.
	Poudre Valley REA - Commercial Lighting Rebate Program	Poudre Valley Rural Electric Association (PVREA), a Touchstone Energy Cooperative, offers a variety of lighting rebates to commercial customers.
	Poudre Valley REA - Energy Efficiency Rebate Program	Poudre Valley Rural Electric Association (PVREA), a Touchstone Energy Cooperative, offers residential energy efficiency rebate programs for qualified residential water heaters, heat pumps, space heating equipment, refrigerators/freezers, dishwashers, and clothes washers.
	San Isabel Electric Association - Residential Energy Efficiency Rebate Program	San Isabel Electric Association (SIEA) provides incentives for its residential customers to install energy efficient equipment.
	San Miguel Power Association - Energy Efficiency Rebate Program	San Miguel Power Association (SMPA) offers a variety of rebates to customers for the purchase and installation of energy efficient equipment and appliances.
	San Miguel Power Association - Renewable Energy Rebate Program	San Miguel Power Association (SMPA) is providing rebates to its residential and commercial customers for installing photovoltaic (PV), small wind, and solar water heating systems.

Type	Incentives	Description
Utility-Specific	<u>Sangre De Cristo Electric Association - Energy Efficiency Credit Program</u>	The Sangre De Cristo Electric Association (SDCEA) offers the Energy Efficiency Credit Program, a rebate program that offers incentives for space heaters, water heaters and appliances.
	<u>SourceGas - Commercial Energy Efficiency Rebate Program</u>	SourceGas offers the Excess is Out Program for commercial customers in Colorado.
	<u>SourceGas - Residential Energy Efficiency Rebate Program</u>	SourceGas offers the Excess is Out Program for residential customers in Colorado.
	<u>Southeast Colorado Power Association - Energy Efficiency Rebate Program</u>	Southeast Colorado Power Association (SECPA) offers a variety of rebates to customers who purchase and install energy efficient appliances, motors and HVAC equipment.
	<u>United Power - Business Energy Efficiency Rebate Program</u>	United Power, in conjunction with wholesale power supplier Tri-State Generation & Transmission (TSGT), offers rebates for the installation of a variety of commercial energy efficient equipment including: motors, general lighting, street lighting, and refrigeration lighting.
	<u>United Power - Energy Efficiency Rebate Program</u>	United Power, together with Tri-State Generation and Transmission (TSGT), offers rebates for the installation of a variety of energy efficient equipment including heating and cooling systems, water heaters, home appliances, and LEDs.

Type	Incentives	Description
Utility-Specific	United Power - Renewable Energy Rebate Program	United Power is providing rebates to their customers for the purchase of photovoltaic (PV), wind, and solar water heating systems.
	Xcel Energy - Residential ENERGY STAR Rebate Program	Xcel provides new ENERGY STAR homeowners with cash rebates. The rebates are provided to residential builders and customers who receive electricity and services from the utility.
	Xcel Energy - Solar*Rewards Program	Xcel Energy's Solar Rewards Program provides incentives for customers who install grid-connected photovoltaic (PV) systems sized up to 120% of the average annual load of their homes and facilities in exchange for the renewable energy credits (RECs) produced by the systems.
	Xcel Energy - Solar*Rewards Community Program	Legislation approved in 2010 allowed for the development of "community solar gardens" in Colorado.
	Xcel Energy (Electric) - Business Energy Efficiency Rebate Programs	Xcel Energy offers rebate programs for Colorado commercial and industrial customers for a wide range of energy efficiency technologies including heating and cooling, motors, lighting, and refrigeration.
	United Power - Renewable Energy Rebate Program	United Power is providing rebates to their customers for the purchase of photovoltaic (PV), wind, and solar water heating systems.

Type	Incentives	Description
Utility-Specific	<u>Xcel Energy (Electric) - Residential Energy Efficiency Rebate Programs</u>	Xcel Energy residential customers in Colorado can qualify for cash incentives on a variety of energy efficient products and home improvements.
	<u>Xcel Energy (Gas) - Business Energy Efficiency Rebate Programs</u>	Xcel Energy offers rebate programs for Colorado commercial and industrial customers for a wide range of energy efficiency technologies including heating and custom natural gas incentives.
	<u>Xcel Energy (Gas) - Residential Energy Efficiency Rebate Programs</u>	Xcel Energy residential customers in Colorado can qualify for cash incentives on a variety of energy efficient products and home improvements.
Local	<u>Boulder County – EnergySmart Commercial Energy Efficiency Rebate Program</u>	EnergySmart offers a rebate for energy efficiency to commercial customers.
	<u>Boulder County – Elevations Energy Loans Program</u>	The Elevations Energy Loan can be used to finance a wide variety of efficiency and renewable energy projects in homes and businesses.
	<u>City of Boulder - Solar Sales and Use Tax Rebate</u>	In 2006, the City of Boulder established a solar sales and use tax rebate for photovoltaic (PV) and solar water heating installations.

Type	Incentives	Description
Local	City of Boulder - Solar Grant Program	The Solar Grant Program provides grants for PV and solar water heating installations on housing enrolled in the city's affordable housing program, site-based non-profit organizations, and low- to moderate-income housing owned and/or developed by a non-profit organization.
	City and County of Denver - Elevations Energy Loans Program	The Elevations Energy Loan can be used to finance a wide variety of efficiency and renewable energy projects in homes and businesses.
	Roaring Fork Valley - Renewable Energy Rebate Program	The Community Office for Resource Efficiency (CORE), a non-profit organization promoting renewable energy and energy efficiency in western Colorado, offers residential and commercial rebates within the Roaring Fork Valley for the installation of photovoltaic, solar hot water, and micro hydro systems.
	Roaring Fork Valley - Energy Efficient Appliance Program	The Aspen Community Office for Resource Efficiency (CORE) promotes renewable energy, energy efficiency and green building techniques in western Colorado's Roaring Fork Valley.
	Roaring Fork Valley - Energy Smart Program	The Energy Smart Program helps residents identify, finance, and complete energy improvements in their homes.
	Roaring Fork Valley - Energy Smart Loan Program	Residents of Eagle, Gunnison or Pitkin Counties may be eligible for financing through the Energy Smart Program.



CONNECTICUT

The Constitution State¹⁵⁷

State Facts

Capital: Hartford

Area: 5,004 sq mi

Population: 3,574,097

State Bird: American Robin

State Flower: Mountain

Laurel¹⁵⁸

Statewide Standards

Policy Name and Date

House Bill 7432,
June 4, 2007

Standard

27% renewable by 2020

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Low E Renewables, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels.¹⁵⁹

Connecticut Energy Fact

Connecticut ranked fifth lowest among the states in per capita energy consumption in 2010.

<http://www.eia.gov/beta/state/?sid=CT>

CONNECTICUT at a Glance

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

House Bill 7432 Electricity and Energy Efficiency Act, June 4, 2007

Standard

Electricity sales reduction of 4% of retail load (includes CHP and Waste heat recovery) by 2010 (annual reduction rate of 1%)

Mandatory/Voluntary

Mandatory¹⁶⁰

Net Metering Standards

Capacity Limit

Per System: 2,000 kW

Entire State: No limit specified

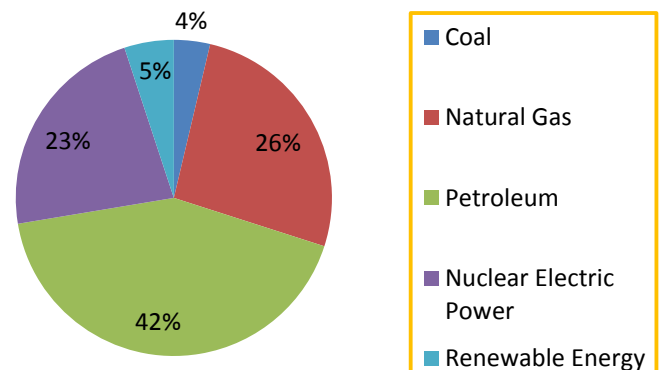
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels.¹⁶³

Connecticut Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

Hartford's ordinance, passed in 1986, applies to all publicly assisted projects of 40,000 sq. ft. or more. For these projects, 40% of all trade project hours must be performed by city residents; 25% of all trade project hours must be performed by minorities and 6.9% must be performed by women.¹⁶¹

MBE Provision/Certification: YES

Connecticut General Statutes, Section 4a-60g, requires Connecticut State agencies to set aside each fiscal year, 25% of their budgets for construction, housing rehabilitation, and purchasing supplies and services to be awarded to certified small businesses, with 25% of this amount to be awarded to certified minority business enterprises.¹⁶²

Clean Energy Potential in Connecticut

Background

Even though Connecticut is small in size, the state has created a growing market for residential and commercial solar energy, sustained by rebate programs. Significant opportunities remain for the diversification of the state renewable energy sector like the development of wind and geothermal energy sources.¹⁶⁴



Solar: Connecticut has urban utility-scale PV potential of 7,717 GWh (23% of total net generation), rural utility-scale PV potential of 19,628GWh (58.85% of total net generation), and rooftop PV potential of 6,616 GWh (19.83% of total net generation).

Wind: Onshore wind power potential is 62 GWh (.18% of total net generation) and offshore wind power potential of 26,545 GWh (79.59% of total net generation) within the state.

Geothermal: Enhanced geothermal systems potential is 56,078 GWh (over 100% total net generation) within the state.¹⁶⁵

Incentives in Connecticut

Type	Incentives	Description
Statewide	Exemption from Electric Generation Tax	In 2011, Connecticut created a new tax requiring electric power plants in the state that generate and upload electricity to the regional bulk power grid to pay \$2.50 per megawatt hour.
	Low-Interest Loans for Customer-Side Distributed Resources	Long-term financing is available to retail end-use customers for the installation of customer-side distributed resources.
	Operational Demonstration Program	The Clean Energy Finance and Investment Authority (CEFIA), formerly the Connecticut Clean Energy Fund (CCEF), created the Operational Demonstration (Op Demo) Program in August 2005 to enable early-stage companies to demonstrate the effectiveness of their own near-commercial, clean-energy technologies.
	Property Tax Exemption for Renewable Energy Systems	Connecticut provides a property tax exemption for "Class I" renewable energy systems and hydropower facilities that generate electricity for private residential use.
	Residential Solar Investment Program	In March 2012, the Clean Energy Finance and Investment Authority (CEFIA) unveiled its new solar photovoltaics residential investment program.
	Sales and Use Tax Exemption for Energy-Efficient Products	In Connecticut, residential weatherization products for residential use only are exempt from the state's sales and use tax.

Type	Incentives	Description
Statewide	Combined Heat and Power Pilot Grant Program	The Clean Energy Finance and Investment Authority (CEFIA) is administering a three year, \$6 million Combined Heat and Power (CHP) Pilot Program.
	Combined Heat and Power Pilot Loan Program	The Clean Energy Finance and Investment Authority (CEFIA) is administering a three year, \$6 million Combined Heat and Power (CHP) Pilot Program.
	Commercial and Industrial Rebate Program	Connecticut electricity customers that install energy efficiency equipment and reduce their energy use during peak hours may be eligible for a rebate based on the amount of kilowatt hours (kWh) saved during peak hours.
	Commercial Solar Thermal Incentive Program	The Clean Energy Finance and Investment Authority is offering grants and loans to non-residential entities for solar hot water installations.
	Community Innovations Grant Program	The Community Innovations Grants Program provides funding for communities to increase voluntary support for clean energy and to build model sustainable communities.
	Energy Conservation Loan	Energy Conservation Loans for single families are available through the Connecticut Housing Investment Fund, Inc. (CHIF) to owners of one-to four-family homes who meet established income limits for family size and location.

Type	Incentives	Description
Statewide	Sales and Use Tax Exemption for Solar and Geothermal Systems	Connecticut enacted legislation in June 2007 (H.B. 7432) that established a sales and use tax exemption for solar energy equipment and geothermal resource systems.
	Sales and Use Taxes for Items Used in Renewable Energy Industries	Connecticut enacted legislation in May 2010 (H.B. 5435) that established a sales and use tax exemption for equipment, machinery and fuels used to manufacture solar thermal (active or passive) systems, solar electric systems, wind-power electric systems, or geothermal resource systems.
	Solar Thermal Incentive Program	To participate in the residential solar hot water rebate, homeowners must first complete an energy assessment. Then, they must work with CEFIA approved solar hot water installers.
Utility-Specific	Connecticut Light & Power - Small ZREC Tariff	In July 2011, Connecticut enacted legislation amending the state's Renewables Portfolio Standard (RPS) and creating two new classes of renewable energy credits (RECs): Zero Emission Renewable Energy Credits (ZRECs) and Low Emission Renewable Energy Credits (LRECs).
	Connecticut Light & Power - ZREC and LREC Long Term Contracts	In July 2011, Connecticut enacted legislation amending the state's Renewables Portfolio Standard and creating two new classes of renewable energy credits (RECs): Zero Emission Renewable Energy Credits (ZRECs) and Low Emission Renewable Energy Credits (LRECs).

Type	Incentives	Description
Utility-Specific	<u>Energy Efficiency Fund (Electric) - Commercial and Industrial Energy Efficiency Programs</u>	All Connecticut Utilities implement electric and gas efficiency rebate programs funded by Connecticut's public benefits charge through the Energy Efficiency Fund.
	<u>Energy Efficiency Fund (Electric) - Home Energy Solutions and Performance Programs</u>	The Energy Efficiency Fund, funded by Connecticut's public benefits charge, provides home energy efficiency rebate programs to customers of The Connecticut Light and Power Company, The United Illuminating Company, Connecticut Natural Gas, Southern Connecticut Gas, and Yankee Gas customers.
	<u>Energy Efficiency Fund (Electric) - Small Business Energy Advantage Program</u>	The Connecticut Energy Efficiency Fund offers financing through electric utility implementation of the Small Business Energy Advantage Program.
	<u>Energy Efficiency Fund (Electric and Gas) - Residential New Construction Program</u>	The Energy Efficiency Fund offers a program designed to encourage the construction of energy efficient homes.
	<u>Energy Efficiency Fund (Electric and Gas) - Residential Energy Efficiency Financing</u>	Connecticut homeowners and customers of Connecticut Light and Power Company (CL&P), and United Illuminating Company (UI) may apply for up to 100% financing for eligible energy efficiency upgrades through the Home Energy Solutions Program.

Type	Incentives	Description
Utility-Specific	<u>Energy Efficiency Fund (Gas) - Commercial and Industrial Energy Efficiency Program</u>	Through the Connecticut Energy Efficiency Fund, rebates are available for commercial, industrial or municipal customers of Connecticut Natural Gas Corporation, Southern Connecticut Gas Company, or Yankee Gas Services Company that are on a firm gas rate.
	<u>Energy Efficiency Fund (Gas) - Home Energy Solutions and Performance Programs</u>	The Energy Efficiency Fund, funded by Connecticut's public benefits charge, provides home energy efficiency rebate programs to customers of The Connecticut Light and Power Company and The United Illuminating Company, Connecticut Natural Gas, Southern Connecticut Gas, and Yankee Gas customers.
	<u>Groton Utilities - Commercial & Industrial Energy Efficiency Rebate Programs</u>	Groton Utilities, a municipal utility, offers incentives for commercial and industrial customers to install energy-efficient equipment in eligible facilities through several efficiency programs described in detail on the web site above.
	<u>Groton Utilities - Residential Energy Efficiency Rebate Program</u>	Groton Utilities offers a variety of rebates to residential customers for the purchase and installation of energy efficient equipment.

Type	Incentives	Description
Utility-Specific	Norwich Public Utilities - Commercial Energy Efficiency Rebate Program	Norwich Public Utilities (NPU) provides rebates to its commercial, industrial, institutional, and agricultural customers for high-efficiency HVAC systems, premium efficiency electric motors, heating equipment for natural gas systems, and lighting retrofits.
	Norwich Public Utilities - Zero Percent Financing Program	In partnership with several local banks, Norwich Public Utilities (NPU) is offering a zero percent loan to commercial and industrial customers for eligible energy efficiency improvement projects.
	Norwich Public Utilities (Electric) - Residential Energy Efficiency Rebate Program	Norwich Public Utilities (NPU) provides residential customers with rebates on the ENERGY STAR-qualified appliances and energy efficient HVAC equipment.
	Norwich Public Utilities (Gas) - Residential Energy Efficiency Rebate Program	Norwich Public Utilities (NPU) provides residential natural gas customers rebates for upgrading to energy efficient equipment in eligible homes.
	The United Illuminating Company - Small ZREC Tariff	In coordination with the state's other investor-owned utility, the United Illuminating (UI) Company offers owners of small ZREC projects (less than or equal to 100 kW) the opportunity to enroll in the Small ZREC Tariff Program.

Type	Incentives	Description
Utility-Specific	The United Illuminating Company - ZREC and LREC Long Term Contracts	The state's two investor-owned electric utilities, United Illuminating (UI) and Connecticut Light & Power (CL&P) must enter into 15-year contracts for RECs from zero-emission "Class I" renewable energy facilities (on the customer side of the meter) larger than 100 kilowatts (kW) but not larger than one megawatt (MW).



DELAWARE

The First State¹⁶⁶

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 119, July 24, 2007

Standard

25% renewable by 2026

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels¹⁶⁸

DELAWARE at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

State Facts

Capital: Dover
Area: 2,023 sq mi
Population: 897,934
State Bird: Blue Hen Chicken
State Flower: Peach Blossom¹⁶⁷

Energy Efficiency Resource Standards

Policy Name and Date

Senate Bill 106, July 29, 2009

Standard

Starting in 2009, electricity and peak demand savings equivalent to 15% of 2007 numbers by 2015 (annual reduction rate of 2.5%) and natural gas savings equivalent to 10% of 2007 numbers by 2015 (approx. annual reduction rate of 1.67%).

Mandatory/Voluntary

Voluntary (mandatory after final implementation rules are set)¹⁷¹

Net Metering Standards

Capacity Limit

Per System: 2,000 kW for non-residential Delmarva customers; 500 kW for non-residential DEC and municipal utility customers; 25 kW for all residential customers; 100 kW for all farm customers on residential rates subject to an appeal and case-by-case determination Entire State: 5% of Electric Supplier's aggregated customer monthly peak demand (utilities may increase limit).

Delaware Energy Fact

The State added its first utility-scale wind project in 2010, a one-turbine project built by the University of Delaware.

<http://www.eia.gov/beta/state/?sid=DE>

ECONOMIC OPPORTUNITIES

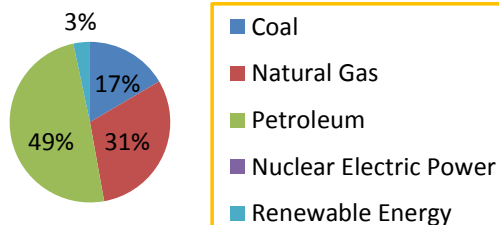
Local Hire Provision: YES

Several compliance multipliers are currently available under the Delaware RPS. An additional 10% credit for solar or wind installations sited in Delaware for which at least 50% of the equipment or components are manufactured in Delaware. This was added by S.S. 1 for S.B. 119 in 2010. An additional 10% credit for solar or wind installations sited in Delaware and installed with a minimum 75% state workforce. This was added by S.S. 1 for S.B. 119 in 2010.¹⁶⁹

MBE Provision/Certification: YES

Delaware has a 3-year certificate for MBE, WBE, and Veteran Enterprises regulated by the Office of Supplier Diversity, but no hiring requirements.¹⁷⁰

Delaware Energy Consumption Estimates 2010



Mandatory/Voluntary
Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass, Hydroelectric, Fuel Cells, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels.¹⁷²

Clean Energy Potential in Delaware

Background

Delaware is among the states leading the nation in solar energy. DE ranked 7th per capita for cumulative solar installations and 5th per capita for solar installations in 2012. From Dec. 2008 through Dec. 2012, the state's solar capacity grew from 2 Megawatts (MW) to 44 MW, with last year's capacity increasing by 41 percent over the previous year.¹⁷³



Solar: Delaware has urban utility-scale PV potential of 14,856 GWh (over 100% of total net generation), rural utility-scale PV potential of 272,333 GWh (over 100% of total net generation), and rooftop PV potential of 2,185 GWh (38.83% of total net generation).

Wind: Onshore wind power potential is 22 GWh (.39% of total net generation) and offshore wind power potential of 60,654 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 22,813 GWh (over 100% total net generation).¹⁷⁴

Incentives in Delaware

Type	Incentives	Description
Statewide	Delmarva Power - Green Energy Program Incentives	The Green Energy Program actually consists of three separate programs: one for Delmarva Power & Light (DP&L), the state's only investor-owned utility; one for the state's municipal utilities; and one for the Delaware Electric Cooperative (DEC).
	Solar Renewable Energy Credits (SRECs)	In 2005, Senate Bill 74 established a renewables portfolio standard (RPS) requiring Delaware retail electricity suppliers to purchase 10% of the electricity sold in the state from renewable sources by 2019.
	SREC Procurement Program	The Delaware Solar Renewable Energy Certificate (SREC) Procurement Program is designed to assist in the creation of a market for SRECs and to provide a mechanism for the procurement of SRECs to ensure that retail electricity suppliers meet the requirements set forth in Delaware's Renewable Energy Portfolio Standards Act (REPSA).
	Sustainable Energy Utility (SEU) - Green for Green Home Rebate	The Delaware Sustainable Energy Utility, in partnership with the Delaware Department of Natural Resources and Environmental Control (DNREC) and the Home Builders Association of Delaware, is offering rebates ranging from \$1,000 to \$2,500 for newly constructed homes that meet minimum certification requirements under the National Green Building System (NGBS), National Association of Home Builders Research Center, Energy Star, Residential Energy Services Network HERS or Leadership in Energy and Environmental Design (LEED) rating systems.

Type	Incentives	Description
Utility-Specific	<u>Delaware Electric Cooperative - Green Energy Program Incentives</u>	The Delaware Electric Cooperative provides incentives for solar photovoltaic (PV), solar thermal, wind, geothermal, and fuel cell systems installed by DEC member-owners.
	<u>DEMEC Member Utilities - Green Energy Program Incentives (8 utilities)</u>	Delaware's municipal utilities provide incentives for solar photovoltaic (PV), solar thermal, wind, geothermal, and fuel cell systems installed by their electric customers.
	<u>Dover Public Utilities - Green Energy Program Incentives</u>	Delaware's municipal utilities provide incentives for solar photovoltaic (PV), solar thermal, wind, geothermal, and fuel cell systems installed by their electric customers.



DISTRICT OF COLUMBIA

Taxation without Representation¹⁷⁵

District Facts

Area: 68.3 sq mi

Population: 617,996

District Bird: Bald Eagle

State Flower: Rose¹⁷⁶

Renewable Portfolio Standards

Policy Name and Date

Clean and Affordable Energy Act (CAEA), January 20, 2009

Standard

20% renewable by 2020

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Solar Space Cooling, Cofiring, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels¹⁷⁷

District of Columbia Energy Fact

One of the largest solar power panel installations in Washington, D.C., is located on the roof of the U.S. Department of Energy's Forrestal headquarters building and generates about 230 thousand kilowatt hours of electricity per year.

Status

The Chesapeake Climate Action Network recommends that the D.C. City Council should pass legislation to remove imported black liquor and wood waste facilities from the city's RPS.

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the District of Columbia.¹⁷⁸

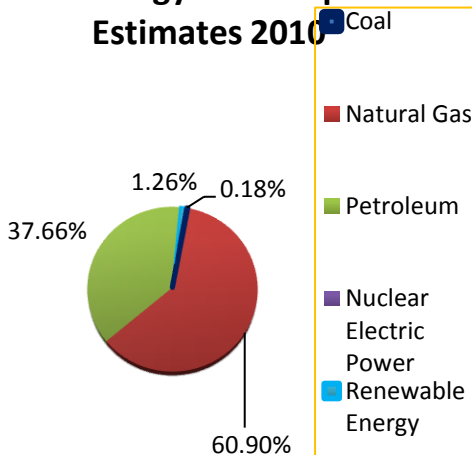
Status

In Progress: On July 15, 2008, the Council of the District of Columbia passed the Clean and Affordable Energy Act, which creates a Sustainable Energy Utility (SEU) charged with reducing peak energy demand, per-capita energy consumption, improving the energy efficiency of low-income housing, and fostering green collar jobs in the District. Specific targets and deadlines have yet to be set.

DISTRICT OF COLUMBIA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

D.C. Energy Consumption Estimates 2010



Net Metering Standards

Capacity Limit

Per System: 1,000 kW

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Fuel Cells using Renewable Fuels, Microturbines¹⁸¹

ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

DC's 1984 First Source Program requires that for all government assisted construction projects, 51% of all new jobs created on the project and at least 70% of all common laborer hours are filled by District Residents.¹⁷⁹

MBE Provision/Certification: YES

The National Community Reinvestment Coalition helps MBEs find contracts in the District of Columbia; however, there is no hiring requirement.¹⁸⁰

Clean Energy Potential in the District of Columbia

Background

The recent Sustainable DC Act was signed into law and now allocates resources for the exploration of potential of renewable energy sources in the district. The plan calls for an increase in the use of renewable energy sources by 50%. Before the law was passed, there were no utility-scale renewable energy systems installed in the district.¹⁸²



Solar: The District of Columbia has urban utility-scale PV potential of 8 GWh (4% of total net generation) and rooftop PV potential of 2,490 GWh (over 100% of total net generation).

Wind: Significant levels of onshore wind power and offshore wind power potential are not available within the district.

Geothermal: Enhanced geothermal systems potential in the District of Columbia is 693 GWh (over 100% total net generation).¹⁸³

Incentives in District of Columbia

Type	Incentives	Description
District-Wide	Business Energy Rebate Program	The District of Columbia's Sustainable Energy Utility (SEU) administers the Business Energy Rebate Program.
	Renewable Energy Incentive Program	In February 2009, the District Department of the Environment (DDOE) introduced the Renewable Energy Incentive Program (REIP), a rebate for solar photovoltaic (PV) systems.
	Solar Energy System and Cogeneration System Personal Property Tax Credit	The District of Columbia Council created a personal property tax exemption for solar energy systems and cogeneration systems within the District by enacting B19-0749 in December of 2012.
	Solar Renewable Energy Credits	In January 2005, the District of Columbia (D.C.) Council enacted a renewable portfolio standard (RPS) with a solar carve-out that applies to all retail electricity sales in the District.
Utility-Specific	Sustainable Energy Utility - D.C. Home Performance	The District of Columbia Sustainable Energy Utility currently offers the D.C. Home Performance program (DCHP).
	Sustainable Energy Utility - Residential Energy Efficiency Program	The program provides incentives to residents who complete qualifying home energy upgrades.

FLORIDA

The Sunshine State¹⁸⁴



Renewable Portfolio Standards

Policy Name and Date

Memorandum of Understanding with the Sierra Club and the American Lung Association of Florida, November 1999

Standard

7.5% renewable by 2015 (JEA municipal utility only)

Mandatory/Voluntary

Voluntary (only for single utility—no statewide RPS established)

Allowable Sources

Photovoltaics, Landfill Gas, Wind, Biomass, Municipal Solid Waste¹⁸⁶

Energy Efficiency Resource Standards

Policy Name and Date

Florida Statutes Section 366.82 Florida Energy Efficiency and Conservation Act, 2011

Standard

The statewide goal of 7,842 GWh in cumulative reductions from 2010-2019¹⁸⁷ has been stalled at implementation due to a lack of funding.¹⁸⁸

Mandatory/Voluntary

Voluntary¹⁸⁹ (not yet implemented)

Net Metering Standards

Capacity Limit

Per System: 2,000 kW

Entire State: No limit specified

Mandatory/Voluntary

Voluntary¹⁹⁰

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, CHP/Cogeneration, Hydrogen, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal¹⁹¹

State Facts

Capital: Tallahassee

Area: 58,976 sq mi

Population: 18,801,310

State Bird: Northern

Mockingbird

State Flower: Orange

Blossom Coreopsis¹⁸⁵

FLORIDA at a Glance:

☒ Renewable Portfolio Standards

☒ Energy Efficiency Resource Standards

☒ Net Metering Standards

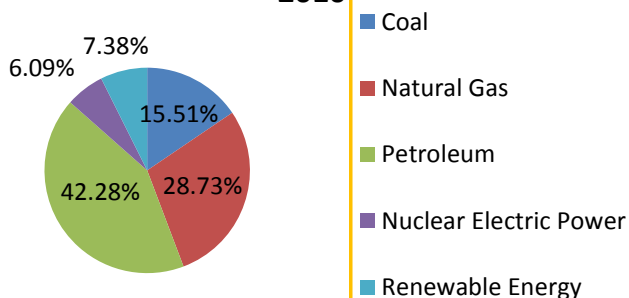
Florida Energy Fact

Renewable energy accounted for 2.2 percent of Florida's total net electricity generation; the State ranked third in the Nation in 2011 in net electricity generation from solar energy.

<http://www.eia.gov/state/?sid=FL>

Florida Energy Consumption Estimates

2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Department of Transportation certifies disadvantaged business enterprises for federally assisted transportation contracts in the state.¹⁹²

Clean Energy Potential in Florida

Background

Florida has one of the highest rates of home electricity consumption in the country, due in no small part to the need for air conditioning. However, the source of Florida's heat is also its most promising source of renewable energy -- sunshine. In addition to solar energy, there is potential for the production of energy through wind and geothermal energy sources.¹⁹³



Solar: Florida has urban utility-scale PV potential of 72,787 GWh (31.77% of total net generation), rural utility-scale PV potential of 5,137,347 GWh (over 100% of total net generation), rooftop PV potential of 63,987 GWh (27.9% of total net generation) and concentrated solar power potential of 359 GWh (.15% of total net generation).

Wind: Offshore wind power potential is 34,684 GWh (15.13% of total net generation).

Geothermal: Enhanced geothermal systems potential is 374,161 GWh (over 100% of total net generation).¹⁹⁴

Incentives in Florida

Type	Incentives	Description
Statewide	Renewable Energy Production Tax Credit	In June 2006, S.B. 888 established a renewable energy production tax credit to encourage the development and expansion of renewable energy facilities in Florida.
	Solar and CHP Sales Tax Exemption	Solar energy systems have been exempt from Florida's sales and use tax since July 1, 1997.
Utility-Specific	Beaches Energy Services - Solar Water Heating Rebate Program	Beaches Energy Services offers a solar water heating rebate to their residential customers.
	Beaches Energy Services - Residential Energy Efficiency Rebate Program	Beaches Energy Services offers rebates to residential customers as an incentive to install qualifying energy efficient equipment and measures in existing homes.
	City of Tallahassee Utilities - Solar Water Heating Rebate	The City of Tallahassee Utilities offers a \$450 rebate to homeowners and homebuilders who install a solar water-heating system.
	City of Tallahassee Utilities - Energy Star Certified New Homes Rebate Program	The City of Tallahassee Utilities offers a rebate of \$1 per square foot (up to \$2,000) for ENERGY STAR qualified new homes.

Type	Incentives	Description
Utility-Specific	City of Tallahassee Utilities - Residential Energy Efficiency Rebate Program	City of Tallahassee Utilities (CTU) offers residential customers rebates for the purchase of ENERGY STAR appliances and heating and cooling equipment.
	City of Tallahassee Utilities - Low-Income Energy Efficiency Grant Program	City of Tallahassee Utilities offers the Ceiling Insulation Grant Program, which encourages low-income residents to improve the energy efficiency of homes.
	City of Tallahassee Utilities - Efficiency Loans	The City of Tallahassee Utilities offers loans with an interest rate of 5% for 29 different energy-saving measures, including energy efficient central air conditioning units, windows, doors, cooking equipment, appliances, reflective roofing, and ceiling insulation.
	City of Tallahassee Utilities - Solar Loans	The City of Tallahassee Utilities offers loans with an interest rate of 5% for a variety of energy-saving measures, including photovoltaic (PV) systems and solar water-heating systems.
	Clay Electric Cooperative, Inc - Energy Smart Solar Water Heater Rebate Program	Clay Electric Cooperative (CEC) provides a rebate of \$0.01 per BTU output to its residential members when they purchase qualified solar water heaters.

Type	Incentives	Description
Utility-Specific	Clay Electric Cooperative, Inc. - Energy Smart Energy Efficiency Rebate Program	Rebates are available only to Clay Electric Cooperative (CEC) residential members who are making efficiency upgrades to primary residences served by CEC.
	Clay Electric Cooperative, Inc. - Energy Conservation Loans	Customers can borrow up to \$5,000 for improvements such as high efficiency heat pumps, insulation, and certain high efficiency appliances.
	Clay Electric Cooperative, Inc. - Solar Thermal Loans	CEC offers low interest loans to help customers finance solar water heaters and solar pool heaters.
	Florida City Gas - Residential Energy Smart Rebate Program	Florida City Gas (FCG) encourages residential customers to become more energy efficient by offering various rebates for the purchase and installation of efficient natural gas appliances.
	Florida Keys Electric Cooperative - Residential Rebate Program	Florida Keys Electric Cooperative offers residential members rebates for installing energy efficient measures.
	Florida Power and Light - Solar Rebate Program	Florida Power and Light (FPL) offers several incentives to encourage residential and business customers to install solar water heating and solar photovoltaic (PV) systems on eligible property.

Type	Incentives	Description
Utility-Specific	Florida Power and Light - Business Energy Efficiency Rebates	Florida Power and Light (FPL) offers incentives for its business customers to upgrade the HVAC system, building envelope, water heating, refrigeration and lighting systems.
	Florida Power and Light - Residential Energy Efficiency Program	Florida Power and Light (FPL) offers rebates to residential customers who implement certain energy efficiency improvements in eligible homes.
	Florida Public Utilities - Commercial Energy Efficiency Rebate Programs	Florida Public Utilities offers the Energy for Life Conservation Program to commercial electric customers to save energy in facilities.
	Florida Public Utilities - Residential HVAC Rebate Program	Florida Public Utilities offers rebates to electric residential customers who improve the efficiency of homes.
	Florida Public Utilities (Gas) - Residential Energy Efficiency Rebate Programs	Florida Public Utilities offers the Energy for Life Conservation Program to its residential natural gas customers to save energy in their homes.
	Fort Pierce Utilities Authority - Solar Water Heating Rebate	Flat rebates of \$450 are now available to residential customers toward the installation of new solar water heating units.

Type	Incentives	Description
Utility-Specific	Fort Pierce Utilities Authority - Residential Energy Efficiency Rebate Program	Fort Pierce Utilities Authority offers a variety of incentives for their residential customers to save energy in their homes.
	Gainesville Regional Utilities - Solar Water Heating Rebate Program	The Gainesville Regional Utilities (GRU) Solar Rebate Program, established in early 1997 as part of GRU's demand-side management initiatives, provides rebates of \$500 to residential customers of GRU who install solar water heating systems.
	Gainesville Regional Utilities - Solar-Electric (PV) System Rebate Program	Gainesville Regional Utilities (GRU) offers its customers a rebate to install photovoltaic (PV) systems.
	Gainesville Regional Utilities - Business Energy Efficiency Rebate Program	Gainesville Regional Utilities (GRU) offers an incentive to business customers for upgrading to energy efficient equipment at eligible facilities.
	Gainesville Regional Utilities - Energy Efficiency Rebate Program	Gainesville Regional Utilities offers rebates on a variety of energy efficient technologies for its residential electric customers.
	Gainesville Regional Utilities - Low-Interest Energy Efficiency Loan Program	Gainesville Regional Utilities (GRU) offers a six percent annual interest loan for pre-approved items including the ENERGY STAR refrigerators, high efficiency central air conditioning systems, and solar electric photovoltaic systems.

Type	Incentives	Description
Utility-Specific	Gainesville Regional Utilities - Solar Feed-In Tariff	Gainesville Regional Utilities (GRU), a municipal utility owned by the City of Gainesville, offers a solar feed-in tariff (FIT) for solar photovoltaic (PV) systems.
	Gulf Power - Commercial Energy Efficiency EarthCents Program	Gulf Power offers a program to make customer businesses more energy efficient through do-it-yourself professionally installed efficiency measures.
	Gulf Power - Residential Energy Efficiency EarthCents Program	Gulf Power, owned by Southern Company, offers programs to make customers' homes more energy efficient through do-it-yourself or professionally installed efficiency measures.
	Gulf Power - Solar PV Program	Gulf Power offers a Solar PV rebate to residential and commercial customers. Gulf Power will provide a \$2/watt rebate with a \$10,000 per system maximum.
	Gulf Power - Solar Thermal Water Heating Program	Gulf Power offers a Solar Thermal Water Heating rebate to customers who install water heaters.
	JEA - Solar Incentive Program	The JEA Solar Incentive Program provides rebates to JEA's residential and commercial customers who install new and retrofit solar hot water heaters on homes and businesses.

Type	Incentives	Description
Utility-Specific	JEA - Commercial Energy Efficiency Rebate Program	JEA offers a number of rebates to commercial customers for purchasing and installing energy efficient equipment in eligible facilities.
	JEA - Green Built Homes of Florida Builder Rebate Program	Green Built Homes of Florida is an incentive program offered by JEA and the Northeast Florida Builders Association (NEFBA) to promote the use of energy and water efficient building practices in new single-family homes constructed in Northeast Florida.
	JEA - ShopSmart Residential Rebate Program	Jacksonville Electric Authority is offers rebates for home energy efficiency improvements through the ShopSmart with JEA Program.
	Kissimmee Utility Authority - Commercial Energy Efficiency Rebate Program	Kissimmee Utility Authority (KUA) offers several rebates to commercial customers for energy efficiency improvements.
	Kissimmee Utility Authority - Residential Energy Efficiency Rebate Program	Kissimmee Utility Authority (KUA) offers several rebates to residential customers for energy efficiency improvements.
	Lake Worth Utilities - Residential Solar Water Heating Rebate Program	The City of Lake Worth Utilities (CLWU), in conjunction with Florida Municipal Power Agency, offers rebates to customers who purchase and install a solar water heating system for residential use.

Type	Incentives	Description
Utility-Specific	Lake Worth Utilities - Energy Conservation Rebate Program	The City of Lake Worth Utilities, in conjunction with Florida Municipal Power Agency, offers a variety of rebates to residential and commercial customers for upgrading to energy saving equipment.
	Lakeland Electric - Commercial Conservation Rebate Program	Lakeland Electric offers several incentives for commercial customers to save energy in eligible facilities.
	Lakeland Electric - Residential Conservation Rebate Program	Lakeland Electric offers a conservation program for residential customers to save energy in homes.
	New Smyrna Beach - Commercial Energy Efficiency Rebate Program	The Utilities Commission of New Smyrna Beach (UCNSB) is offering rebates to commercial customers for the purchase and implementation of energy efficient LED exit signs, increased insulation and window solar screens.
	New Smyrna Beach - Residential Energy Efficiency Rebate Program	New Smyrna Beach offers residential customers incentives for improving the energy efficiency of eligible homes.
	Ocala Utility Services - Solar Hot Water Heating Rebate Program	The Solar Water Heater Rebate Program is offered to residential retail electric customers by the City of Ocala Utility Services.
	Ocala Utility Services - Energy Efficiency Rebate Program	Ocala Utility Services offers rebates on A/C and heat pumps, refrigerators and freezers, dishwashers, clothes washers, and insulation.

Type	Incentives	Description
Utility-Specific	Orlando Utilities Commission - Residential Solar Water Heater Rebate Program	The Orlando Utilities Commission (OUC) offers residential electric customers a point-of-sale rebate of \$1,000 for new solar water heating systems.
	Orlando Utilities Commission - Residential Energy Efficiency Rebate Program	Orlando Utilities Commission (OUC) offers rebates on a variety of energy efficient improvements for residential customers.
	Orlando Utilities Commission - Home Energy Efficiency Fix-Up Program	Orlando Utilities Commission's (OUC) Home Energy Fix-Up Program provides assistance to low-income residential customers.
	Orlando Utilities Commission - Residential Solar Loan Program	Orlando Utilities Commission (OUC), in cooperation with the Orlando Federal Credit Union (OFCU), provides its customers with low-interest loans for solar photovoltaic (PV) systems and solar water heating (SWH) systems.
	Orlando Utilities Commission - Solar Programs	The Orlando Utilities Commission (OUC), through its Solar Program, offers to purchase the environmental attributes or renewable energy credits (RECs) from customers who install a photovoltaic (PV) and/or solar thermal energy system on their property.
	Progress Energy Florida - SunSense Commercial PV Incentive Program	In March 2011, Progress Energy Florida began offering incentives to commercial customers who install photovoltaic (PV) systems.

Type	Incentives	Description
Utility-Specific	Progress Energy Florida - SunSense Solar Photovoltaics Rebate Program	Progress Energy Florida (PEF) has allocated \$1.9 million per year towards residential photovoltaic (PV) incentives.
	Progress Energy Florida - SunSense Solar Water Heating with EnergyWise	Progress Energy Florida (PEF) launched the Solar Water Heating with EnergyWise Program in February 2007 to encourage its residential customers to participate in its load control program and install a solar water heating system.
	Progress Energy Florida - Commercial Energy Efficiency Rebate Program	Progress Energy Florida offers an incentive to its business customers for replacing their old equipment with high-efficiency models.
	Progress Energy Florida - Home Energy Check Audit and Rebate Program	Progress Energy Florida offers free home energy inspections.
	Tampa Electric - Solar Rebate Program	Tampa Electric provides financial incentives to customers who install solar-energy systems on their homes and businesses.
	Tampa Electric - Commercial Energy Efficiency Rebate Programs	Tampa Electric offers a variety of incentives for commercial and industrial customers to increase the efficiency of eligible facilities.
	Tampa Electric - Residential Energy Efficiency Rebate Program	Tampa Electric provides a variety of financial incentives to promote energy efficiency in the residential sector.

Type	Incentives	Description
Local	<u>City of Lauderdale - Revolving Loan Program</u>	The City of Lauderdale offers Interest Free Energy Appliance Loans through a municipal revolving loan program.
	<u>City of Longwood - Raising Energy Efficiency Rebate Program</u>	The City of Longwood offers the Raising Energy Efficiency Program (REEP) to owner occupied residences within the City of Longwood for making energy efficiency improvements to their properties while supporting local businesses.
	<u>Miami-Dade County - Targeted Jobs Incentive Fund</u>	The Targeted Jobs Incentive Fund (TJIF) provides financial incentives for select industries, including solar thermal and photovoltaic manufacturing, installation and repair companies that are relocating or expanding within Miami-Dade County.
	<u>Miami-Dade County - Expedited Green Buildings Process</u>	In an effort to promote environmentally sensitive design and construction, the Miami-Dade County Commissioners passed an ordinance in June 2005 to expedite the permitting process for “green” buildings certified by a recognized environmental rating agency.
	<u>St. Lucie County - Solar and Energy Loan Fund (SELF)</u>	St. Lucie County has collaborated with local financial institutions and community leaders to establish the non-profit Solar and Energy Loan Fund (SELF), which will administer a low-interest loan program.



GEORGIA

The Peach State¹⁹⁵

State Facts

Capital: Atlanta

Area: 58,921 sq mi

Population: 9,687,653

State Bird: Brown
Thrasher

State Flower: Cherokee
Rose and Azalea¹⁹⁶

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Georgia.¹⁹⁷

Status

No Activity Identified¹⁹⁸

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Georgia.¹⁹⁹

Status

No Activity Identified²⁰⁰

GEORGIA at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: 100 kW for non-residential; 10 kW for residential
Entire State: 0.2% of utility's peak demand during previous year

Mandatory/Voluntary

Mandatory

Allowable Sources

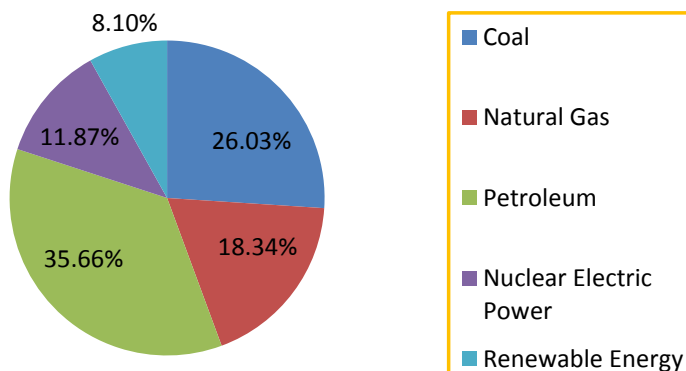
Photovoltaics, Wind, Fuel Cells, Fuel Cells using Renewable Fuel²⁰¹

Georgia Energy Fact

Georgia is considered to have substantial hydroelectric potential and is one of the top hydroelectric power producers east of the Rocky Mountains.

<http://www.eia.gov/beta/state/?sid=GA>

Georgia Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Georgia Department of Administrative Services and the Georgia Department of Transportation provide a joint process for MBE certification, but there is no hiring requirement.²⁰²

Clean Energy Potential in Georgia

Background

Georgia has some of the best solar resources in the southeast and while growth has been historically limited, there is strong potential in this renewable energy sector.²⁰³



Solar: Georgia has urban utility-scale PV potential of 43,167 GWh (31.37% of total net generation), rural utility-scale PV potential of 5,492,183 GWh (over 100% of total net generation), and rooftop PV potential of 43,167 GWh (72% of total net generation).

Wind: The onshore wind power potential is 323 GWh (.23% of total net generation) and offshore wind power potential is 220,807 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 353,206 GWh (over 100% total net generation).²⁰⁴

Incentives in Georgia

Type	Incentives	Description
Statewide	Biomass Sales and Use Tax Exemption	Georgia enacted legislation in April 2006 (HB 1018) creating an exemption for biomass materials from the state's sales and use taxes.
	Clean Energy Tax Credit (Corporate)	In May 2008, Georgia enacted legislation establishing personal and corporate tax credits for renewable energy equipment and certain energy efficient equipment installed and placed into service.
	Clean Energy Tax Credit (Personal)	In May 2008, Georgia enacted legislation establishing personal and corporate tax credits for clean energy equipment installed and placed into service.
	Sales Tax Exemption for Energy-Efficient Products (Sales Tax Holiday)	Georgia allows an annual state and local sales tax exemption on Energy Star products of \$1,500 or less per product, purchased for non-commercial home or personal use.
Utility-Specific	Blue Ridge Mountain Electric Membership Corporation - Energy Efficiency Rebate Program	Blue Ridge Mountain EMC and TVA, its power supplier, offer the Energy Right and In Home Energy Evaluation programs to qualified members.
	Central Georgia EMC - Photovoltaic Rebate Program	In June 2008, Central Georgia Electric Membership Corporation (CGEMC) began offering a rebate of \$450 per kilowatt (kW) to residential members who install photovoltaic (PV) systems that are interconnected and net metered.

Type	Incentives	Description
Utility-Specific	Central Georgia EMC - Residential Energy Efficiency Rebate Program	Central Georgia Electric Member Corporation (CGEMC) offers rebates for residential customers to increase the energy efficiency of existing homes or to build new energy efficient homes.
	Cobb EMC - Solar Rebate Program	Cobb Energy Management Corporation (EMC) offers rebates for residential solar photovoltaic (PV) systems.
	Coweta-Fayette EMC - Residential Energy Efficiency Rebate Program	Coweta-Fayette EMC offers a variety of rebates of up to \$1,000 for the purchase and installation of geothermal heat pumps, electric heat pumps, dual fuel heat pumps, water heaters, insulation, windows, and programmable thermostats.
	Coweta-Fayette EMC - Residential Solar Water Heater Rebate Program	Coweta-Fayette EMC offers rebates on solar water heaters from \$750 up to \$1,500 as part of the Touchstone Energy Home Program.
	Coweta-Fayette EMC - Home Plus Loan Program	Customers of Coweta-Fayette EMC can take advantage of the Home Plus Energy Efficiency Loan Program to pursue any approved energy efficiency measures and upgrades.

Type	Incentives	Description
Utility-Specific	Diverse Power - Energy Efficient Existing Homes Rebate Program	Diverse Power offers a number of rebates to homeowners for purchasing and installing energy efficient measures, such as heat pumps, water heaters, heat recovery systems, and for replacing natural gas heat pumps and water heaters with electric systems.
	Diverse Power - Energy Efficient New Construction Rebate Programs	Diverse Power offers a number of rebates for new and existing homes that meet or exceed national, state and local building and energy codes and install energy efficient measures, such as heat pumps, water heaters, and heat recovery systems.
	Electric Power Board - Energy Efficiency Rebate Program	Electric Power Board provides a financial incentive for residential customers to replace old water heaters with new ones, which meet the minimum standards set forth by the DOE.
	Flint Energies - Residential Energy Efficiency Loan Program	Flint Energies has collaborated with Robins Federal Credit Union to offer affordable financing options to residential customers who wish to upgrade the energy efficiency of homes and residential equipment.

Type	Incentives	Description
Utility-Specific	Georgia Environmental Finance Authority - Residential Energy Efficiency Loan Program	The Georgia Environmental Finance Authority (GEFA) encourages Georgians to utilize zero-interest financing options to help make their homes more energy efficient and save on utility bills.
	Georgia Power - Solar Buyback Program	Georgia Power, the state's largest utility, has established a green power program, that allows the company to purchase limited solar generation at a premium price based on other customers voluntarily paying a premium on their electric bill to support renewable generation.
	Georgia Power - Commercial Energy Efficiency Program	Georgia Power offers rebates to business customers who pay taxes and non-tax paying commercial customers.
	Georgia Power - Energy Efficiency Home Improvement Rebates	Georgia Power offers up to \$2,200 in rebates to customers who choose to improve home performance with whole building BPI certified efficiency measures or up to \$700 for individual improvements from its list of prescriptive measures.
	Georgia Power - Energy Star New Home Builder Rebate Program	Georgia Power provides an incentive for homebuilders to subsidize the rating cost of new homes, which meet ENERGY STAR guidelines.

Type	Incentives	Description
Utility-Specific	Georgia Power - Residential Solar and Heat Pump Water Heater Rebate	Georgia Power customers may be eligible for rebates up to \$250 each toward the installation costs of a 50-gallon or greater solar water heater or heat pump water heater.
	GreyStone Power - Photovoltaic Rebate Program	GreyStone Power, an electricity cooperative in Georgia, offers a rebate for solar photovoltaic (PV) systems to members.
	GreyStone Power - Solar Water Heating Program	GreyStone Power, an electricity cooperative serving 103,000 customers in Georgia, introduced a solar water-heating rebate in March 2009.
	Habersham EMC - Energy Efficiency Rebate Program	Habersham EMC offers a rebate program for homes that meet certain insulation specifications and pass inspection by a Habersham EMC representative.
	Habersham EMC - Energy Efficient Loan Program	Habersham EMC offers an ERC loan program with a 0% - 5% interest rate for customers to upgrade homes to be more energy efficient.
	Jackson EMC - Right Choice Sun Power Rebate Program	Jackson Electric Membership Corporation (Jackson EMC), which serves over 185,000 residential customers, offers rebates to those customers who install photovoltaic (PV) systems or solar water-heating systems.

Type	Incentives	Description
Utility-Specific	<u>Jackson EMC - Residential Energy Efficiency Rebate Program</u>	To encourage its residential customers to adopt energy efficient equipment in their homes, Jackson EMC provides rebates for qualified heat pumps and water heaters.
	<u>Jackson EMC - Right Choice for Builders Rebate Program</u>	To encourage the construction of homes that are energy efficient, Jackson EMC offers the Right Choice Savings Program.
	<u>Marietta Power & Water - Residential Energy Efficiency Rebate</u>	Marietta Power & Water provides rebates for electric water heaters (\$250) and electric and dual-fuel heat pumps (\$150).
	<u>Satilla REMC - HomePlus Loan Program</u>	Satilla Rural Electric Member Corporation offers the HomePlus Loan Program to members to install energy efficient improvements in their homes.
	<u>Sawnee EMC - Solar Photovoltaic Rebate Program</u>	Sawnee EMC offers a rebate of \$300 per kilowatt (kW) to residential customers who install photovoltaic (PV) systems that meet the cooperative's net metering guidelines.
	<u>Sawnee EMC - Commercial Energy Efficiency Rebate Program</u>	Sawnee EMC provides a variety of rebates for commercial customers who wish to upgrade the energy efficiency of eligible facilities.

Type	Incentives	Description
Utility-Specific	Sawnee EMC - Residential Energy Efficiency Rebate Program	Sawnee EMC provides a variety of rebates for residential customers building new energy efficient homes or making energy efficiency improvements to existing homes.
	TVA - Energy Right Solutions for Business	TVA offers the energy right Solutions Program to commercial and industrial facilities.
	TVA - Green Power Providers	Tennessee Valley Authority (TVA) and participating power distributors of TVA power offer a performance-based incentive program to homeowners and businesses for the installation of renewable generation systems from the following qualifying resources: PV, wind, hydropower, and biomass.
	TVA - Mid-Sized Renewable Standard Offer Program	The Tennessee Valley Authority (TVA) now compliments the small generation Green Power Providers Program by providing incentives for mid-sized renewable energy generators between 50 kW and 20 MW to enter into long-term price contracts.
	TVA Partner Utilities - Energy Right Heat Pump Program	The Tennessee Valley Authority (TVA) energy right Heat Pump Plan provides financing to promote the installation of high efficiency heat pumps in homes and small businesses.

Type	Incentives	Description
Utility-Specific	TVA Partner Utilities - Energy Right New Homes Program	The Tennessee Valley Authority (TVA) energy right New Homes Plan provides incentives for all electric, energy efficient new homes by offering graduated rebates for new homes.
	TVA Partner Utilities - Energy Right Water Heater Program	The TVA energy right Water Heater Plan promotes the installation of high efficiency water heaters in homes and small businesses.
	TVA Partner Utilities - In-Home Energy Evaluation Pilot Program	The Tennessee Valley Authority (TVA) energy right In-Home Energy Evaluation Pilot Program encourages the installation of energy efficiency improvements in existing single-family dwellings.
	Walton EMC - Residential Energy Efficiency Rebate Programs	Walton EMC provides financial incentives for residential members that wish to improve the energy efficiency of eligible residences.
	Walton EMC - Residential Solar Water Heating Rebate Program	WEMC provides a number of incentives to residential members who wish to increase the energy efficiency of a residence.
	Walton EMC - Prime PowerLoan Program	Walton EMC offers the Prime PowerLoan program for both residential and commercial accounts.

Type	Incentives	Description
Local	Athens-Clarke County - Green Business Revolving Loan Fund	Athens-Clarke County has created a Green Business Revolving Loan Fund for new or existing businesses.
	Grants to Green Program	The program offers grants to non-profits for energy efficiency upgrades to existing buildings or for buildings that are built more efficiently than required by the building code.
Non-Profit	Georgia Cities Foundation - Green Communities Revolving Loan Fund	The Green Communities Fund is a revolving loan fund providing low-interest loans to businesses located within the city limits of any city in Georgia.
	Georgia Interfaith Power and Light - Energy Improvement Grants	Georgia Interfaith Power and Light (GIPL) offers grants of up to \$10,000 to congregations or faith-based communities, including faith-based schools.

HAWAII

The Aloha State²⁰⁵



Renewable Portfolio Standards

Policy Name and Date

House Bill 1464, June 25, 2009

Standard

40% renewable by 2030

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, Municipal Solid Waste, CHP/Cogeneration, Hydrogen, Seawater AC, Solar AC, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Ethanol, Methanol, Biodiesel, Fuel Cells using Renewable Fuels²⁰⁷

HAWAII at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Mandatory/Voluntary

Mandatory²⁰⁸

Net Metering Standards

Capacity Limit

Per System: 100 kW for HECO, MECO, HELCO customers; 50 kW for KIUC customers
Entire State: 15% per circuit distribution threshold for distributed generation penetration

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass, Hydroelectric, Small Hydroelectric²¹⁰

State Facts

Capital: Honolulu

Area: 6,468 sq mi

Population: 1,360,301

State Bird: Nene

(Hawaiian Goose)

State Flower: Yellow

Hibiscus²⁰⁶

Energy Efficiency Resource Standards

Policy Name and Date

House Bill 1464, June 2009

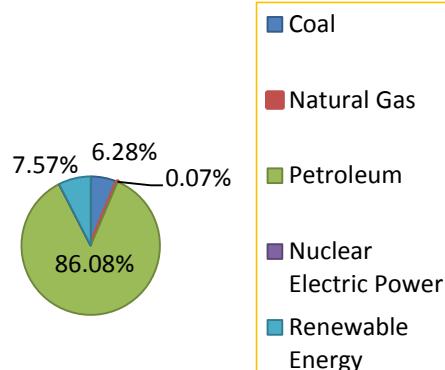
Standard

In 2009, 4,300 GWh reduction in electricity use by 2030 (net reduction of 30% of projected 2030 sales, approximate annual reduction rate of 1.4%)

Hawaii Energy Fact

Solar photovoltaic (PV) capacity increased 150 percent in Hawaii in 2011, making it the 11th biggest state for PV capacity.

Hawaii Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Hawaii's Department of Transportation certifies DBEs for federally assisted contracts.²⁰⁹

Clean Energy Potential in Hawaii

Background

Hawaii has one of the most diverse renewable energy generation opportunities of any state, but the transmission of electricity to areas of high demand remains a challenge.



Solar: Hawaii has urban utility-scale PV potential of 3,725 GWh (34.3% of total net generation), rural utility-scale PV potential of 38,033 GWh (over 100% of total net generation), and concentrated solar power potential is 15,370 GWh (over 100% total net generation).

Wind: The onshore wind power potential is 7,787 GWh (71.8% of total net generation) and offshore wind power potential is 2,836,735 GWh (over 100% of total net generation).

Geothermal: The potential for hydrothermal power is 20,632 GWh (over 100% total net generation).²¹¹

Incentives in Hawaii

Type	Incentives	Description
Statewide	Commercial Energy Efficiency Rebate Program	Hawaii Energy is a ratepayer-funded conservation and efficiency program administered by SAIC under contract with the Hawaii Public Utilities Commission serving the islands of Hawaii, Lanai, Maui, Molokai and Oahu.
	Farm and Aquaculture Alternative Energy Loan	Farmers and aquaculturists may receive loans for projects involving photovoltaic (PV) energy, hydroelectric power, wind power generation, methane generation, bio-diesel and ethanol production.
	Feed-in Tariff	In September 2009, the Hawaii Public Utilities Commission (PUC) issued a decision that established a feed-in tariff in Hawaii.
	GreenSun Hawaii	The GreenSun Hawaii Program works with various lenders throughout Hawaii to offer financing for renewable energy and energy efficiency upgrades.
	Priority Permit Processing for Green Buildings	Hawaii Revised Statutes (HRS) §46-19.6 requires each county agency that issues building, construction, or development-related permits to establish a procedure for priority processing of permit applications for construction projects incorporating energy and environmental design building standards.

Type	Incentives	Description
Statewide	Residential Energy Efficiency Rebate Program	As part of the Energy Solutions Programs, the Hawaii Energy Efficiency Program provides rebates to residences for heat pump water heaters, central air conditioning systems, washers, refrigerators, ceiling fans, CFL light bulbs and equipment maintenance.
	Solar and Wind Energy Credit (Corporate)	Originally enacted in 1976, the Hawaii Energy Tax Credits allow individuals or corporations to claim an income tax credit of 20% of the cost of equipment and installation of a wind system and 35% of the cost of equipment and installation of a solar thermal or photovoltaic (PV) system.
	Solar and Wind Energy Credit (Personal)	Originally enacted in 1976, the Hawaii Energy Tax Credits allow individuals or corporations to claim an income tax credit of 20% of the cost of equipment and installation of a wind system and 35% of the cost of equipment and installation of a solar thermal or photovoltaic (PV) system.
	Solar Water Heater Rebate	Hawaii Energy, a third-party administered public benefits fund, provides incentives for energy efficiency and conservation to customers of the Hawaiian Electric Company (HECO) and its subsidiaries, Maui Electric Company (MECO) and Hawaii Electric Light Company (HELCO).

Type	Incentives	Description
Utility-Specific	KIUC - Solar Water Heating Rebate Program	Participants will receive an energy use analysis and screening for the installation of cost-effective energy saving devices, including solar water heating systems.
	KIUC - Energy Wise Commercial Energy Efficiency Program	Kauai Island Utility Cooperative, a Touchstone Energy Cooperative, offers incentives to its commercial customers for installing energy efficient equipment.
	KIUC - Solar Water Heating Loan Program	Through a partnership with Kauai Community Federal Credit Union (KCFCU) and Kauai County Housing Agency (KCHA), the Kauai Island Utility Cooperative (KIUC) provides qualifying members with zero-interest loans for solar water heating systems.
Local	City and County of Honolulu - Real Property Tax Exemption for Alternative Energy Improvements	In September 2009, the Honolulu City Council unanimously passed Bill 58 to create a real property tax exemption for alternative energy improvements.
	City and County of Honolulu - Solar Loan Program	The program offers zero-interest loans to income-eligible homeowners for the installation of solar water heating and photovoltaic systems through the City's Rehabilitation Loan Program.
	Maui County - Solar Roofs Initiative Loan Program	In September 2002, Maui Electric Company (MECO) and the County of Maui teamed up to launch the Maui Solar Roofs Initiative to increase the use of renewable energy in Maui County.



IDAHO

*The Gem State*²¹²

State Facts

Capital: Boise

Area: 83,569 sq mi

Population: 1,567,582

State Bird: Mountain
Bluebird

State Flower: Lewis'
Mock Orange
(*'Syringa'*)²¹³

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Idaho.²¹⁴

Status

No Activity Identified²¹⁵

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Idaho.²¹⁶

Status

No Activity Identified²¹⁷

IDAHO at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: Varies by utility

Entire State: Varies by utility

Mandatory/Voluntary

Voluntary

Allowable Sources

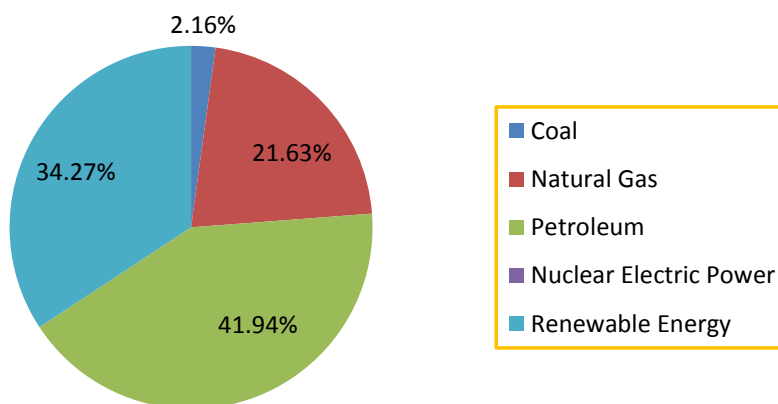
Varies by utility²¹⁸

Idaho Energy Fact

Idaho's wind generation nearly tripled in 2011, providing 8.2 percent of net electricity generation.

<http://www.dsireusa.org/incentives/allsummaries.cfm?SearchType=Net&re=1&ee=1>

Idaho Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Idaho Transportation Department administers the U.S. Department of Transportation's DBE Program, which sets goals for MBE participation in each transportation sector.²¹⁹

Clean Energy Potential in Idaho

Background

Idaho has some of the lowest electricity rates in the country, and is one of the nation's leaders in using geothermal resources. Furthermore, the state's wind power generation is also notable, especially for a state without an official target for renewable energy.²²⁰



Solar: Idaho has urban utility-scale PV potential of 23,195 GWh (over 100% of total net generation), rural utility-scale PV potential of 3,936,848 GWh (over 100% of total net generation), rooftop PV potential is 4,051 GWh (33.6% of total net generation) and concentrated solar power potential is 3,502,877 GWh (over 100% of total net generation).

Wind: The onshore wind power potential is 44,320 GWh (over 100% of total net generation).

Geothermal: The potential for hydrothermal power is 17,205 GWh (over 100% total net generation) and enhanced geothermal systems potential is 993,257 GWh (over 100% of total net generation).²²¹

Incentives in Idaho

Type	Incentives	Description
Statewide	Income Tax Deduction for Energy Efficiency Upgrades	Idaho residents with homes built or under construction before 2002, or who had a building permit issued before January 1, 2002, qualify for an income tax deduction for 100% of the cost of installing new insulation or other approved energy efficiency improvements in an existing residence.
	Low-Interest Energy Loan Programs	The Idaho Office of Energy Resources administers low-interest loan programs for energy efficiency projects, and for active solar, wind, geothermal, hydropower and biomass energy projects.
	Renewable Energy Project Bond Program	Legislation enacted in Idaho in April 2005 (Senate Bill 1192) allows independent (non-utility) developers of renewable energy projects in the state to request financing from the Idaho Energy Resources Authority, a state bonding authority created in March 2005 by the Environment, Energy and Technology Energy Resources Authority Act (House Bill 106).
	Property Tax Exemption for Wind and Geothermal Energy Producers	In 2007, Idaho enacted a bill that restructured the method of taxation for producers of wind energy from a property tax to a tax on production.

Type	Incentives	Description
Statewide	Residential Alternative Energy Tax Deduction	This statute allows taxpayers an income tax deduction of 40% of the cost of a solar, wind, geothermal, and certain biomass energy devices used for heating or electricity generation.
Utility-Specific	Avista Utilities (Electric) - Commercial Energy Efficiency Incentives Program	Avista Utilities offers numerous incentives to commercial and industrial customers to increase the energy efficiency of customer facilities or equipment.
	Avista Utilities (Electric) - Commercial Food Equipment Rebates	Avista Utilities offers incentives to customers who improve efficiency through electric food service equipment retrofits.
	Avista Utilities (Electric) - Commercial Lighting Energy Efficiency Program	Avista Utilities' Commercial Lighting Program provides incentives for lighting upgrades.
	Avista Utilities (Electric) - Residential Energy Efficiency Rebate Programs	Avista Utilities Home Improvement and New Home Construction Programs offer a variety of incentives for residential customers to save energy in eligible homes.
	Idaho Falls Power - Residential Weatherization Loan Program	Residential customers with permanently installed electric heat, who receive service from the City of Idaho Falls, are eligible for 0% weatherization loans.
	Idaho Falls Power - Residential Energy Efficiency Loan Program	Idaho Falls Power's Energy Efficiency Loan Program offers zero interest loans for qualifying customers to purchase and install efficient electric appliances.

Type	Incentives	Description
Utility-Specific	Idaho Falls Power - Energy Efficient Heat Pump Loan Program	Idaho Falls Power offers zero interest loans to all eligible customers for the purchase and installation of energy efficient heat pumps.
	Idaho Falls Power - Commercial Energy Conservation Loan Program	Idaho Falls Power is offering a zero interest loan program to qualifying commercial customers to install efficient lighting and other energy conservation measures.
	Idaho Falls Power - Commercial Energy Conservation Rebate Program	In addition to loan programs, Idaho Falls Power offers rebates for customers meeting certain criteria.
	Idaho Falls Power - Residential Energy Efficiency Rebate Program	Idaho Falls Power offers rebates to eligible customers for installing energy efficient equipment and pursuing whole building efficiency measures.
	Idaho Power - Easy Upgrades Efficiency Incentive Program	Idaho Power offers incentives for its commercial and industrial customers in Idaho and Oregon to upgrade to more efficient equipment in facilities.
	Idaho Power - Large Commercial Custom Efficiency Program	Large commercial and industrial Idaho Power customers that reduce energy usage through more efficient electrical commercial and industrial processes may qualify for an incentive that is the lesser of 12 cents per kilowatt hour (kWh) saved per year or 70% of the project cost.

Type	Incentives	Description
Utility-Specific	Idaho Power - New Building Efficiency Program	Idaho Power offers incentives for its commercial and industrial customers in Idaho and Oregon to install new equipment above code in eligible facilities.
	Idaho Power - Rebate Advantage for New Manufactured Homes	Idaho Power is offering a \$1,000 sales rebate to customers who purchase a new ENERGY STAR all-electric manufactured home and connect that home to an Idaho Power residential account.
	Idaho Power - Residential Energy Efficiency Rebate Programs	Idaho Power offers a variety of incentives for residential customers in Idaho and Oregon.
	Intermountain Gas Company (IGC) - Gas Heating Rebate Program	The Intermountain Gas Company's (IGC) Gas Heating Rebate Program offers customers a \$200 per unit rebate when they convert to a high efficiency natural gas furnace that replaces a heating system using another energy source.
	Kootenai Electric Cooperative - Residential Efficiency Rebate Program	Kootenai Electric Cooperative offers incentives for residential customers to increase the energy efficiency of participating homes.
	Northern Lights Inc. - Energy Conservation Rebate Program	Northern Lights Inc. offers a variety of rebates for the purchase and installation of energy efficient appliances and measures.
	Questar Gas - Residential Solar Assisted Water Heating Rebate Program	Questar Gas provides incentives for residential customers to purchase and install solar water heating systems on their homes.

Type	Incentives	Description
Utility-Specific	Questar Gas - Commercial Energy Efficiency Rebate Program	Questar Gas provides rebates to its business customers for installing energy efficient food service equipment, laundry equipment, HVAC and water heating equipment, and certain weatherization measures.
	Questar Gas - Home Builder Gas Appliance Rebate Program	Questar Gas provides incentives for home builders who incorporate energy efficiency into new construction.
	Questar Gas - Residential Energy Efficiency Rebate Programs	Questar Gas provides rebates for energy efficient appliances and heating equipment, and certain weatherization measures through the ThermWise program.
	Rocky Mountain Power - Energy FinAnswer	Rocky Mountain Power's Energy FinAnswer Program provides incentives to help its customers improve the efficiency of existing facilities and build new facilities that are significantly more efficient than code.
	Rocky Mountain Power - FinAnswer Express	Rocky Mountain Power provides incentives for its commercial and industrial customers in Idaho to retrofit existing facilities with more efficient equipment, or install energy efficient equipment in new facilities.
	Rocky Mountain Power - WattSmart Residential Efficiency Program	Rocky Mountain Power provides incentives for residential customers in Idaho to install energy efficient equipment in participating homes.

Type	Incentives	Description
Non-Profit	BEF - Solar 4R Schools	This competitive grant program seeks to install small-scale photovoltaic systems at K-12 schools interested in increasing the visibility of renewable energy.

ILLINOIS

The Prairie State²²²



Renewable Portfolio Standards

Policy Name and Date

Public Act 095-0481, August 28, 2007

Standard

25% renewable by 2025-2026

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Anaerobic Digestion, Biodiesel²²⁴

Energy Efficiency Resource Standards

Policy Name and Date

Senate Bill 1592, August 28, 2007

Standard

Began at 0.2% of electricity sales per year in 2008 and increases in steps up to 2.0% of sales per year by 2015; Natural gas EERS--8.6% cumulative natural gas savings by 2020.

Mandatory/Voluntary

Mandatory²²⁵

Net Metering Standards

Capacity Limit

Per System: Current rules: 40 kW

New rules per SB 1652/HB 3036: 2,000 kW

Entire State: Current rules: 1% of utility's peak demand in previous year

New rules per SB 1652/HB 3036: 5% of utility's peak demand in previous year

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind Biomass, Hydroelectric, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines²²⁶

State Facts

Capital: Springfield

Area: 57,916 sq mi

Population: 12,830,632

State Bird: Northern

Cardinal

State Flower: Violet²²³

Illinois Energy Fact

With a production capacity of 1.5 billion gallons per year, Illinois is a top producer of ethanol; it ranked third in the United States in 2011.

<http://www.eia.gov/beta/state/?sid=IL>

ILLINOIS at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

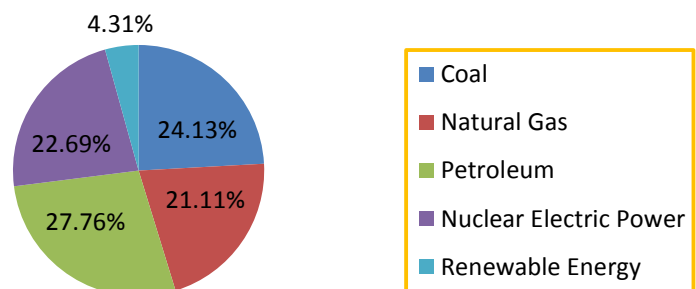
ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Illinois's Business Enterprise Program fosters an inclusive and competitive business environment that helps business enterprises increase their capacity, grow revenue, and enhance credentials for businesses owned by minorities, women, and persons with disabilities. There are no hiring requirements.²²⁷

Illinois Energy Consumption Estimates 2010



Clean Energy Potential in Illinois

Background

Illinois is one of the top electricity generating states in the nation and a leading net exporter of electricity to other states. The state is home to one of the most extensive networks of wind resources in the nation while being home to over 100 companies involved in wind energy.²²⁸



Solar: Illinois has urban utility-scale PV potential of 103,552 GWh (51.4% of total net generation), rural utility-scale PV potential of 8,090,985 GWh (over 100% of total net generation), and rooftop PV potential is 30,086 GWh (14.94% of total net generation).

Wind: The onshore wind power potential is 649,468 GWh (over 100% of total net generation) and offshore wind power potential is 66,070 GWh (32.8% of total net generation).

Geothermal: Enhanced geothermal systems potential is 676,056 GWh (over 100% total net generation).²²⁹

Incentives in Illinois

Type	Incentives	Description
Statewide	Biogas and Biomass to Energy Grant Program	The Renewable Energy Resources Program (RERP) promotes the development of renewable energy in Illinois.
	Commercial Wind Energy Property Valuation	In October 2007, Illinois passed Public Act 095-0644, a law providing consistent valuation procedures for commercial wind farm equipment (amended via HB4797 in 2010).
	Community Solar and Wind Grant Program	The Illinois Department of Commerce and Economic Opportunity (DCEO) offers grants for community-scale solar and wind projects located in Illinois.
	Efficient Living Energy Grant	The Smart Energy Design Assistance Center and the Illinois Department of Commerce and Economic Opportunity is offering grants for public housing authorities (PHAs) and their residents for the implementation of energy efficiency measures.
	Energy Efficient Affordable Housing Construction Program	The Department of Commerce and Economic Opportunity (DCEO) provides grants through the Energy Efficient Affordable Housing Construction Program.

Type	Incentives	Description
Statewide	Energy Impact Illinois Loans	Energy Impact Illinois partners with local banks and credit unions to provide low-interest loans to help reduce the upfront costs associated with energy efficiency improvements.
	Energy Impact Illinois Rebates	The Energy Impact Illinois Program offers rebates for implementing energy efficient measures.
	Green Energy Loans	Illinois business owners, non-profit organizations, and local governments seeking loans for certain energy efficiency and renewable energy upgrades may apply for a rate reduction, under the Green Energy Loan Program through the Illinois State Treasurer's Office, in partnership with eligible banks in the state (loan seekers are encouraged to verify if the eligible banks are actively participating in the program).
	Public Sector Electric Efficiency Programs	The Illinois Department of Commerce and Economic Opportunity (DCEO) Bureau of Energy and Recycling administers the public sector energy efficiency programs required by the Illinois Energy Efficiency Portfolio Standard (EEPS).

Type	Incentives	Description
Statewide	Public Sector Energy Efficiency Aggregation Program	The Public Sector Energy Efficiency Aggregation Program will allow public sector participants to combine energy efficiency projects in order to simplify the application process and implement projects that might otherwise be submitted as standalone projects.
	Public Sector New Construction and Retrofit Program	The Illinois Department of Commerce and Economic Opportunity (DCEO) Bureau of Energy and Recycling administers the public sector energy efficiency programs required by the Illinois Energy Efficiency Portfolio Standard (EEPS).
	Renewable Energy and Energy Efficiency Project Financing	The Illinois Finance Authority (IFA) is a state conduit issuer of tax-exempt bonds & credit enhancement for projects in Illinois. The IFA funding is available to commercial, as well as non-profit entities as long as those entities meet strict eligibility criteria.
	Renewable Energy Business Development Grant Program	The Renewable Energy Business Development Grant Program is to support the development, retooling, or expansion of renewable energy businesses and component manufacturers.
	Retro-Commissioning (RCx) Program	The Retro-Commissioning (RCx) Program is limited to ComEd and Ameren Illinois electric service territories, for the inclusion of natural gas savings measures.

Type	Incentives	Description
Statewide	Sales Tax Exemption for Wind Energy Business Designated High Impact Business	A business establishing a new wind power facility in Illinois that will not be located in an Enterprise Zone may be eligible for designation as a "High Impact Business."
	School Energy Efficiency Grant Program	The Illinois State Board of Education (ISBE) is offering \$50 Million in Energy Efficiency Matching Grants for Illinois Schools over the next two fiscal years.
	Solar and Wind Energy Rebate Program	The State of Illinois Renewable Energy Resources Program (RERP) promotes the development of renewable energy in Illinois.
	Solar Renewable Energy Credits	In October 2011, the legislature passed S.B. 1652, which requires the IPA to conduct a procurement event for the acquisition of renewable energy credits (RECs) for the period of June 1, 2013 to December 31, 2017.
	Special Assessment for Solar Energy Systems	Illinois offers a special assessment of solar energy systems for property-tax purposes.
Utility-Specific	Ameren Illinois (Electric) - Commercial Kitchen and Grocery Incentives Program	Ameren offers several programs targeted at grocery stores, convenience stores, refrigerated warehouses or spaces, and commercial kitchens.

Type	Incentives	Description
Utility-Specific	Ameren Illinois (Electric) - Custom, HVAC and Motor Business Efficiency Incentives	Prescriptive rebates are available for many HVAC and motor efficiency improvements.
	Ameren Illinois (Electric) - Lighting Rebates for Businesses	Ameren Illinois offers their non-residential Illinois customers a wide range of incentives for the installation of lighting improvements.
	Ameren Illinois (Electric) - Multi-Family Properties Energy Efficiency Rebate Program	The Multi-Family Properties Energy Efficiency Rebate Program aims to increase the energy efficiency of multi-family properties by implementing simple measures.
	Ameren Illinois (Electric) - Residential Energy Efficiency Rebates	Ameren Illinois Utilities (AmerenIP, AmerenCIPS, and AmerenCILCO) offer residential customers incentives for certain energy efficiency upgrades and improvements.
	Ameren Illinois (Gas) - Business Efficiency Incentives	Ameren Illinois offers several incentive programs that include efficient natural gas technologies.
	Ameren Illinois (Gas) - Residential Energy Efficiency Rebates	Ameren Illinois Utilities (AmerenIP, AmerenCIPS, and AmerenCILCO) offer residential customers incentives for certain energy efficiency upgrades and improvements.
	City Water Light and Power - Commercial Energy Efficiency Rebate Programs	City Water Light and Power (CWLP) offers rebates to help commercial customers increase the energy efficiency of participating facilities.

Type	Incentives	Description
Utility-Specific	City Water Light and Power - Residential Energy Efficiency Rebate Programs	City Water Light and Power (CWLP) offers rebates to Springfield residential customers for increasing the energy efficiency of participating homes.
	City Water Light and Power - Solar Rewards Program	City Water Light and Power (CWLP) offers residential and commercial customers a \$1,500 per kilowatt (kW) rebate for installing solar photovoltaic (PV) systems.
	ComEd - Business Instant Lighting Discounts Program	ComEd offers the Business Instant Lighting Discounts Program to businesses, multi-family properties and private schools.
	ComEd - Smart Ideas for Business Efficiency Program	Commonwealth Edison (ComEd) offers its non-residential Illinois customers a wide range of incentives for the installation of energy efficiency improvements.
	ComEd - Smart Ideas for Business New Construction	Commonwealth Edison's (ComEd) New Construction Service Program element, in coordination with Nicor Gas, provides cash incentives and technical assistance to encourage building owners, designers, and architects to surpass standard practices.
	ComEd - Smart Ideas for Your Home Efficiency Program	Commonwealth Edison (ComEd) offers residential customers and building owners (or managers) incentives for certain energy efficiency upgrades and improvements.

Type	Incentives	Description
Utility-Specific	ComEd, Nicor Gas, Peoples Gas & North Shore Gas - Small Business Energy Savings Program	ComEd, Nicor Gas, Peoples Gas, and North Shore Gas fund the Small Business Energy Savings Program in which an energy advisor conducts a free on-site energy assessment and provides free installation of energy saving products, as well as recommendations for further improvements with rebates of up to 70%.
	Corn Belt Energy Coop - Commercial Energy Efficiency Rebate Program	Corn Belt Energy, through the Wabash Valley Power Association, offers business, school, and farm customers a variety of rebates and incentives for energy efficiency through its "Power Moves" Program.
	Corn Belt Energy Coop - Residential Energy Efficiency Rebate Program	Corn Belt Energy Corporation (CBEC), in association with the Wabash Valley Power Association, provides its customers with the "Power Moves" energy efficiency rebate program.
	Illinois Municipal Electric Agency - Electric Efficiency Program	The Illinois Municipal Electric Agency (IMEA) offers rebates to member municipal utilities (those who purchase wholesale electric service from IMEA) and retail customers for energy efficiency upgrades.
	Jo-Carroll Energy - Energy Efficiency Rebate Program	Jo-Carroll Energy Cooperative, Inc. (JCECI) offers a variety of rebates on energy efficient equipment to members receiving electric or natural gas service from JCECI.

Type	Incentives	Description
Utility-Specific	MidAmerican Energy (Electric) - Commercial EnergyAdvantage Rebate Program	MidAmerican Energy offers a variety of energy efficiency rebate programs to its non-residential customers located in Illinois.
	MidAmerican Energy (Electric) - Residential Energy Efficiency Rebate Programs	MidAmerican Energy offers a variety of incentives for residential customers to improve the energy efficiency of participating homes.
	MidAmerican Energy (Gas) - Commercial EnergyAdvantage Rebate Program	MidAmerican Energy offers a variety of energy efficiency rebate programs to non-residential customers located in Illinois.
	MidAmerican Energy (Gas) - Residential Energy Efficiency Rebate Programs	MidAmerican Energy offers a variety of incentives for residential customers to improve the energy efficiency of eligible homes.
	Nicor Gas - Commercial Energy Efficiency Rebates	Nicor Gas offers a variety of rebates to commercial customers for the purchase and installation of energy efficient products.
	Nicor Gas - Residential Energy Efficiency Rebates	Energy efficient heating products are eligible for Nicor Gas rebates.
	Nicor Gas, North Shore Gas, Peoples Gas, Ameren and ComEd - Residential On-Bill Financing Programs	The Illinois Energy Efficiency Loan Program, administered through AFC First and funded by participating utilities, provides loans to customers of Ameren Illinois, ComEd, Nicor, North Shore Gas, and Peoples Gas.
	Wabash Valley Power Association (28 Member Cooperatives) - Commercial and Industrial Energy Efficiency Program	WVPA offers a number of rebates to its business, school, and farm customers through its "Power Moves" Program.

Type	Incentives	Description
Utility-Specific	Wabash Valley Power Association (28 Member Cooperatives) - Residential Energy Efficiency Program	WVPA offers a number of rebates to residential customers of these member organizations.
Local	City of Chicago - Small Business Improvement Fund	The fund utilizes revenue from Tax Increment Financing (TIF) and supports commercial and industrial properties, as well as tenants, within specific TIF districts to upgrade their facilities.
	City of Chicago - Green Permit and Green Homes Programs	The City of Chicago encourages building design, construction and renovation in a manner that provides healthier environments, reduces operating costs and conserves energy and resources through their Green Permit Program.
Non-Profit	Illinois Clean Energy Community Foundation Grants	The ICECF invests in clean energy development and land preservation efforts, working with communities and citizens to improve environmental quality in Illinois.
	Illinois Solar Energy Association - Renewable Energy Credit Aggregation Program	The Illinois Solar Energy Association offers the Renewable Energy Credit Aggregation Program (RECAP) to Illinois solar photovoltaic (PV) system owners, providing them with an opportunity to receive payment for their solar renewable energy credits (SRECs).



INDIANA

The Hoosier State²³⁰

State Facts

Capital: Indianapolis

Area: 36,417 sq mi

Population: 6,483,802

State Bird: Northern Cardinal

State Flower: Peony²³¹

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 251: The Clean Energy Portfolio Standard,
May 10, 2011

Standard

10% renewable by 2025

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Geothermal Heat Pumps, Municipal Solid Waste, Hydrogen, Nuclear, Coal Bed Methane, Clean Coal, Fuel Cells using Renewable Fuels, Geothermal Direct-Use²³²

Indiana Energy Fact

The largest geothermal heating and cooling system in the United States is being built in Muncie.

<http://thinkprogress.org/climate/2012/02/23/430745/largest-us-geothermal-heat-pump-system/>

Energy Efficiency Resource Standards

Policy Name and Date

Indiana Utility Regulatory Commission issued Cause No. 42693, December 9, 2009

Standard

0.3% GWh reduction of 2009 energy sales for 2010. Annual requirements increase to 2.0% reduction of prior year's energy sales by 2019. After obtaining 2.0% reduction by the year 2019, the electricity sales reduction percentage holds at 2.0% for every year thereafter.

Mandatory/Voluntary

Mandatory²³³

Net Metering Standards

Capacity Limit

Per System: 1,000 kW

Entire State: 1% of utility's most recent peak summer load

Mandatory/Voluntary

Mandatory

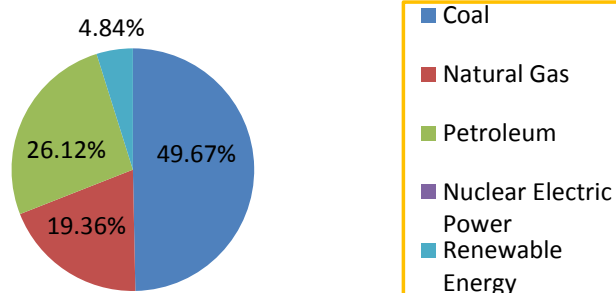
Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Fuel Cells, Hydrogen, Small Hydroelectric, Fuel Cells using Renewable Fuels²³⁴

INDIANA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Indiana Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Indiana's MBE program qualifies the business for subcontracting opportunities on state contracts in Indiana seeking to reach business diversity goals.²³⁵

Clean Energy Potential in Indiana

Background

Indiana hosts a large supply of wind resources. So far, project construction and wind turbine manufacturing have brought thousands of jobs and substantial investment to the state.



Solar: Indiana has urban utility-scale PV potential of 98,815 GWh (78.9% of total net generation), rural utility-scale PV potential of 4,876,186 GWh (over 100% of total net generation), and rooftop PV potential is 17,151 GWh (14.94% of total net generation).

Wind: The onshore wind power potential is 377,604 GWh (over 100% of total net generation) and offshore wind power potential is 166 GWh (.13% of total net generation).

Geothermal: Enhanced geothermal systems potential is 434,258 GWh (over 100% total net generation).²³⁶

Incentives in Indiana

Type	Incentives	Description
Statewide	Commercial and Industrial Prescriptive Rebates	As part of the Indiana Demand Side Management Program, customers of participating utilities can receive rebates for lighting, HVAC systems, VFDs, and Energy Star commercial kitchen appliances.
	Community Conservation Challenge	The Indiana Office of Energy Development (OED) is offering grants under the Community Conservation Challenge (CCC) Program.
	Income Tax Deduction for Solar-Powered Roof Vents or Fans	Indiana allows taxpayers to take a deduction on solar-powered roof fans (or vent, also sometimes called an attic fan) installed in a home that the taxpayer owns or leases.
	Renewable Energy Property Tax Exemption	In Indiana, systems that generate energy using solar, wind, hydropower or geothermal resources -- including geothermal heat pumps -- are exempt from property tax.
	Sales and Use Tax Exemption for Electrical Generating Equipment	In Indiana, transactions involving manufacturing machinery, tools, and equipment are exempt from the state gross retail tax if the property is used for the production of tangible personal property, which includes electricity.

Type	Incentives	Description
Utility-Specific	Bartholomew County REMC - Residential Energy Efficiency Rebate Program	Bartholomew County Rural Electric Membership (BCREM) Cooperative provides its residential customers with rebates for geothermal and air source heat pumps, central air conditioners, and new high efficiency electric water heaters.
	Carroll County REMC - Residential Energy Efficiency Rebate Program	Carroll County REMC offers incentives to residential customers who purchase and install energy efficiency equipment for the home.
	Citizens Gas - Commercial Efficiency Rebates	Citizens Gas of Indiana offers rebates to commercial customers for the installation of several types of efficient natural gas appliances, as well as certain equipment upgrades and tune-up services.
	Citizens Gas - Residential Efficiency Rebates	Citizens Gas of Indiana offers rebates to its residential customers for the installation of several types of efficient natural gas appliances.
	Clark County REMC - Residential Energy Efficiency Rebate Program	Clark County REMC provides incentives for residential members to upgrade to more efficient household equipment.
	Dubois REC - Residential Energy Efficiency Rebate Program	Dubois REC offers a variety of rebates for residential customers to save energy in new or existing homes.

Type	Incentives	Description
Utility-Specific	Duke Energy - Commercial and Industrial Energy Efficiency Rebate Program	Duke Energy encourages its business customers to increase the energy efficiency of eligible facilities through the Commercial and Industrial Energy Efficiency Rebate Program.
	Duke Energy - Residential and Builder Energy Efficiency Rebate Program	The Smart \$aver® Program offers incentives for residential customers to increase their home's energy efficiency.
	Harrison County REMC - Residential Energy Efficiency Rebate Program	Harrison County REMC offers rebates for residential customers to save energy in new or existing homes.
	Indiana Michigan Power - Commercial and Industrial Rebates Program	Indiana Michigan Power offers rebates for HVAC equipment, variable frequency drives, commercial refrigeration equipment, food service equipment and lighting measures for commercial and industrial customers.
	Indiana Michigan Power - Energy Savings Rebate Program	Indiana Michigan Power's Energy Saver Program provides its customers incentives for upgrading to energy efficient equipment and for properly disposing of old equipment.
	Indianapolis Power & Light - Rate REP (Renewable Energy Production)	Indianapolis Power & Light Co. (IPL) purchases renewable energy through its Rate Renewable Energy Production (REP).

Type	Incentives	Description
Utility-Specific	<u>Indianapolis Power & Light - Small-Scale Renewable Energy Incentive Program</u>	Indianapolis Power & Light (IP&L) offers all customers rebates for small wind and photovoltaic (PV) installations completed after June 1, 2010.
	<u>Indianapolis Power & Light - Builder Energy Efficiency Rebate Program</u>	The Indianapolis Power and Light Builder Energy Efficiency Rebate Program encourages the construction of energy efficient new homes.
	<u>Indianapolis Power & Light - Business Energy Incentives Program</u>	The Indiana Power and Light Business (IPL) Energy Incentives Program assists commercial and industrial customers with reducing energy consumption through three common types of equipment: lighting, motors and pumps (for HVAC and Processing Equipment).
	<u>Indianapolis Power & Light - Residential Energy Incentives Program</u>	The Indianapolis Power and Light Energy Incentives Programs assist residential customers with reducing energy consumption.
	<u>Jackson County REMC - Energy Efficiency Rebate Program</u>	Jackson County Rural Electric Membership Corporation (REMC) offers a variety of rebates for energy efficient equipment installed and operating in the current program year.

Type	Incentives	Description
Utility-specific	<u>Jasper County REMC - Residential Energy Efficiency Rebate Program</u>	Jasper County REMC, in conjunction with Wabash Valley Power Association's Power Moves Programs, offers a range of rebates to its residential customers for the purchase and installation of energy efficient home equipment.
	<u>Jay County REMC - Geothermal and Air-source Heat Pump Rebate Program</u>	Jay County REMC offers rebates to its customers for the purchase and installation of heat pumps.
	<u>Johnson County REMC - Commercial Energy Efficiency Rebate Program</u>	Johnson County REMC offers rebates to commercial and industrial customers who install or replace new motors, variable frequency drives, air conditioners, heat pump systems, and lighting equipment.
	<u>Johnson County REMC - Residential Energy Efficiency Rebate Program</u>	Johnson County Rural Electric Membership Cooperative offers rebates to residential customers who install or replace new water heating and HVAC equipment.
	<u>Kosciusko REMC - Residential Geothermal and Air-source Heat Pump Rebate Program</u>	Kosciusko REMC offers rebates (as bill credits) to residential members for the purchase and installation of high efficiency air-source heat pumps, geothermal heat pumps, and electric water heaters.

Type	Incentives	Description
Utility-Specific	<u>LaGrange County REMC - Energy Efficiency Rebate Program</u>	LaGrange County REMC, in conjunction with the Wabash Valley Power Association's Power Moves program, offers a variety of rebates for the purchase and installation of energy efficient equipment.
	<u>Marshall County REMC - Geothermal and Add-on Heat Pump Rebate Program</u>	Marshall County REMC provides a rebate to residential customers for the purchase and installation of an add-on heat pump and/or a geothermal heat pump.
	<u>Miami-Cass REMC - Residential Energy Efficiency Rebate Program</u>	MCREMC offers energy efficiency rebates to its residential customers in conjunction with the Wabash Valley Power Association (the wholesale power provider of MCREMC).
	<u>NineStar Connect - Residential Energy Efficient Equipment Rebate Program</u>	Nine Star Connect (Greenfield and Maxwell, IN) offers residential customers an incentive to buy energy efficient air-source heat pumps and geothermal heat pumps.
	<u>NIPSCO - Existing Facility Retrofit Rebate Program</u>	Northern Indiana Public Service Corporation (NIPSCO) offers incentives to commercial, industrial, non-profit, government and institutional customers for replacing or retrofitting equipment or systems in existing facilities.

Type	Incentives	Description
Utility-Specific	NIPSCO - New Facility Efficiency Rebate Program	Northern Indiana Public Service Corporation (NIPSCO) offers incentives to commercial, industrial, non-profit, government, and institutional customers for new, high-efficiency equipment or systems, including new construction, major renovations, or additions to existing facilities.
	NIPSCO - Feed-In Tariff	NIPSCO is now offering a feed-in tariff program for customers who generate electricity from solar, wind, biomass, or new hydroelectric facilities.
	NIPSCO (Gas & Electric) - Residential Energy Efficiency Rebate Program	Northern Indiana Public Service Corporation (NIPSCO) offers rebates to residential customers that install energy efficient gas and electric measures in homes through the NIPSCO Energy Efficiency Rebate Program.
	NIPSCO (Gas) - Business Energy Efficiency Rebate Program	NIPSCO, in partnership with Franklin Energy Services, LLC, provides a range of incentive options for its business, government and non-profit customers.
	Northeastern REMC - Residential Energy Efficiency Rebate Program	Northeastern REMC offers rebates to its residential customers for the purchase of geothermal heat pumps, air-source heat pumps, and water heaters.

Type	Incentives	Description
Utility-specific	Ohio Valley Gas Corporation - Residential and Small Commercial Natural Gas Incentive Program	Ohio Valley Gas Corporation (OVG) offers rebates to its residential and small commercial customers for the purchase of energy efficient equipment and appliances.
	Orange County REMC - Energy Efficient Equipment Rebate Program	Orange County REMC offers incentives for members to improve the energy efficiency of homes, appliances and equipment.
	Parke County REMC - Energy Efficient Equipment Rebate Program	Parke County REMC offers rebates to commercial and residential customers for purchasing and installing qualifying energy efficient water heaters, clothes washers, air-source heat pumps, dual fuel heat pumps, and geothermal heat pumps.
	RushShelby Energy - Residential and Commercial Energy Efficiency Rebate Program	RushShelby Energy provides customers with incentives to help offset the cost of installing energy efficient equipment in participating homes and facilities.
	South Central Indiana REMC - Residential Energy Efficiency Loan Program	South Central Indiana REMC offers a 6.0% interest loan for residential customers interested in making energy efficiency improvements to participating homes.

Type	Incentives	Description
Utility-Specific	South Central Indiana REMC - Residential Energy Efficiency Rebate Program	South Central Indiana REMC, a Touchstone Energy Partner, offers incentives for residential customers to save energy in participating homes.
	Southeastern Indiana REMC - Residential Energy Efficiency Rebate Program	Southeastern Indiana REMC (SIREMC) offers residential customers various heating and cooling rebates to improve the energy efficiency of participating homes.
	Southern Indiana Power - Residential Energy Efficiency Rebate Program	Southern Indiana Rural Electric Cooperative offers an incentive program for customers to help offset the cost of high efficiency heating and cooling equipment.
	Tipmont REMC - Energy Efficiency Equipment Rebate Program	Tipmont REMC customers are eligible for rebates for the installation of efficient water heaters and air-source and geothermal heat pumps.
	Utilities District of Western Indiana REMC - Residential Energy Efficiency Rebate Program	Utilities District of Western Indiana REMC offers residential customers incentives for energy efficient heat pumps, water heaters, and air conditioners.
	Vectren Energy Delivery of Indiana (Electric) - Residential Energy Efficiency Rebate Program	Vectren Energy Delivery of Indiana offers several rebates to electric residential customers who purchase and install energy efficient equipment in their home.

Type	Incentives	Description
Utility-Specific	Vectren Energy Delivery of Indiana (Electric) - Commercial New Construction Rebates	Vectren Energy Delivery offers commercial customers in Indiana electric rebates for the installation of certain types of equipment in newly constructed buildings.
	Vectren Energy Delivery of Indiana (Gas) - Commercial Energy Efficiency Rebates	Vectren Energy Delivery offers commercial natural gas customers in Indiana rebates for the installation of certain types of efficient natural gas equipment.
	Vectren Energy Delivery of Indiana (Gas) - Residential Energy Efficiency Rebates	Vectren Energy Delivery offers its residential natural gas customers in Indiana rebates for the installation of certain high efficiency natural gas appliances and insulation measures.
	Wabash County REMC - Residential Geothermal and Air-source Heat Pump Rebate Program	To encourage energy efficiency, Wabash County REMC offers rebates to residential customers for the purchase of efficient heat pumps and water heaters.
	Wabash Valley Power Association (28 Member Cooperatives) - Commercial and Industrial Energy Efficiency Program	WVPA offers a number of rebates to its business, school, and farm customers through its "Power Moves" Program.
	Wabash Valley Power Association (28 Member Cooperatives) - Residential Energy Efficiency Program	WVPA offers a number of rebates to residential customers of these member organizations through its "Power Moves" Program.

Type	Incentives	Description
Utility-Specific	White County REMC - Residential Geothermal Heat Pump Rebate Program	White County REMC offers incentives for the purchase and installation of energy efficient heat pumps.
	WIN Energy REMC - Residential Rebate Program	WIN Energy REMC offers incentives to residential customers for the purchase and installation of energy efficient water heaters, air source heat pumps, geothermal heat pumps, and central air conditioning systems.
Local	City of Bloomington - Sustainable Development Incentives	The City of Bloomington offers fee waivers and other design incentives for developers that incorporate the city's sustainability goals.
	City of Indianapolis - Green Building Incentive Program	The Indianapolis Office of Sustainability and the Department of Code Enforcement offers a reduction in permit fees for projects achieving certain green building criteria.
	City of Indianapolis - EcoHouse Project	In June 2011, the City of Indianapolis announced the availability of the EcoHouse Project, an energy-efficiency loan program for medium- and low-income homeowners in Indianapolis.



IOWA

*The Hawkeye State*²³⁷

Renewable Portfolio Standards

Policy Name and Date

Iowa Alternative Energy Production Law, 1983

Standard

In 1983, Iowa's Alternate Energy Production law required the state's investor-owned utilities to purchase 105 megawatts (averaged) of electricity from renewable energy projects. In 2001, Iowa's governor established a secondary, voluntary goal of 1,000 MW of wind generating capacity by 2010.

Mandatory/Voluntary

Mandatory

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Indiana's Targeted Small Business certification allows MBE's to apply for low interest loans and equity grants through the Iowa Department of Economic Development, but there are no hiring requirements.²³⁹

Allowable Sources

Solar Thermal
Electric,
Photovoltaic,
Landfill Gas, Wind,
Biomass,
Hydroelectric,
Municipal Solid
Waste, Anaerobic
Digestion²⁴⁰

IOWA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Senate Bill 2386, May 6, 2008

Standard

Varies by utility.

Mandatory/Voluntary

Mandatory²⁴¹

Net Metering Standards

Capacity Limit

Per System: 500 kW

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Small Hydroelectric²⁴²

State Facts

Capital: Des Moines

Area: 57,273 mi

Population: 3,046,355

State Bird: Eastern

Goldfinch

State Flower: Wild Prairie

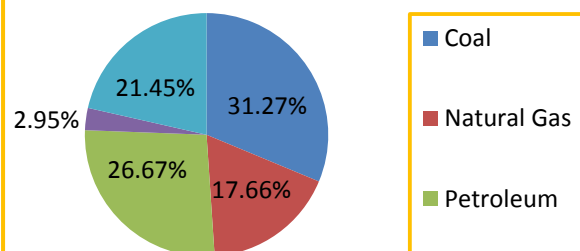
Rose²³⁸

Iowa Energy Fact

In 2011, Iowa was ranked third in the share of net electricity generation from non-hydroelectric renewable energy resources.

<http://www.eia.gov/state/?sid=IA>

Iowa Energy Consumption Estimates 2010



Clean Energy Potential in Iowa

Background

Iowa has been a leading state in the production of renewable energy from wind and the state has seen significant growth in recent years. In May 2013, MidAmerican Energy announced that it would make a \$1.9 billion investment in Iowa for wind energy projects that will be the biggest single economic investment ever. MidAmerican Energy estimates that by January 2016, when all new wind generation is expected to be operating, it may be capable of generating approximately 39% of its retail generation output through wind generation.²⁴³



Solar: Iowa has urban utility-scale PV potential of 27,092 GWh (47.1% of total net generation), rural utility-scale PV potential of 6,994,159 GWh (over 100% of total net generation), and rooftop PV potential is 8,646 GWh (15% of total net generation).

Wind: The onshore wind power potential is 1,723,588 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 606,390 GWh (over 100% of total net generation).²⁴⁴

Incentives in Iowa

Type	Incentives	Description
Statewide	Alternate Energy Revolving Loan Program	The AERLP provides loan funds to individuals and organizations that seek to build renewable energy production facilities in Iowa.
	Energy Replacement Generation Tax Exemption	Iowa imposes a replacement generation tax of 0.06 cents (\$0.0006) per kilowatt-hour (kWh) on various forms of electricity generated within the state.
	Geothermal Tax Credit	In May 2012, Iowa enacted a series of tax incentives for residential geothermal incentives.
	Iowa Energy Bank	The Iowa Energy Bank offers Iowa's public facilities, schools, area education agencies, colleges, universities, hospitals and local governments a 1% financing option for the implementation of cost-effective energy projects.
	Local Option - Special Assessment of Wind Energy Devices	Any city or county in Iowa may pass an ordinance assessing wind energy conversion equipment at a special valuation for property tax purposes, beginning at 0% of the net acquisition cost in the first assessment year and increasing annually by five percentage points to a maximum of 30% of the net acquisition cost in the 7th and succeeding years.

Type	Incentives	Description
Statewide	Methane Gas Conversion Property Tax Exemption	Under Iowa's methane gas conversion property tax exemption, real and personal property used to decompose waste and convert the waste to gas, collect the methane or other gases, convert the gas to energy, or to collect waste for these purposes is exempt from property tax.
	Property Tax Exemption for Renewable Energy Systems	In Iowa, the market value added to a property by a solar or wind energy system is exempt from the state's property tax for five full assessment years.
	Renewable Energy Production Tax Credits (Corporate)	In June 2005, Iowa enacted legislation creating two separate production tax credit programs for energy generated by eligible wind and renewable energy facilities.
	Renewable Energy Production Tax Credit (Personal)	In June 2005, Iowa enacted legislation creating two separate production tax credit programs for energy generated by eligible wind and renewable energy facilities.
	Solar Energy Systems Tax Credit (Corporate)	Iowa offers a 15% corporate tax credit for solar energy systems.
	Solar Energy Systems Tax Credit (Personal)	Iowa offers a 15% individual tax credit for solar energy systems.
	Wind and Solar Energy Equipment Exemption	This statute exempts from the state sales tax, the total cost of wind energy equipment and all materials used to manufacture, install or construct wind energy systems.

Type	Incentives	Description
Utility-Specific	Alliant Energy Interstate Power and Light - Business and Farm Renewable Energy Rebates	The Alliant Energy Renewable Cash-Back Rewards Program offers rebates for solar photovoltaics (PV), wind, renewable biomass, and anaerobic digesters.
	Alliant Energy Interstate Power and Light - Residential Renewable Energy Rebates	The Alliant Energy Renewable Cash-Back Rewards program offers its electricity customers rebates for solar photovoltaics (PV), wind, and solar thermal water heating systems.
	Alliant Energy Interstate Power and Light (Electric) - Business Energy Efficiency Rebate Programs	Interstate Power and Light (IPL) offers a wide variety of incentives for commercial customers to save energy in eligible facilities, whether they are upgrading existing facilities or building new ones.
	Alliant Energy Interstate Power and Light (Electric) - Residential Energy Efficiency Rebate Programs	Interstate Power and Light (Alliant Energy) offers residential energy efficiency rebates and incentives for Iowa customers for a variety of technologies.
	Alliant Energy Interstate Power and Light (Gas and Electric) - Low Interest Energy Efficiency Loan Program	Interstate Power and Light (Alliant Energy), in conjunction with Wells Fargo Bank, offers a low-interest loan for residential, commercial and agricultural customers who purchase and install energy efficient measures.
	Alliant Energy Interstate Power and Light (Gas and Electric) - Farm Equipment Energy Efficiency Incentives	Interstate Power and Light (Alliant Energy) offers prescriptive rebates for a variety of energy efficient products for agricultural customers. In addition to these incentives, IPL offers a Farm Energy Audit and New Construction Programs.

Type	Incentives	Description
Utility-Specific	<u>Alliant Energy Interstate Power and Light (Gas and Electric) - New Home Construction Incentives</u>	Interstate Power and Light's New Home Program gives incentives to builders and contractors who build energy efficient homes.
	<u>Alliant Energy Interstate Power and Light (Gas) - Business Energy Efficiency Rebate Programs</u>	Interstate Power and Light (IPL) offers a wide variety of incentives for commercial customers to save energy in eligible facilities, whether they are upgrading existing facilities or building new ones.
	<u>Alliant Energy Interstate Power and Light (Gas) - Residential Energy Efficiency Rebate Programs</u>	Interstate Power and Light (Alliant Energy) offers residential energy efficiency rebates to Iowa customers for a variety of home upgrades.
	<u>Ames Electric Department - Commercial Energy Efficiency Rebate Programs</u>	The Ames Electric Department provides free energy audits and multiple energy efficiency rebates for commercial and industrial customers.
	<u>Ames Electric Department - Residential Energy Efficiency Rebate Programs</u>	The City of Ames Electric Services offers a variety of services and rebates for residential customers interested in purchasing energy efficient appliances or making energy efficiency improvements to eligible homes.
	<u>Atmos Energy (Gas) - Residential Efficiency Program</u>	Atmos Energy provides rebates for residential natural gas heating equipment through their High Efficiency Rebate Program.
	<u>Black Hills Energy (Gas) - Commercial Energy Efficiency Rebate Programs</u>	Black Hills Energy offers commercial and industrial customers incentives to encourage energy efficiency in eligible businesses.

Type	Incentives	Description
Utility-Specific	<u>Black Hills Energy (Gas) - Residential Energy Efficiency Rebate Programs</u>	Black Hills Energy offers its residential Iowa customers incentives to encourage energy efficiency in their homes.
	<u>Black Hills Energy (Gas) - Residential New Construction Rebate Program</u>	Black Hills Energy offers new construction rebates for homebuilders in the eligible service area.
	<u>Business Energy Efficiency Rebate (Offered by 16 Utilities)</u>	Bright Energy Solutions offers energy efficiency cash incentive programs to residential and business customers of municipal utilities that are members of Missouri River Energy Services.
	<u>Cedar Falls Utilities - Commercial Energy Efficiency Rebate Program</u>	The CFU Commercial Energy Efficiency Rebate Program provides rebates for a variety of energy efficient improvements in commercial facilities.
	<u>Cedar Falls Utilities - Residential Energy Efficiency Rebate Program</u>	The Cedar Falls Utilities (CFU) Energy Efficiency Rebate Program provides rebates for energy efficient heating and cooling equipment, thermal envelope improvements and appliance recycling.
	<u>Cedar Falls Utilities - Residential New Construction Program</u>	Cedar Falls Utilities offers incentives to residential customers who construct new energy efficient homes.
	<u>Farmers Electric Cooperative (Kalona) - Renewable Energy Purchase Rate</u>	Farmers Electric Cooperative offers a production incentive to members that install qualifying wind and solar electricity generating systems.

Type	Incentives	Description
Utility-Specific	Farmers Electric Cooperative (Kalona) - Renewable Energy Rebates	Farmers Electric Cooperative (Kalona) offers rebates for the installation of small wind and solar photovoltaic (PV) systems to its member customers.
	Farmers Electric Cooperative (Kalona) - Residential Efficiency Matching Grant Program	Farmers Electric Cooperative (FEC) offers a grant program, which splits the cost of simple energy efficient improvements to the home.
	Farmers Electric Cooperative (Kalona) - Residential Energy Efficiency Rebate Program	Farmers Electric Cooperative (FEC) offers a variety of rebates for the purchase and proper installation of energy efficient equipment for the home.
	Indianola Municipal Utilities - Energy Efficiency Rebate Program	Indianola Municipal Utilities offer a number of energy efficiency rebates to residential, commercial and industrial customers.
	Linn County Rural Electric Cooperative - Agricultural Energy Efficiency Rebate Program	To encourage energy efficiency, Linn County offers a number of equipment rebates to agricultural customers.
	Linn County Rural Electric Cooperative - Commercial Energy Efficiency Rebate Program	To encourage energy efficiency, Linn County offers a number of rebates to commercial customers.
	Linn County Rural Electric Cooperative - Residential Energy Efficiency Rebate Program	To encourage energy efficiency, Linn County offers a number of rebates to new and existing residential customers.
	Linn County Rural Electric Cooperative - Solar Water Heater Rebate Program	To encourage energy efficiency, Linn County offers owners of both new construction and existing buildings a \$500 rebate for solar water heaters.

Type	Incentives	Description
Utility-Specific	MidAmerican Energy (Electric) - Municipal Solid-State Lighting Grant Program	MidAmerican Energy offers grants to municipalities, which implement solid-state roadway street lighting upgrades.
	MidAmerican Energy (Electric) - Commercial EnergyAdvantage Rebate Program	MidAmerican Energy offers a variety of incentives for commercial customers to improve the energy efficiency of facilities.
	MidAmerican Energy (Electric) - Residential Energy Efficiency Rebate Programs	MidAmerican Energy offers a variety of incentives for residential customers to improve the energy efficiency of eligible homes.
	MidAmerican Energy (Gas and Electric) - Residential EnergyAdvantage Loan Program	MidAmerican Energy's EnergyAdvantage Financing Program, in partnership with First American Bank, offers Iowa residential energy customers below-prime financing on installation of qualifying energy efficient equipment.
	MidAmerican Energy (Gas and Electric) - Commercial New Construction Energy-Efficiency Program	MidAmerican Energy's Commercial New Construction Program offers incentives to businesses for energy-efficient construction and design of new or pre-existing buildings.
	MidAmerican Energy (Gas) - Commercial EnergyAdvantage Rebate Program	MidAmerican Energy offers a variety of incentives for commercial natural gas customers to improve the energy efficiency of facilities.
	MidAmerican Energy (Gas) - Residential Energy Efficiency Rebate Programs	MidAmerican Energy offers a variety of incentives for residential customers to improve the energy efficiency of eligible homes.

Type	Incentives	Description
Utility-Specific	Missouri River Energy Service Member Utilities - Commercial and Industrial Efficiency Rebates	Rebates are offered for improvements in several different categories: Lighting in New Construction; Lighting Retrofits; Cooling/Chillers; Motors, Pumps, and Variable Frequency Drives; Food Service Equipment; and Custom Measures.
	Missouri River Energy Service Member Utilities - Residential Energy Efficiency Rebates	Prescriptive rebates are available for many types of equipment including appliances, insulation, HVAC equipment, programmable thermostats, energy audits, and equipment recycling.
	Muscatine Power and Water - Commercial and Industrial Energy Efficiency Rebates	Muscatine Power and Water (MP&W) offers rebates for energy efficient upgrades to commercial and industrial customers.
	Muscatine Power and Water - Residential Energy Efficiency Rebates	Muscatine Power and Water (MP&W) offers rebates on certain energy efficiency appliances to residential customers.
	Residential Energy Efficiency Rebate (Offered by 16 Utilities)	Bright Energy Solutions offers energy efficiency cash incentive programs to residential and business customers of municipal utilities that are members of Missouri River Energy Services.
	Residential Energy Efficiency Rebate (Offered by Several Cooperative Utilities)	Associated Electric Cooperative and many of its member cooperatives offer rebates to residential customers who purchase and install energy efficient equipment for the home.

Type	Incentives	Description
Utility-Specific	Rural Electric Cooperatives Energy Efficiency Rebate Programs (Offered by 12 Utilities)	Rural Electric Cooperatives Energy Efficiency Rebate program endorses energy efficiency improvements in members' homes, farms and businesses.
	Waverly Light & Power - Residential Energy Efficiency Rebates	Waverly Light and Power (WL&P) offers rebates for the purchase and installation of energy efficient HVAC systems and appliances to residential customers.
	Waverly Light & Power - Residential Solar Thermal Rebates	Waverly Light and Power (WL&P) offers rebates for solar hot water heating systems to its residential customers.



KANSAS

The Sunflower State²⁴⁵

State Facts

Capital: Topeka

Area: 82,278sq mi

Population: 2,853,118

State Bird: Western

Meadowlark

State Flower: Common

Sunflower²⁴⁶

Renewable Portfolio Standards

Policy Name and Date

House Bill 2369, May 22, 2009

Standard

20% renewable by 2020

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Small Hydroelectric, Fuel Cells using Renewable Fuels²⁴⁷

Kansas Energy Fact

In 2011, eight percent of net electricity generation in Kansas came from wind energy.

<http://www.eia.gov/state/?sid=KS>

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been identified for the state of Kansas.²⁴⁸

Status

Proposed: On November 15, 2007, Kansas signed the Energy Security and Climate Stewardship Platform for the Midwest, committing to an overall 2% reduction in energy use by 2015. In January 2007, Governor Sebelius asked energy producers to promote a statewide consumer education and conservation effort to reduce energy consumption 5% by 2010 and 10% by 2020.²⁴⁹

KANSAS at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: 200 kW for non-residential; 25 kW for residential

Entire State: 1% of utility's retail peak demand during previous year

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Small Hydroelectric, Fuel Cells using Renewable Fuels²⁵¹

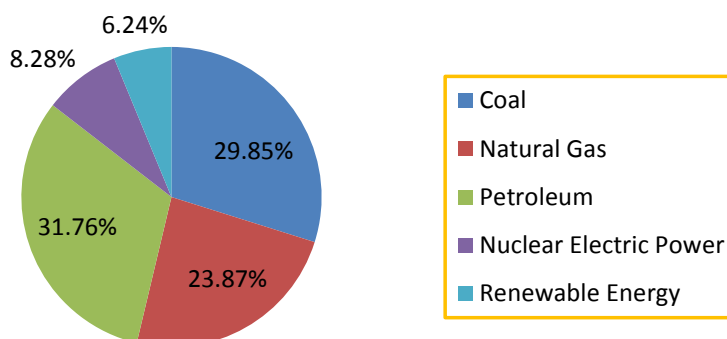
ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Kansas's MBE Certification may increase opportunities for women and minority businesses to gain contracts and subcontracts from governmental and private entities committed to the inclusion of minority- and women-owned businesses in the contracting and procurement process.²⁵⁰

Kansas Energy Consumption Estimates 2010



Clean Energy Potential in Kansas

Background

Kansas has one of the most promising wind resource potentials in the country and is on track to double its installed capacity from wind in 2013. The state has the potential to generate solar energy from the extensive rural areas in the state, as well as tap into the state's geothermal resources.²⁵²



Solar: Kansas has urban utility-scale PV potential of 31,706 GWh (66% of total net generation), rural utility-scale PV potential of 14,500,149 GWh (over 100% of total net generation), rooftop PV potential is 8,962 GWh (18.7% of total net generation) and concentrated solar power potential of 7,974,256 GWh (over 100% net generation).

Wind: The onshore wind power potential is 3,101,576 GWh (over 100% of total net generation).

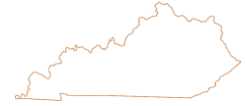
Geothermal: Enhanced geothermal systems potential is 989,676 GWh (over 100% total net generation).²⁵³

Incentives in Kansas

Type	Incentives	Description
Statewide	Renewable Energy Property Tax Exemption	This statute exempts renewable energy equipment from property taxes.
	Solar and Wind Manufacturing Incentive	Manufacturers of solar or wind equipment or components in Kansas may be eligible for financing through the Kansas Department of Commerce to support research, development, engineering or manufacturing projects.
Utility-Specific	Kansas City Board of Public Utilities - Commercial Energy Efficiency Rebate Program	The Kansas City Board of Public Utilities provides incentives for commercial customers to install or upgrade to, energy efficiency equipment in new and existing facilities.
	Midwest Energy (Gas and Electric) - How\$mart Energy Efficiency Finance Program	Midwest Energy offers its residential and small commercial electricity and natural gas customers in good standing a way to finance energy efficiency improvements on eligible properties.

KENTUCKY

The Blue Grass State²⁵⁴



Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Kentucky.²⁵⁶

Status

No Activity Identified²⁵⁷

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Kentucky.²⁵⁸

Status

No Activity Identified²⁵⁹

State Facts

Capital: Frankfort

Area: 40,411sq mi

Population: 4,339,367

State Bird: Northern

Cardinal

State Flower:

Goldenrod²⁵⁵

KENTUCKY at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: 30 kW

Entire State: 1% of utility's single-hour peak load during previous year

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass, Hydroelectric, Biogas, Small Hydroelectric²⁶⁰

Kentucky Energy Fact

Ninety-three percent of Kentucky's net electricity generation in 2011 was generated from coal.

<http://www.eia.gov/state/?sid=KY>

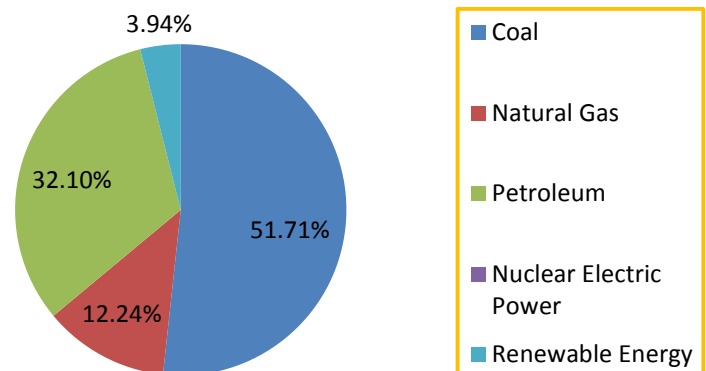
ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The objective of Kentucky's Minority and Women Business Enterprise Certification Program is to encourage growth among Kentucky businesses owned by women and minorities and to assist those businesses in locating and obtaining further business opportunities.²⁶¹

Kentucky Energy Consumption Estimates 2010



Clean Energy Potential in Kentucky

Background

Kentucky remains largely dependent on fossil fuel sources to generate electricity. The state has identified wind, solar and geothermal energy as potential new energy sources in its energy plan. The state recognizes that the mix of clean energy sources could have many potential benefits to not only the environment but also, put an end to the rising electricity prices for businesses, residents and consumers of electricity in the state.²⁶²



Solar: Kentucky has urban utility-scale PV potential of 26,515 GWh (26.99% of total net generation), rural utility-scale PV potential of 1,823,977 GWh (over 100% of total net generation), and rooftop PV potential is 12,312 GWh (12.5% of total net generation).

Wind: The onshore wind power potential is 147 GWh (.15% of total net generation).

Geothermal: Enhanced geothermal systems potential is 484,659 GWh (over 100% of total net generation).²⁶³

Incentives in Kentucky

Type	Incentives	Description
Statewide	Energy Efficiency Loans for State Government Agencies	Through the Green Bank of Kentucky, state agencies may be eligible for three separate energy loan products, depending on the proposed energy efficiency improvements.
	Energy Efficiency Tax Credits (Corporate)	In April 2008, Kentucky enacted legislation establishing a 30% state income tax credit for taxpayers that install certain energy efficiency measures on commercial property.
	Energy Efficiency Tax Credits (Personal)	In April 2008, Kentucky enacted legislation allowing a 30% state income tax credit for taxpayers who install certain energy efficiency measures on their principal residence or residential rental property.
	Energy Efficient Home Improvements Loan Program	Kentucky offers ENERGY STAR Home Performance rebates and loans for residential energy efficiency improvements meant to meet the need for incentives and financing to middle or upper income residents not served by the Weatherization Assistance Programs.
	Energy Efficient Home Improvements Rebate Program	Kentucky offers ENERGY STAR Home Performance rebates and loans for residential energy efficiency improvements meant to meet the need for incentives and financing to middle or upper income residents not served by the Weatherization Assistance Programs.

Type	Incentives	Description
Statewide	<u>Incentives for Energy Independence</u>	In August 2007, Kentucky established the Incentives for Energy Independence Act to promote the development of renewable energy and alternative fuel facilities, energy efficient buildings, alternative fuel vehicles, research & development activities and other energy initiatives.
	<u>On Farm Energy Efficiency & Production Grants</u>	Under the County Agricultural Investment Program (CAIP), the Office of Agricultural Policy (OAP) offers grants for farms that incorporate energy efficiency into their operations, produce alternative energy for on-farm use, or grow biomass crops.
	<u>Renewable Energy Tax Credit (Corporate)</u>	In April 2008, Kentucky enacted legislation establishing a 30% state income tax credit for certain solar, wind and geothermal installations on single or multi-family residences and on commercial property.
	<u>Renewable Energy Tax Credit (Personal)</u>	In April 2008, Kentucky enacted legislation establishing a 30% state income tax credit for certain renewable energy installations on residential and commercial property (see the Kentucky Renewable Energy Tax Credit (Corporate) for more information on taking the credit for installations on commercial property).
	<u>Sales Tax Exemption for Manufacturing Facilities</u>	In August 2007, Kentucky established the Incentives for Energy Independence Act to promote the development of renewable energy and alternative fuel facilities, energy efficient buildings, alternative fuel vehicles, research & development activities and other energy initiatives.

Type	Incentives	Description
Statewide	Tax Credits for Renewable Energy Facilities	In August 2007, Kentucky established the Incentives for Energy Independence Act to promote the development of renewable energy and alternative fuel facilities, energy efficient buildings, alternative fuel vehicles, research & development activities and other energy initiatives.
	Tax Exemption for Large-Scale Renewable Energy Projects	In August 2007, Kentucky established the Incentives for Energy Independence Act (IEIA) to promote the development of renewable energy and alternative fuel facilities, energy efficient buildings, alternative fuel vehicles, research & development activities, and other energy initiatives.
Utility-Specific	Atmos Energy - Natural Gas and Weatherization Efficiency Program	Atmos Energy provides rebates to residential and commercial customers for natural gas heating equipment through the Kentucky High Efficiency Rebate Program.
	Clark Energy - Residential Energy Efficiency Rebate Programs	Clark Energy offers a free energy audit to provide residential customers with suggestions on ways to improve the energy efficiency of participating homes.
	Columbia Gas of Kentucky - Home Savings Rebate Program	Columbia Gas of Kentucky offers rebates to residential customers for the purchase and installation of energy efficient appliances and equipment.
	Cumberland Valley Electric Cooperative - Energy Efficiency and Renewable Energy Program	Cumberland Valley Electric offers a number of programs to promote energy conservation.

Type	Incentives	Description
Utility-Specific	Duke Energy - Residential and Builder Efficiency Rebate Program	The Smart \$aver® Program offers incentives for residential customers to increase the energy efficiency of homes.
	Duke Energy - Non-Residential Energy Efficiency Rebate Program	Duke Energy offers a variety of incentives through its “Smart \$aver® Incentive Program” for commercial and industrial customers installing energy efficient equipment in their facilities.
	Farmers RECC - Residential Insulation Rebate Program	The Farmers Rural Electric Cooperative (RECC) Button-Up Program provides free energy audits and rebates for insulation upgrades to its residential customers.
	Grayson Rural Electric Cooperative - Energy Efficiency Rebate Program	Grayson Rural Electric Cooperative provides rebates to its customers for increasing their energy efficiency.
	Jackson Energy Cooperative - Residential Energy Efficiency Rebate Programs	Customers can apply for the Touchstone Energy Home Rebate, whereby customers get a \$500 rebate for building homes according to Touchstone Energy Home standards, which are 30% more efficient than those within the 1990 Energy Code.
	Kenergy - Commercial and Industrial Rebate Program	Kenergy offers commercial and industrial customers rebates for energy efficient lighting and other energy efficient improvements.
	Kenergy - Residential Rebate Program	Currently, Kenergy offers three rebate programs for residential customers who wish to increase the efficiency of their homes.

Type	Incentives	Description
Utility-Specific	Kentucky Power - Commercial Energy Efficiency Rebate Program	Kentucky Power provides a variety of prescriptive incentives to commercial customers for lighting upgrades, HVAC retrofits, refrigeration measures and custom upgrades, which conserve energy.
	Kentucky Power - Residential Energy Efficiency Rebate Program	Kentucky Power's High Efficiency Heat Pump Program offers a \$400 rebate to residential customers living in existing (site-built) homes who upgrade electric resistance heating systems with a new, high efficiency heat pump.
	Kentucky Utilities Company - Commercial Energy Efficiency Rebate Program	Kentucky Utilities Company (KU) offers rebates to all commercial customers who pay a DSM charge on monthly bills.
	Kentucky Utilities Company - Residential Energy Efficiency Rebate Program	Kentucky Utilities Company's Home Energy Rebate Program provides incentives for residential customers to upgrade to energy efficient home appliances and heat and air conditioning equipment.
	Louisville Gas & Electric - Commercial Energy Efficiency Rebate Program	Louisville Gas and Electric (LGE) offers rebates to all commercial customers who pay a DSM charge on monthly bills.
	Louisville Gas & Electric - Residential Energy Efficiency Rebate Program	Louisville Gas & Electric's Home Energy Rebate Program provides incentives for residential customers to upgrade to energy efficient home appliances and heat and air conditioning equipment.

Type	Incentives	Description
Utility-Specific	<u>Meade County RECC - Residential Rebate Program</u>	Meade County RECC offers rebates to residential members who install energy efficient systems and equipment.
	<u>Mountain Association for Community Economic Development - HowSmartKY On-Bill Financing Energy Efficiency Program</u>	Four rural utility cooperatives in Eastern Kentucky (Big Sandy RECC, Fleming-Mason RECC, Grayson RECC, and Jackson Energy) work with MACED to provide energy retrofits as part of utility service under the KY Energy Retrofit Rider.
	<u>Nolin RECC - Residential Energy Efficiency Rebate Program</u>	Nolin Rural Electric Cooperative Corporation (RECC) offers a variety of rebate programs to residential customers.
	<u>Owen Electric - Residential Energy Efficiency Rebate Program</u>	For residential customers, Owen Electric offers some rebates for the installation of energy efficient measures.
	<u>Pennyrile RECC - Commercial Energy Efficiency Loan Program</u>	Pennyrile RECC offers its non-residential customers the opportunity for financing energy efficiency improvements.
	<u>Pennyrile RECC - Residential Energy Efficiency Rebate Program</u>	Pennyrile RECC offers residential customers in new and existing homes cash incentives to encourage energy efficiency.
	<u>Salt River Electric - Residential Energy Efficiency Rebate Program</u>	Residential customers are eligible for a variety of cash incentives for energy efficiency.
	<u>South Kentucky RECC - Residential Energy Efficiency Rebate Program</u>	To promote energy efficiency to residential customers, South Kentucky RECC offers a variety of rebates and cash incentives.

Type	Incentives	Description
Utility-Specific	Taylor County RECC - Residential Energy Efficiency Rebate Program	Taylor County RECC offers rebates to residential customers for upgrading to energy efficient insulation and heat pumps.
	TVA - Mid-Sized Renewable Standard Offer Program	The Tennessee Valley Authority (TVA) now compliments the small generation Green Power Providers Program by providing incentives for mid-sized renewable energy generators between 50 kW and 20 MW to enter into long-term price contracts.
	TVA - Green Power Providers	Tennessee Valley Authority (TVA) and participating power distributors of TVA power offer a performance-based incentive program to homeowners and businesses for the installation of renewable generation systems from the following qualifying resources: PV, wind, hydropower, and biomass.
	TVA - Energy Right Solutions for Business	TVA offers the energy right Solutions Program to commercial and industrial facilities.
	TVA Partner Utilities - Energy Right Heat Pump Program	The Tennessee Valley Authority (TVA) energy right Heat Pump Plan provides financing to promote the installation of high efficiency heat pumps in homes and small businesses.
	TVA Partner Utilities - Energy Right New Homes Program	The Tennessee Valley Authority (TVA) energy right New Homes Plan provides incentives for all electric, energy efficient new homes by offering graduated rebates for new homes.
	TVA Partner Utilities - Energy Right Water Heater Program	The TVA energy right Water Heater Plan promotes the installation of high efficiency water heaters in homes and small businesses.

Type	Incentives	Description
Utility-Specific	TVA Partner Utilities - In-Home Energy Evaluation Pilot Program	The Tennessee Valley Authority (TVA) energy right In-Home Energy Evaluation Pilot Program encourages the installation of energy-efficiency improvements in existing single-family dwellings.
	Warren RECC - Electric Water Heater Rebate	Upon the submission of the original receipt, Warren RECC will provide a \$50 rebate to current members in new and existing homes for the purchase of an energy efficient electric water heater.
Local	Greater Cincinnati Energy Alliance - Residential Rebate Program	To qualify for rebates, homeowners must receive a Home Performance with Energy Star energy assessment, which is provided at a discount price through Greater Cincinnati Energy Alliance.
	Greater Cincinnati Energy Alliance - Residential Loan Program	To qualify for loans, homeowners must receive a Home Performance with Energy Star energy assessment, which is provided at a discount price through Greater Cincinnati Energy Alliance.
	Mountain Association for Community Economic Development - Energy Efficient Enterprise Loan Program	The Mountain Association for Community Economic Development (MACED) offers loans to small and mid-sized businesses, non-profits, schools and municipalities to improve energy efficiency through its Energy Efficient Enterprises Program.
Non-Profit	Mountain Association for Community Economic Development - Solar Water Heater Loan Program	The Kentucky Solar Partnership (KSP) and the Mountain Association for Community Economic Development (MACED) partner to offer low interest loans for the installation of solar water heaters.



LOUISIANA

The Pelican State²⁶⁴

State Facts

Capital: Baton Rouge

Area: 47,632sq mi

Population: 4,533,372

State Bird: Eastern

Brown Pelican

State Flower: Southern

Magnolia and Louisiana

Iris²⁶⁵

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Louisiana.²⁶⁶

Status

No Activity Identified²⁶⁷

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Louisiana.²⁶⁸

Status

No Activity Identified²⁶⁹

Net Metering Standards

Capacity Limit

Per System: Commercial and agricultural: 300 kW; residential: 25 kW; Entire State: .5%

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines²⁷⁰

LOUISIANA at a Glance:

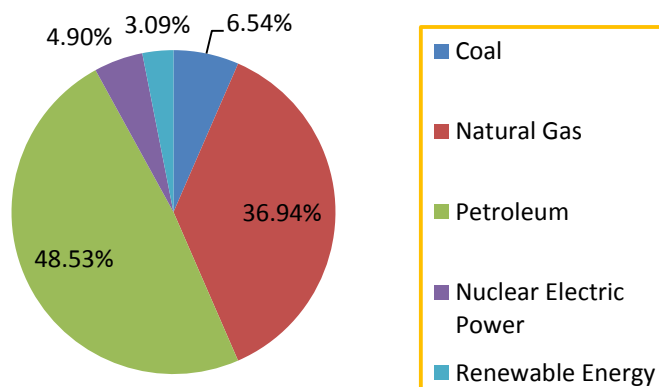
- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Louisiana Energy Fact

In 2010, Louisiana ranked third among the States in total energy consumption per capita, primarily because of the heavy use in the industrial sector, which includes many refineries and petrochemical plants.

<http://www.eia.gov/state/print.cfm?sid=LA>

Louisiana Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Louisiana's Department of Transportation certifies MBEs for federally assisted projects.

The Louisiana Minority Business Enterprise Center is funded by the U.S. Department of Commerce/Minority Business Development Agency and seeks to assist minority businesses with seeking opportunities, planning, strategizing, financing, and marketing, but does not have a certification process.²⁷¹

Clean Energy Potential in Louisiana

Background

Louisiana has viable resources to expand into using solar energy. To further diversify its energy portfolio, the state has authorized analysis of its offshore wind resources to determine the viability of installing offshore wind turbines.



Solar: Louisiana has urban utility-scale PV potential of 55,669 GWh (54.1% of total net generation), rural utility-scale PV potential of 4,114,605 GWh (over 100% of total net generation), and rooftop PV potential is 14,368 GWh (13.96% of total net generation).

Wind: The onshore wind power potential is 935 GWh (.90% of total net generation) and offshore wind power potential is 1,200,699 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 484,271 GWh (over 100% of total net generation).²⁷²

Incentives in Louisiana

Type	Incentives	Description
Statewide	Solar Energy System Exemption	In Louisiana, any equipment attached to an owner-occupied residential building or swimming pool as part of a solar energy system is considered personal property that is exempt from ad valorem taxation.
	Tax Credit for Solar and Wind Energy Systems on Residential Property (Corporate)	Louisiana provides a corporate tax credit for solar and wind energy systems purchased and installed on single-family homes on or after January 1, 2008.
	Tax Credit for Solar and Wind Energy Systems on Residential Property (Personal)	Louisiana provides a personal income tax credit for solar and wind energy systems purchased and installed on single-family homes on or after January 1, 2008.
	Home Energy Loan Program (HELP)	The Home Energy Loan Program (HELP), administered by the Louisiana Department of Natural Resources (DNR), allows homeowners to get a five-year loan to improve the energy efficiency of their existing home.
	Home Energy Rebate Option (HERO) - Existing Homes Program	The Home Energy Rebate Option (HERO) - Existing Homes Program is offered by the Louisiana Department of Natural Resources (DNR) for residents to receive cash rebates for energy efficient improvements to existing homes that achieve a minimum of 30% energy reduction.

Type	Incentives	Description
Utility-Specific	DEMCO - Touchstone Energy Home Program	DEMCO, a Touchstone Energy Cooperative, provides residential customers who have a qualified Touchstone Energy Home, a rebate of up to \$0.10 per square foot of living area for electric heat pumps and \$125 for electric water heaters.
	Entergy New Orleans - Residential Solar Water Heating Program	Entergy New Orleans offers a Solar Water Heater Rebate Pilot Program designed to help residential customers make energy efficiency improvements.
	Entergy New Orleans - Commercial and Industrial Solutions Program	The Commercial and Industrial Solutions Program is an energy efficiency program designed to help business customers understand and make energy efficiency improvements in eligible facilities.
	Entergy New Orleans - Residential Energy Efficiency Program	Entergy New Orleans has designed an incentive program to help residential customers understand and make energy efficiency improvements in eligible homes.
Local	City of New Orleans - NOLA Wise Energy Efficiency Loan Program	NOLA Wise is a comprehensive residential and commercial energy efficiency program for existing buildings in New Orleans.
	City of Shreveport – Shreveport Energy Efficiency Program (SEED)	The Shreveport Energy Efficiency (SEED) program, offered by the City of Shreveport, is intended to complement and enhance the existing Louisiana Home Energy Rebate Option (HERO) Program.

MAINE

The Pine Tree State²⁷³



Renewable Portfolio Standards

Policy Name and Date

CMR 65-407-311, November 6, 2007

Standard

40% renewable by 2017

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Tidal Energy, Fuel Cells using Renewable Fuels,

Other Distributed Generation Technologies²⁷⁵

MAINE at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Act Regarding Maine's Energy Future, June 2009

Standard

20% reduction of electricity and natural gas sales by 2020 (annual reductions of 1% FY2014-2015, rising to 1.9% in FY2016); 0.2% annual reduction in natural gas

State Facts

Capital: Augusta

Area: 33,123 sq mi

Population: 1,328,361

State Bird: Black-Capped Chickadee

State Flower: White Pine

Cone and Tassel²⁷⁴

Maine Energy Fact

In 2011, half of Maine's net electricity generation came from renewable energy resources, with 25 percent from hydroelectricity, 21 percent from wood, and 4.5 percent from wind.

<http://www.eia.gov/state/print.cfm?sid=ME>

Mandatory/Voluntary

Voluntary²⁷⁶

Net Metering Standards

Capacity Limit

Per System: 660 kW for IOU customers; 100 kW for muni and co-op customers (munis and co-ops may voluntarily offer net energy billing for systems up to 660 kW)

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

ECONOMIC OPPORTUNITIES

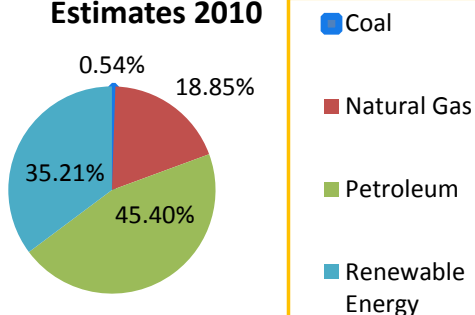
Local Hire Provision: YES

In June 2009, Maine established the Community-based Renewable Energy Pilot Program. This program is intended to encourage the development of locally owned, in-state renewable energy resources. To be eligible for incentives, a generating facility must be 51% locally owned, use renewable energy resources (solar, wind, hydro, certain biomass, fuel cells, and tidal), be no larger than 10 MW in generating capacity, and be located in the State.²⁷⁷

MBE Provision/Certification: YES

The Maine Disadvantaged Business Enterprise Program is administered by the Maine Department of Transportation and certifies DBE companies to ensure nondiscrimination in the award of federally assisted contracts.²⁷⁸

Maine Energy Consumption Estimates 2010



Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric, Tidal Energy, Fuel Cells using Renewable Fuels²⁷⁹

Clean Energy Potential in Maine

Background

Maine is New England's largest renewable energy producer.



Solar: Maine has urban utility-scale PV potential of 3,216 GWh (18.89% of total net generation), rural utility-scale PV potential of 1,100,327 GWh (over 100% of total net generation), and rooftop PV potential is 2,443 GWh (14.35% of total net generation).

Wind: The onshore wind power potential is 28,743 GWh (over 100% of total net generation) and offshore wind power potential is 631,960 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 377,075 GWh (over 100% of total net generation).²⁸⁰

Incentives in Maine

Type	Incentives	Description
Statewide	Community Based Renewable Energy Production Incentive (Pilot Program)	As the name suggests, this program is intended to encourage the development of locally owned, in-state renewable energy resources.
	Efficiency Maine Business Program	The Efficiency Maine Business Program provides cash incentives and free, independent technical advice to help non-residential electric customers save energy and money, and to improve Maine's environment.
	Efficiency Maine Multifamily Efficiency Program	Efficiency Maine's Multi-family Efficiency Program offers incentives to multi-family residency building owners for improving energy efficiency.
	Efficiency Maine Renewable Energy Program	Efficiency Maine is accepting rebate reservations at this time for all technologies eligible under the program, including wind, solar photovoltaics, and solar thermal.
	Efficiency Maine Residential Appliance Program	Efficiency Maine offers rebates for the purchase of Energy Star certified appliances, including \$50 to \$100 for Energy Star clothes washers, \$100 for Energy Star refrigerators or freezers, \$25 for Energy Star dehumidifiers, \$50 for Energy Star air conditioners and \$50 for Energy Star air purifiers.
	Efficiency Maine Residential Lighting Program	Efficiency Maine's Residential Lighting Program works directly with retailers and manufacturers to encourage residential customers to purchase energy efficient lighting.

Type	Incentives	Description
Utility-Specific	<u>Bangor Hydro Electric Company - Residential and Small Commercial Heat Pump Program</u>	Bangor Hydro Electric Company offers a two-tiered incentive program for residential and small commercial customers.
	<u>Efficiency Maine Business Programs (Unitil Gas) - Commercial Energy Efficiency Programs</u>	Efficiency Maine offers natural gas efficiency rebates to Unitil customers.
	<u>Maine Public Service Company - Residential and Small Commercial Heat Pump Program</u>	Maine Public Service Company offers a two-tiered incentive program for residential and small commercial customers.
Local	<u>Seacoast Energy Initiative - Energy Efficiency Loan Program</u>	Homeowners in the towns of Eliot, Kittery, North Berwick, South Berwick, Ogunquit, and York (located in Southern York County) may be eligible for a loan of up to \$15,000 to make energy efficiency improvements in their homes.



MARYLAND

The Old Line State²⁸¹

State Facts

Capital: Annapolis

Area: 10,441 sq mi

Population:

5,773,552

State Bird: Baltimore

Oriole

State Flower: Black-

Eyed Susan²⁸²

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 209, April 24, 2008

Standard

20% renewable by 2022

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas,

Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells using Renewable Fuels²⁸³

Energy Efficiency Resource Standards

Policy Name and Date

EmPOWER Maryland Efficiency Act, April 2008

Standard

15% reduction in per capita energy consumption by 2015, compared to 2007; 15% reduction in per capita peak demand by 2015, compared to 2007 (1.88% annual reduction rate)

Mandatory/Voluntary

Mandatory²⁸⁴

Status

A coalition of environmental organizations including CCAN, Environment Maryland, Interfaith Power and Light, and Maryland League of Conservation Voters are advocating an extension to the EmPOWER Maryland mandate from 2015 to 2020.

Maryland Energy Fact

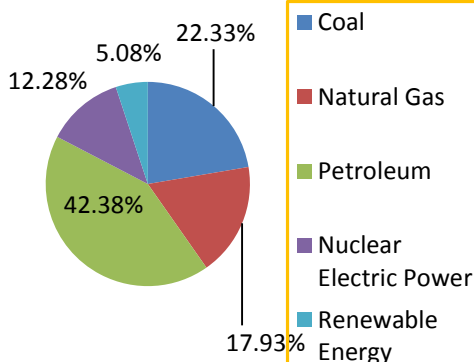
In April 2013, the Maryland Offshore Wind Energy Act was passed. This law creates a mechanism to incentivize the development of up to 500 megawatts (MW) of offshore wind capacity, at least ten nautical miles off of Maryland's coast. The law requires electricity suppliers in Maryland to get up to 2.5 percent of their power from offshore wind by as early as 2017.

<http://www.governor.maryland.gov/wind.asp>

MARYLAND at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Maryland Energy Consumption Estimates 2010



Net Metering Standards

Capacity Limit

Per System: 2000 kW (30 kW for micro-CHP); also limited to that needed to meet 200% of baseline customer electricity usage
Entire State: 1,500 MW (~8% of peak demand)

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels²⁸⁷

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

Baltimore City Council President Young introduced a bill requiring businesses receiving city contracts or financing to hire Baltimore residents for at least 51% of the jobs created by those funds.²⁸⁵

MBE Provision/Certification: YES

Maryland's Office of Minority Business Enterprise certifies MBEs.²⁸⁶

Clean Energy Potential in Maryland

Background

Maryland has been actively seeking to diversify its electricity portfolio through increased wind and solar power generation, which show strong potential in the state.



Solar: Maryland has urban utility-scale PV potential of 28,551 GWh (65.47% of total net generation), rural utility-scale PV potential of 585,949 GWh (over 100% of total net generation), and rooftop PV potential is 14,850 GWh (34.05% of total net generation).

Wind: The onshore wind power potential is 3,632 GWh (8.32% of total net generation) and offshore wind power potential is 200,852 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 86,649 GWh (over 100% of total net generation).²⁸⁸

Incentives in Maryland

Type	Incentives	Description
Statewide	Be SMART Business Efficiency Loan Program	Under the Be SMART Business Program, the Maryland Department of Housing and Community Development (DCHD) offers loans to small businesses and commercial property owners within certain communities (see list below) for the purpose of making energy efficiency improvements.
	Be SMART Home Efficiency Loan Program	Under the Be SMART Homes Program, the Maryland Department of Housing and Community Development offers loans to homeowners for energy efficiency retrofit projects in their primary residence.
	Be SMART Home Efficiency Rebate Program	The Maryland Department of Housing and Community Development (DHCD) offers rebates to homeowners for the installation of energy efficiency improvements in single-family and town homes.
	Be SMART Multi-Family Efficiency Loan Program	Under the Be SMART Multi-Family Program, the Maryland Department of Housing and Community Development (DHCD) offers loans for energy efficiency improvements in existing multi-family rental properties.
	Bio-Heating Oil Tax Credit (Corporate)	Maryland allows individuals and corporations to take an income tax credit of \$0.03/gallon for purchases of biodiesel used for space heating or water heating.

Type	Incentives	Description
Statewide	Bio-Heating Oil Tax Credit (Personal)	Maryland allows individuals and corporations to take an income tax credit of \$0.03/gallon for purchases of biodiesel used for space heating or water heating.
	Clean-Burning Wood Stove Grant Program	The Maryland Energy Administration (MEA) now offers the Clean Burning Wood Stove Grant Program as part of its Residential Clean Energy Grant Program.
	Clean Energy Production Tax Credit (Corporate)	Maryland offers a production tax credit to corporations for electricity generated by wind, geothermal energy, solar energy, hydropower, hydrokinetic, municipal solid waste and biomass resources.
	Clean Energy Production Tax Credit (Personal)	Maryland offers a production tax credit to individuals for electricity generated by wind, geothermal energy, solar energy, hydropower, hydrokinetic, municipal solid waste and biomass resources.
	Commercial Clean Energy Grant Program	The Maryland Energy Administration (MEA) is offering grants for mid-sized photovoltaic (PV) systems and solar water heating systems (SWH) installed by businesses, non-profits, and local governments.
	EmPOWER Maryland Low Income Energy Efficiency Program	EmPOWER Maryland Low Income Energy Efficiency Program helps qualifying low-income residents increase the energy efficiency of their homes at no cost to program participants.

Type	Incentives	Description
Statewide	Geothermal Heat Pump Grant Program	The Maryland Energy Administration (MEA) offers rebates of \$3,000 for residential geothermal heat pump systems and up to \$4,500 for non-residential geothermal heat pump systems.
	Home Energy Loan Program	The Maryland Energy Administration (MEA) joins the Maryland Clean Energy Center (MCEC) in offering low interest loans for projects, which increase the energy efficiency of participating residences.
	Jane E. Lawton Conservation Loan Program	The Jane E. Lawton Conservation Loan Program (JELLP) provides local governments, non-profits, and businesses, loans for conservation improvements to reduce their operating expenses.
	Local Option - Property Tax Credit for High Performance Buildings	Similar to Maryland's Local Option Property Tax Credit for Renewable Energy, Title 9 of Maryland's property tax code creates an optional property tax credit for high performance buildings.
	Local Option - Property Tax Credit for Renewables and Energy Conservation Devices	Title 9 of Maryland's property tax code provides local governments the option to allow a property tax credit for buildings equipped with a solar, geothermal or qualifying energy conservation device.
	Property Tax Exemption for Solar and Wind Energy Systems	In May 2007, Maryland established a property tax exemption for residential solar energy systems.

Type	Incentives	Description
Statewide	Residential Clean Energy Grant Program	Maryland's Residential Clean Energy Grant Program, administered by the Maryland Energy Administration (MEA), provides financial incentives to homeowners that install solar water-heating systems or solar electric (PV) systems.
	Rural Business Energy Efficiency Improvement Loan Program	The Maryland Agricultural and Resource Based Industry Development Corporation (MARBIDCO) offers low interest loans for energy efficiency improvements to farms and rural businesses through the Rural Business Energy Efficiency Improvement Loan Program.
	Sales and Use Tax Exemption for Renewable Energy Equipment	In April 2008, Maryland enacted legislation exempting geothermal and solar energy equipment from the state sales and use tax.
	Sales and Use Tax Exemption for Residential Solar and Wind Electricity Sales	In May 2011, Maryland enacted legislation providing a sales and use tax exemption for sales of electricity from qualifying solar energy and residential wind energy equipment to residential customers.
	Sales Tax Holiday for Energy-Efficient Appliances	In November 2007, Maryland enacted legislation creating a sales and use tax "holiday" for certain energy efficient appliances, beginning in 2011.
	Solar Renewable Energy Certificates (SRECs)	Maryland's Renewable Energy Portfolio Standard, enacted in May 2004 and revised in 2007 and 2008, requires electricity suppliers (all utilities and competitive retail suppliers) to use renewable energy sources to generate a minimum portion of their retail sales.

Type	Incentives	Description
Statewide	Special Property Assessment for Renewable Heating & Cooling Systems	Title 8 of Maryland's property tax code includes a statewide special assessment for solar and geothermal heating and cooling systems.
	State Agency Loan Program	Through this revolving loan program, the Maryland Energy Administration (MEA) provides loans to state agencies for cost-effective energy efficiency improvements in state facilities.
	Windswept Grant Program	The Maryland Energy Administration (MEA) provides rebates for the installation of residential and non-residential wind energy systems through the Windswept Program, which is part of the Clean Energy Grant Program.
	Wood Heating Fuel Exemption	This statute exempts from the state sales tax all wood or "refuse-derived" fuel used for heating purposes.
Utility-Specific	Baltimore Gas & Electric Company - Home Performance with Energy Star Rebates	The Baltimore Gas & Electric Company (BG&E) offers the Home Performance with Energy Star Program that provides incentives for residential customers who have audits performed by participating contractors.
	Baltimore Gas & Electric Company (Electric) - Commercial Energy Efficiency Program	Baltimore Gas and Electric (BGE) provides incentives for technical assistance, retrofitting inefficient equipment, starting a new construction project, launching a major renovation, purchasing new equipment, or replacing equipment at the end of its lifespan.
	Baltimore Gas & Electric Company (Electric) - Residential Energy Efficiency Rebate Program	The Baltimore Gas & Electric Company (BGE) offers rebates for residential customers to improve the energy efficiency of eligible homes.

Type	Incentives	Description
Utility-Specific	Baltimore Gas & Electric Company (Gas) - Residential Energy Efficiency Rebate Program	The Baltimore Gas & Electric Company (BGE) offers the Smart Energy Savers Program for residential natural gas customers to improve the energy efficiency of eligible homes.
	Delmarva Power- Commissioning and Operations Incentive Programs	Delmarva's Enhanced Commissioning Program offers building design and commissioning incentives to commercial, industrial, governmental and institutional customers planning large new buildings.
	Delmarva Power- Commercial and Industrial Energy Savings Program	The Delmarva Power Commercial and Industrial (C&I) Energy Savings Program is designed to promote and encourage the incorporation of energy efficient equipment, products, and services into non-residential construction, renovation, and replacement projects, by offering cash incentives.
	Delmarva Power- Home Performance with Energy Star Incentive Program	Delmarva Power and Light Company offers the Home Performance with Energy Star Program, which provides incentives for residential customers who have audits performed by participating contractors.
	Delmarva Power- Residential Energy Efficiency Rebate Program	Delmarva Power offers a variety of rebates to residential customers who purchase and install energy efficient products or measures.
	FirstEnergy (Potomac Edison) - Commercial and Industrial Efficiency Rebate Program	FirstEnergy company Potomac Edison offers rebates to eligible commercial and industrial customers in Maryland service territory who are interested in upgrading to efficient equipment.
	FirstEnergy (Potomac Edison) - LEED for New Construction Program	FirstEnergy offers incentives for non-residential customers who construct or renovate buildings that implement a range of energy efficient techniques in construction and operation.

Type	Incentives	Description
Utility-Specific	FirstEnergy (Potomac Edison) - Municipal and Street Lighting Program	FirstEnergy offers several incentives for non-residential and municipal customers to upgrade traffic signals, pedestrian signals, and streetlights to more efficient fixtures.
	FirstEnergy (Potomac Edison) - Residential Energy Efficiency Rebate Program	FirstEnergy (Potomac Edison) offers incentives to Maryland residential customers who are interested in upgrading to more energy efficient appliances and HVAC systems.
	PEPCO - Commercial and Industrial Energy Efficiency Incentives Program	Pepco provides a range of rebates for prescriptive measures in existing and new facilities.
	PEPCO - Commissioning and Operations Incentive Programs	Pepco's Enhanced Commissioning Program offers building design and commissioning incentives to commercial, industrial, governmental and institutional customers planning large new buildings.
	PEPCO - Home Performance with Energy Star Incentive Program	The Potomac Electric Power Company (PEPCO) offers the Home Performance with Energy Star Program that provides incentives for residential customers who have audits performed by participating contractors.
	PEPCO - Residential Energy Efficiency Rebate Program	PEPCO offers a variety of rebates to Maryland customers who purchase select energy efficient products.
	SMECO - Non-Residential Energy Efficiency Rebate Program	Southern Maryland Electric Cooperative's (SMECO) Non-Residential Energy Efficiency Program provides technical assistance and a range of incentives to commercial, industrial, municipal and institutional customers who employ energy efficient measures in new and existing facilities.

Type	Incentives	Description
Utility-Specific	SMECO - Residential Energy Efficiency Rebate Program	Southern Maryland Electric Cooperative's (SMECO) Residential Energy Efficiency Program helps residential customers save energy by providing rebates for home weatherization and the installation of energy efficient equipment.
Local	Anne Arundel County - High Performance Dwelling Property Tax Credit	The state of Maryland permits local governments (Md Code: Property Tax § 9-242) to offer property tax credits for high performance buildings, if they choose to do so.
	Anne Arundel County - Solar and Geothermal Equipment Property Tax Credits	Anne Arundel County offers a one-time credit from county property taxes on residential dwellings that use solar and geothermal energy equipment for heating and cooling, and solar energy equipment for water heating and electricity generation.
	Baltimore County - Property Tax Credit for High Performance Buildings and Homes	The state of Maryland permits local governments (Md Code: Property Tax § 9-242) to offer property tax credits for high performance buildings if they choose to do so.
	Baltimore County - Property Tax Credit for Solar and Geothermal Devices	The state of Maryland permits local governments (Md Code: Property Tax § 9-203) to offer property tax credits for energy conservation devices, if they choose to do so.
	Carroll County - Green Building Property Tax Credit	The state of Maryland permits Carroll County (Md Code: Property Tax § 9-308(e)) to offer property tax credits for high performance buildings, if it chooses to do so.
	Harford County - Property Tax Credit for Solar and Geothermal Devices	Harford County offers a tax credit from real property taxes imposed on residential buildings, non-residential buildings, or other structures that use solar or geothermal devices for heating, cooling, water heating or generating electricity for on-site consumption.

Type	Incentives	Description
Local	Howard County - High Performance and Green Building Property Tax Credit	The state of Maryland permits local governments (Md Code: Property Tax § 9-242) to offer property tax credits for high performance buildings and energy conservation devices (Md Code: Property Tax § 9-203), if they choose to do so.
	Montgomery County - Residential Energy Conservation Property Tax Credit	Montgomery County offers property tax credits on residential, owner-occupied structures for the installation of energy conservation devices.
	Montgomery County - High Performance Building Property Tax Credit	The state of Maryland permits local governments (Md Code: Property Tax § 9-242) to offer property tax credits for high performance buildings, if they choose to do so.
	Prince George's County - Solar and Geothermal Residential Property Tax Credit	In 2008, Prince George's County enacted legislation offering a property tax credit on residential structures equipped with solar and geothermal systems.
	Small Town Energy Program (STEP)	The Small Town Energy Program (STEP) offers guidance and rebates to residents for home energy efficiency measures.

MASSACHUSETTS

The Old Colony State²⁸⁹



Renewable Portfolio Standards

Policy Name and Date

Senate Bill 2768: The Green Communities Act, July 1, 2009

Standard

22.1% renewable by 2020 of which 15% new renewable by 2020, 1% increase each year thereafter

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Renewable Fuels, Fuel Cells using Renewable Fuels²⁹¹

State Facts

Capital: Boston

Area: 8,262 sq mi

Population: 6,547,629

State Bird: Black-Capped Chickadee and Wild Turkey

State Flower:

Mayflower²⁹⁰

MASSACHUSETTS at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency

Resource Standards

Policy Name and Date

Senate Bill 2768: Green Communities Act, June 26, 2008

Standard

Annual electricity savings: 1.4% in 2010, 2% in 2011 2.4% in 2012, and 2.6% in 2015

Annual natural gas savings: 0.63% in 2010, ramping up to 1.14% in 2015

Mandatory/Voluntary

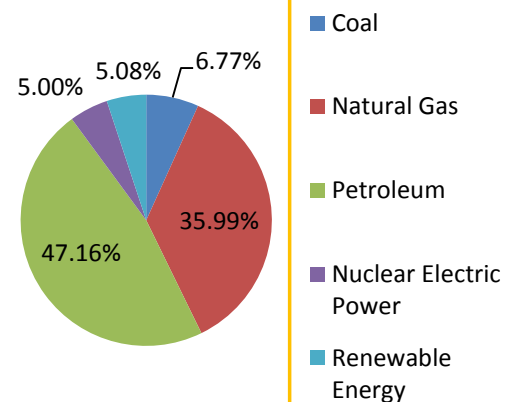
Mandatory²⁹²

Massachusetts Energy Fact

Massachusetts hosts the first federally approved offshore wind project, Cape Wind, and is working to open more offshore areas for wind.

<http://www.eia.gov/state/print.cfm?sid=MA>

Massachusetts Energy Consumption Estimates 2010



Net Metering Standards

Capacity Limit

Per System: 10,000 kW for net metering by a municipality or other governmental entity; 2,000 kW for all other "Class III" systems; 1,000 kW for all other "Class II" systems; 60 kW for all other "Class I" systems.

Entire State: Current rules: 1% of utility's peak load for private entities; 2% of utility's peak load for net metering by municipalities or governmental entities.

New rules per S.B. 2395: 3% of utility's peak load for private entities; 3% of utility's peak load for municipalities or governmental entities.

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies²⁹⁵

ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

Since 1987, Boston's Neighborhood Jobs Trust has strengthened the link between the city's economic development projects and jobs for unemployed and underemployed residents by directly funding job training through a real estate development fee.²⁹³

MBE Provision/Certification: YES

Massachusetts's Supplier Diversity Office provides services and certification for minority and women business enterprises.²⁹⁴

Clean Energy Potential in Massachusetts

Background

Massachusetts has become an early leader in clean energy research and innovation. The state is host to multiple renewable energy resources, including offshore wind.²⁹⁶



Solar: Massachusetts has urban utility-scale PV potential of 17,470 GWh (40.8% of total net generation), rural utility-scale PV potential of 82,205 GWh (over 100% of total net generation), and rooftop PV potential is 11,723 GWh (27.4% of total net generation).

Wind: The onshore wind power potential is 2,827 GWh (6.6% of total net generation) and offshore wind power potential is 799,344 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 92,227 GWh (over 100% of total net generation).²⁹⁷

Incentives in Massachusetts

Type	Incentives	Description
Statewide	Alternative Energy and Energy Conservation Patent Exemption (Corporate)	Massachusetts offers a corporate excise tax deduction for (1) any income -- including royalty income -- received from the sale or lease of a U.S. patent deemed beneficial for energy conservation or alternative energy development by the Massachusetts Department of Energy Resources, and (2) any income received from the sale or lease of personal or real property or materials manufactured in Massachusetts and subject to the approved patent.
	Alternative Energy and Energy Conservation Patent Exemption (Personal)	Massachusetts offers a personal income tax deduction for any income received from the sale of a patent or royalty income from a patent deemed beneficial for energy conservation or alternative energy development.
	Commonwealth Hydropower Program	Through the Commonwealth Hydropower Initiative, the Massachusetts Clean Energy Center (MassCEC) offers grants for both feasibility studies and construction of hydroelectric facilities.
	Commonwealth Organics-to-Energy Program	The Massachusetts Clean Energy Center (MassCEC) offers a Commonwealth Organics-to-Energy Grant Program.

Type	Incentives	Description
Statewide	<u>Commonwealth Outdoor Hydronic Heater Change-Out Pilot Program</u>	The Massachusetts Clean Energy Center (MassCEC) and the Department of Energy Resources (DOER) are offering the Commonwealth Outdoor Hydronic Heater (OHH) Change-Out Pilot Program to replace older or improperly operated OHH systems (also known as outdoor wood boilers).
	<u>Commonwealth Small Pellet Boiler Grant Program</u>	The Massachusetts Clean Energy Center (MassCEC) and the Department of Energy Resources (DOER) are offering the Commonwealth Small Pellet Boiler Pilot Grant Program to provide grants to residents and organizations who install high-efficiency, low-particulate matter wood pellet boilers or furnaces.
	<u>Commonwealth Solar Hot Water Commercial Program</u>	Commonwealth Solar Hot Water Commercial grants are available to electricity customers served by the following Massachusetts investor-owned electric utilities: Fitchburg Gas and Electric Light (Unitil), National Grid, NSTAR Electric and Western Massachusetts Electric.
	<u>Commonwealth Solar Hot Water Residential Program</u>	Since February 2011, the Massachusetts Clean Energy Center (MassCEC) provides rebates for the installation of residential solar hot water systems through the Commonwealth Solar Hot Water Pilot Program.

Type	Incentives	Description
Statewide	Commonwealth Solar II Rebates	Commonwealth Solar II, offered by the Massachusetts Clean Energy Center (MassCEC), provides rebates for the installation of photovoltaic (PV) systems at residential, commercial, industrial, institutional and public facilities.
	Commonwealth Wind Commercial Wind Program	Through the Commonwealth Wind Incentive Program – Commercial Wind Initiative the Massachusetts Clean Energy Center (MassCEC) offers site assessment grants of services, feasibility study grants, and development grants and loans for commercial wind projects 2 MW or greater that will serve the whole-sale energy markets or for projects that do not qualify for net metering but provide on-site use.
	Commonwealth Wind Community-Scale Initiative	Through the Commonwealth Wind Incentive Program – Community-Scale Wind Initiative the Massachusetts Clean Energy Center (MassCEC) offers site assessment grants of services, feasibility study grants, and design and construction grants for community-scale wind projects greater than 100 kW that will serve a load at the project site (and typically net meter) or will serve load requirements of a host municipal light department.

Type	Incentives	Description
Statewide	<u>Commonwealth Wind Incentive Program – Micro Wind Initiative</u>	Through the Commonwealth Wind Incentive Program – Micro Wind Initiative the Massachusetts Clean Energy Center (MassCEC) offers rebates of up to \$4/W with a maximum of \$130,000 for design and construction of customer-sited small wind public projects and rebates of up to \$5.20/W with a maximum of \$100,000 for non-public projects.
	<u>Commonwealth Woodstove Change-Out Pilot Program</u>	The Massachusetts Clean Energy Center (MassCEC) and Massachusetts Department of Energy Resources (DOER) are currently offering rebate vouchers through the Commonwealth Woodstove Change-Out Pilot Program.
	<u>Excise Tax Deduction for Solar- or Wind-Powered Systems</u>	In Massachusetts, businesses may deduct from net income, for state excise tax purposes, expenditures paid or incurred from the installation of any "solar or wind powered climatic control unit and any solar or wind powered water heating unit or any other type unit or system powered thereby," including labor expenditures.
	<u>Excise Tax Exemption for Solar- or Wind-Powered Systems</u>	Massachusetts law exempts any "solar or wind powered climatic control unit and any solar or wind powered water heating unit or any other type unit or system powered thereby," that qualifies for the state's excise tax deduction for these systems from the tangible property measure of the state's corporate excise tax.

Type	Incentives	Description
Statewide	Green Communities Grant Program	The Green Communities Grant Program offers funding for communities investing in energy efficiency upgrades and policies, renewable energy technologies, energy management systems and services, and demand side reduction programs.
	Massachusetts New Homes with ENERGY STAR	In Massachusetts, homebuilders constructing new homes in territories of sponsoring utilities and energy efficiency service providers, can receive up to \$8,000 in incentives for building a home more efficient than the typical Massachusetts home.
	Renewable Energy Equipment Sales Tax Exemption	Massachusetts law exempts from the state's sales tax "equipment directly relating to any solar, wind powered; or heat pump system, which is being utilized as a primary or auxiliary power system for the purpose of heating or otherwise supplying the energy needs of an individual's principal residence in the commonwealth."
	Renewable Energy Property Tax Exemption	Massachusetts law provides that solar-energy systems and wind-energy systems used as a primary or auxiliary power system for the purpose of heating or otherwise supplying the energy needs of taxable property are exempt from local property tax for a 20-year period.

Type	Incentives	Description
Statewide	Residential Renewable Energy Income Tax Credit	Massachusetts allows a 15% credit -- up to \$1,000 -- against the state income tax for the net expenditure of a renewable-energy system (including installation costs) installed on an individual's primary residence.
	Solar Renewable Energy Credits (SRECs)	Massachusetts' renewables portfolio standard (RPS) requires each regulated electricity supplier/provider serving retail customers in the state to include in the electricity it sells 15% qualifying renewables by December 31, 2020.
Utility-Specific	Berkshire Gas - Commercial Energy Efficiency Rebate Program	Berkshire Gas Company (BCG) provides rebates for its commercial and industrial customers to pursue energy efficient improvements to their facilities.
	Berkshire Gas - Residential Energy Efficiency Rebate Program	Berkshire Gas will pay residential customers that use gas to heat their homes 75% of the installed cost (up to \$2,000) of certain pre-determined energy efficiency measures listed on their web site.
	Chicopee Electric Light - Commercial Energy Efficiency Rebate Program	Chicopee Electric Light (CEL) offers a Pilot Energy Efficiency Program to encourage non-residential, commercial, and industrial facilities to pursue energy saving measures and install energy efficient lighting and equipment in eligible facilities.
	Chicopee Electric Light - Residential Energy Efficiency Rebate Program	Chicopee Electric Light (CEL) offers a variety of incentives for its residential customers to increase the energy efficiency of participating homes.

Type	Incentives	Description
Utility-Specific	<u>Chicopee Electric Light - Residential Solar Rebate Program</u>	Chicopee Electric Light offered rebates to residential customers who install solar photovoltaic systems on their homes.
	<u>Columbia Gas of Massachusetts - Commercial Energy Efficiency Program</u>	Columbia Gas of Massachusetts offers its multi-family, commercial and industrial customers rebates and assistance for energy efficiency improvements to eligible facilities.
	<u>Columbia Gas of Massachusetts - Residential Energy Efficiency Programs</u>	Columbia Gas of Massachusetts participates in energy efficiency programs that reward eligible residential natural gas customers for utilizing energy efficient equipment or measures.
	<u>Concord Municipal Light Plant - Solar Rebate Program</u>	Concord Municipal Light Plant (CMLP) offers rebates to customers who install solar photovoltaic (PV) systems that are designed to offset the customer's electrical needs.
	<u>Concord Municipal Light Plant - Commercial Energy Efficiency Rebate Program</u>	Concord Municipal Light Plant (CMLP) offers rebates to commercial customers for a variety of appliances, ETS heating systems, general lighting upgrades, CFL bulbs, and exit sign retrofit kits.
	<u>Concord Municipal Light Plant - Residential Energy Efficiency Rebate Program</u>	Concord Municipal Light Plant (CMLP) offers residential customers rebates on energy efficient appliances through the Appliance Rebate Program.
	<u>Holyoke Gas & Electric - Commercial Energy Efficiency Loan Program</u>	Holyoke Gas & Electric Commercial Assistance Program offers a zero interest loan to its commercial customers who are making energy efficient improvements to facilities.

Type	Incentives	Description
Utility-Specific	Holyoke Gas & Electric - Residential Energy Efficiency Loan Program	The Holyoke Gas & Electric (HG&E) Residential Energy Efficiency Program provides residential customers with loans to help make energy saving improvements on eligible homes.
	Hudson Light & Power - Photovoltaic Incentive Program	Starting in 2011, Hudson Light & Power Department, the municipal utility for the Town of Hudson, started offering a limited number of photovoltaic rebates for residential, commercial, industrial, and municipal customers.
	Mansfield Municipal Electric Department - Residential Energy Efficiency Rebate Program	Mansfield Municipal Electric Department encourages energy efficiency through the ENERGY STAR Appliance Rebate Incentive Program.
	Marblehead Municipal Light Department - Solar Rebate Program	Marblehead Municipal Light Department offers eligible customers a rebate for solar photovoltaic (PV) installations.
	Marblehead Municipal Light Department - Residential Energy Efficiency Rebate Program	Marblehead Light Department encourages conservation within the residential sector through the Energy Efficiency Rebate Program.
	Massachusetts Municipal Commercial Industrial Incentive Program	Certain municipal utilities in Massachusetts, in cooperation with Massachusetts Municipal Wholesale Electric Company, have begun offering energy efficiency incentives to their commercial and industrial customers.

Type	Incentives	Description
Utility-Specific	MassSAVE - Financing for Business Program	Business customers of Berkshire Gas, Cape Light Compact, Columbia Gas of Massachusetts, National Grid, New England Gas Company, NSTAR, Unitil and Western Massachusetts Electric Company may be eligible for low-interest financing to help increase the energy efficiency of their businesses and non-profits.
	MassSAVE – HEAT Loan Program	Residential customers of Cape Light Compact, National Grid, NSTAR, Unitil and Western Massachusetts Electric Company may be eligible for zero-interest financing to help increase the energy efficiency of their homes through the Mass Save HEAT Loan Program.
	MassSAVE (Electric) – Commercial New Construction Program	MassSAVE organizes commercial, industrial, and institutional conservation services for programs administered by Massachusetts electric companies, gas companies and municipal aggregators.
	MassSAVE (Electric) – Commercial Retrofit Program	MassSAVE is designed for commercial and industrial customers to help replace aging, inefficient equipment and systems with energy efficient technologies.
	MassSAVE (Electric) - Residential Energy Efficiency Programs	MassSAVE organizes residential conservation services for programs administered by Massachusetts electric companies, gas companies and municipal aggregators.

Type	Incentives	Description
Utility-Specific	MassSAVE (Gas) - Commercial Retrofit Program	MassSAVE organizes commercial, industrial, and institutional conservation services for programs administered by Massachusetts electric companies, gas companies and municipal aggregators.
	MassSAVE (Gas) - Residential Rebate Program	MassSAVE, through Gas Networks, organizes residential conservation services for programs administered by Massachusetts electric companies, gas companies and municipal aggregators.
	MuniHELPS - Offered by 17 Utilities through the MMWEC	The Massachusetts Municipal Wholesale Electric Company (MMWEC) provides the Home Energy Loss Prevention Services (HELPS) Program to seventeen municipal utilities in Massachusetts.
	New England Gas Company - Residential and Commercial Energy Efficiency Rebate Programs	In conjunction with Gas Networks, New England Gas Company offers its residential and commercial customers rebates for buying energy efficient gas boilers, furnaces, high efficiency water heaters, thermostats and boiler controls.
	NSTAR (Electric) - Business Solutions Program	The Business Solutions Program offers NSTAR's non-residential customers incentives for a variety of energy efficient retrofit and new construction projects.
	NSTAR (Electric) - Small Business Direct Install Program	The NSTAR Small Business Solutions Program offers incentives for business customers whose average monthly demand is 300 kW or less.
	NSTAR (Gas) - Commercial Energy Efficiency Programs	NSTAR Gas offers incentives for their commercial customers to save energy in existing facilities.

Type	Incentives	Description
Utility-Specific	Reading Municipal Light Department - Residential Energy Star Appliance Rebate Program	Reading Municipal Light Department (RMLD) offers rebates to residential customers who install Energy Star appliances in eligible homes.
	Reading Municipal Light Department - Business Lighting Rebate Program	Reading Municipal Light Department (RMLD) offers incentives for non-residential customers to install energy efficient lights and sensors in existing facilities.
	Reading Municipal Light Department - Business Energy Efficiency Rebate Program	Reading Municipal Light Department (RMLD) offers energy efficiency incentives to eligible commercial and industrial customers.
	Reading Municipal Light Department - Residential Renewable Energy Rebates	Reading Municipal Light Department (RMLD) offers rebates of \$1.00/watt for solar photovoltaic and small wind installations for residential customers.
	Shrewsbury Electric - Residential Energy Efficiency Rebate Program	In collaboration with EFI, Shrewsbury Electric offers rebates on ENERGY STAR appliances.
	Taunton Municipal Lighting Plant - Residential Energy Star Appliance Rebate Program	Customers of Taunton Municipal Lighting Plant (TMLP) are eligible for rebates on energy efficient appliances for the home.
	Taunton Municipal Lighting Plant - Residential and Non-Profit Weatherization Program	Taunton Municipal Lighting Plant (TMLP) offers the 'House N Home' Thermal Rebate Program, which provides financial incentives to residential and non-profit customers for making buildings more energy efficient.
	Taunton Municipal Lighting Plant - Residential PV Rebate Program	Customers of Taunton Municipal Lighting Plant (TMLP) may be eligible for \$2.00/watt rebate on solar photovoltaic (PV) installations.

Type	Incentives	Description
Utility-Specific	<u>Wakefield Municipal Gas & Light Department - Residential Conservation Services Program</u>	The Wakefield Municipal Gas & Light Department (WMGLD), in cooperation with the Massachusetts Municipal Wholesale Electric Company (MMWEC), offers the "Incentive Rebate Program" to encourage residential customers to improve the energy efficiency of their homes.
	<u>Wellesley Municipal Light Plant - Residential Energy Efficiency Rebate Program</u>	Wellesley Municipal Light Plant (WMLP) offers a number of appliance rebates to residential customers who purchase and install energy efficient equipment.
	<u>Western Massachusetts Electric - Commercial Energy Efficiency Rebates</u>	Western Massachusetts Electric (WMECO) helps commercial and industrial customers offset the additional costs of purchasing and installing energy efficient equipment.
	<u>Western Massachusetts Electric - Residential Energy Efficiency Rebate Program</u>	Western Massachusetts Electric (WMECO) and MassSave, a collaboration of Massachusetts municipalities and cooperatives, provides technical assistance and financial incentives to customers who implement energy efficiency upgrades in participating homes.
Local	<u>Cape Light Compact - Residential Energy Efficiency Rebate Program</u>	Cape Light Compact (CLC) offers a variety of financial incentives to customers for purchasing energy efficient residential equipment.
	<u>Cape Light Compact - Commercial, Industrial and Municipal Buildings Energy Efficiency Rebate Program</u>	Through a multi-member partnership, Cape Light Compact (CLC) and MassSave offer a variety of financial incentives for commercial, industrial, and municipal facilities.



MICHIGAN

The Great Lake State²⁹⁸

State Facts

Capital: Lansing

Area: 96,713 sq mi

Population: 9,883,640

State Bird: American Robin

State Flower: Apple Blossom and Dwarf Lake Iris²⁹⁹

Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Coal-Fired w/CCS, Gasification, Anaerobic Digestion, Tidal Energy, Wave Energy³⁰⁰

Status

Proposal 3, on Michigan's 2012 ballot, hoped to increase Michigan RPS to 25% by 2025. Governor Snyder has released a report stating that MI can feasibly reach 30% by 2035.

Energy Efficiency Resource Standards

Policy Name and Date

Public Act 295 Clean, Renewable, and Efficient Energy Act, October 2008

Standard

1.0% annual reduction of previous year retail electricity sales (MWh) from 2012 to 2015; 0.75% annual reduction of previous year retail natural gas sales by 2012.

Mandatory/Voluntary

Mandatory³⁰³

Net Metering Standards

Capacity Limit

Per System: 150 kW
Entire State: 0.75% of utility's peak load during previous year

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy³⁰⁴

Michigan Energy Fact

Michigan used coal for 54 percent of its net electricity generation in 2011; much of its coal is imported from Wyoming.

<http://www.eia.gov/beta/state/?sid=MI>

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 213: Clean, Renewable, and Efficient Energy Act, October 6, 2008

Standard

All utilities: 10% renewable by 2015 ; Detroit Edison: 300 MW of new renewables by 2013 and 600 MW by 2015; Consumers Energy: 200 MW of new renewables by 2013 and 500 MW by 2015

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass,

MICHIGAN at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

ECONOMIC OPPORTUNITIES

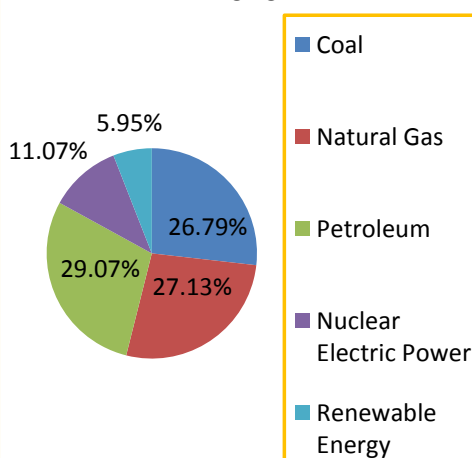
Local Hire Provision: YES

The RPS contains a series of bonus credits, Michigan incentive renewable energy credits. Renewable electricity produced using equipment manufactured within the state of Michigan receives an additional 1/10 credit per MWh. Renewable electricity produced using a system which was constructed using an in-state workforce receives an additional 1/10 credit per MWh.³⁰¹

MBE Provision/Certification: YES

Firms certified as DBEs with the Michigan Unified Certification Program are eligible to work on any federally funded airport, highway, or transit contract as a DBE.³⁰²

Michigan Energy Consumption Estimates 2010



Clean Energy Potential in Michigan

Background

Michigan has become a hub for clean energy production due to its skilled workforce, supportive policies and significant renewable energy resource development. Within the United States, Michigan's incentives rank among the most effective for attracting clean energy manufacturing and research and development.³⁰⁵



Solar: Michigan has urban utility-scale PV potential of 50,845 GWh (45.6% of total net generation), rural utility-scale PV potential of 5,215,640 GWh (over 100% of total net generation), rooftop PV potential is 23,528 GWh (21.1% of total net generation).

Wind: The onshore wind power potential is 143,908 GWh (over 100% of total net generation) and offshore wind power potential is 1,739,801 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 457,850 GWh (over 100% of total net generation).³⁰⁶

Incentives in Michigan

Type	Incentives	Description
Statewide	Alternative Energy Personal Property Tax Exemption	In July 2002, the Michigan legislature created a statewide personal property tax exemption designed to promote the development, commercialization, and manufacturing of a broad range of alternative energy technologies.
	BetterBuildings for Michigan	The BetterBuildings for Michigan program offers incentives and loans to residents of certain communities to implement energy efficiency improvements in their homes.
	Biomass Energy Program Grants	The Michigan Biomass Energy Program (MBEP) provides funding for state bioenergy and biofuels projects on a regular basis.
	Biomass Gasification and Methane Digester Property Tax Exemption	Michigan exempts certain energy production related farm facilities from real and personal property taxes.
	Energy Revolving Loan Fund - Farm Energy	In January 2010, Michigan enacted the Public Act 242 of 2009, which established the Energy Efficiency and Renewable Energy Revolving Loan Fund Program.
	Energy Revolving Loan Fund - Passive Solar	In January 2010, Michigan enacted the Public Act 242 of 2009, which established the Energy Efficiency and Renewable Energy Revolving Loan Fund Program.

Type	Incentives	Description
Statewide	Energy Revolving Loan Fund - Public Entities	In January 2010, Michigan enacted the Public Act 242 of 2009, which established the Energy Efficiency and Renewable Energy Revolving Loan Fund Program.
	Energy Revolving Loan Fund - Clean Energy Advanced Manufacturing	In January 2010, Michigan enacted the Public Act 242 of 2009, which established the Energy Efficiency and Renewable Energy Revolving Loan Fund Program.
	Nonrefundable Business Activity Tax Credit	Businesses engaged in alternative energy research, development, and manufacturing may claim a nonrefundable credit from the Michigan business tax.
	Refundable Payroll Tax Credit	Businesses certified by the NextEnergy Authority that locate in the NextEnergy Zone to research, develop, or manufacture "alternative energy technologies," as defined by the Michigan Next Energy Authority Act, may claim a credit equal to their qualified payroll amount multiplied by their income tax rate for that year.
	Renewable Energy Renaissance Zones	In 2006, Michigan enacted legislation allowing for the creation of Renewable Energy Renaissance Zones (RERZ).

Type	Incentives	Description
Utility-Specific	Coldwater Board of Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program	The Coldwater Board of Public Utilities, in conjunction with American Municipal Power's "Efficiency Smart" program, offers a wide range of incentives that encourage commercial and industrial customers to pursue energy efficient equipment and energy saving measures.
	Coldwater Board of Public Utilities - Residential Energy Efficiency Rebate Program	The Coldwater Board of Public Utilities (CBPU), in conjunction with American Municipal Power's "Efficiency Smart" Program, offers incentives that encourage residential customers to install energy efficient appliances and energy saving measures.
	Consumers Energy - Experimental Advanced Renewable Program	The Experimental Advanced Renewable Energy Program (EARP) offers Consumers Energy residential and non-residential customers a buy-back tariff program for electricity produced by solar photovoltaic (PV) systems.
	Consumers Energy (Electric) - Commercial Energy Efficiency Program	Passage of the Clean, Renewable and Energy Efficiency Act of 2008, paved the way for the Consumers Energy Business Solutions Program to provide incentives for customers who upgrade facilities with energy efficient equipment.
	Consumers Energy (Electric) - Residential Energy Efficiency Program	Consumers Energy residential electric customers are eligible to apply for a variety of rebates on energy efficient equipment.

Type	Incentives	Description
Utility-Specific	<u>Consumers Energy (Gas) - Commercial Energy Efficiency Program</u>	Passage of the Clean, Renewable and Energy Efficiency Act of 2008, paved the way for the Consumers Energy Business Solutions Program to provide incentives for customers who upgrade eligible facilities with energy efficient equipment.
	<u>Consumers Energy (Gas) - Residential Energy Efficiency Program</u>	Consumers Energy residential gas customers are eligible to apply for a variety of rebates on energy efficient equipment.
	<u>Detroit Public Lighting Department - Commercial and Industrial Energy Wise Program</u>	The Detroit Public Lighting Department (PLD) offers commercial and industrial customers rebates for energy efficient equipment.
	<u>Detroit Public Lighting Department - Residential Energy Wise Program</u>	The Detroit Public Lighting Department (PLD) offers residential customers rebates for energy efficient lights.
	<u>DTE Energy - Commercial New Construction Energy Efficiency Program</u>	DTE Energy offers rebates for commercial facility new construction.
	<u>DTE Energy - Solar Currents Program</u>	DTE Energy offers incentives through the Solar Currents Program to its electric customers that install photovoltaic systems with a capacity of 1 kilowatt (kW) to 20 kW.
	<u>DTE Energy (Electric) - Commercial and Industrial Energy Efficiency Program</u>	DTE Energy's Commercial Your Energy Savings Program provides prescriptive incentives to commercial and industrial customers who implement energy efficiency upgrades in facilities.

Type	Incentives	Description
Utility-Specific	<u>DTE Energy (Electric) - Residential Energy Efficiency Program</u>	DTE offers a combination of energy audit discounts and rebates for the installation of energy efficiency improvements in Detroit Edison Electric and Michigan Consolidated Gas Co. service areas.
	<u>DTE Energy (Gas) - Commercial and Industrial Energy Efficiency Program</u>	Passage of the Clean, Renewable and Energy Efficiency Act of 2008, paved the way for the Consumers Energy Business Solutions Program to provide incentives for customers who upgrade eligible facilities with energy efficient equipment.
	<u>DTE Energy (Gas) - Residential Energy Efficiency Program</u>	DTE offers a combination of energy audit discounts and rebates for the installation of energy efficiency improvements in Detroit Edison Electric and Michigan Consolidated Gas Co. service areas.
	<u>Efficiency United (Gas) - Commercial Efficiency Program</u>	Commercial and industrial (C&I) customers can participate in prescriptive programs that provide incentives for the installation of energy efficient products and equipment.
	<u>Efficiency United (Gas) - Residential Efficiency Program</u>	The Efficiency United Program is intended to provide assistance and incentives to customers who employ energy efficient measures.
	<u>Energy Optimization (Electric) - Commercial Efficiency Program</u>	Commercial and industrial (C&I) members/customers can participate in prescriptive programs that provide incentives for the installation of energy efficient products and equipment.

Type	Incentives	Description
Utility-Specific	Energy Optimization (Electric) - Residential Efficiency Program	The Efficiency United and Energy Optimization Programs provide residential electric and gas incentives, as well as the "Energy Depot," a set of online tools and resources to help manage home energy use and costs.
	Energy Smart - Commercial and Industrial Energy Efficiency Rebate Program (20 Municipalities)	Franklin Energy Services has partnered with the Michigan Public Power Agency (MPPA), which is made up of 20 municipal utilities, to offer the Energy Smart Commercial and Industrial Energy Efficiency Rebate Program.
	Energy Smart - Residential Energy Efficiency Rebate Program (20 Municipalities)	Franklin Energy Services has partnered with the Michigan Public Power Agency (MPPA), which is made up of 20 municipal utilities, to offer the Energy Smart Residential Energy Efficiency Rebate Program.
	Great Lakes Energy - Residential Energy Efficiency Rebate Program	Great Lakes Energy offers rebates to residential customers for the purchase of efficiency air-source heat pumps or geothermal heat pumps.
	Lansing Board of Water & Light - Hometown Energy Savers Commercial Rebates	Franklin Energy Services and the Lansing Board of Water & Light (LBWL) partner together to offer the Hometown Energy Savers® Commercial and Industrial Energy Efficiency Rebate Program.
	Lansing Board of Water & Light - Hometown Energy Savers Residential Rebates	The Lansing Board of Water & Light (BWL) offers the Hometown Energy Savers® Residential Energy Efficiency Rebate Program.

Type	Incentives	Description
Local	City of Detroit - SmartBuildings Detroit Grant Program	The Economic Development Corporation (EDC) of the City of Detroit is offering financial assistance to commercial, institutional, and public buildings in Detroit that install energy efficiency and renewable energy technologies.
	City of Detroit - SmartBuildings Detroit Green Fund Loan	The Economic Development Corporation (EDC) of the City of Detroit is offering financial assistance to commercial, institutional, and public buildings in Detroit that install energy efficiency and renewable energy technologies.
	Michigan Saves - Business Energy Financing	Michigan Saves is a non-profit that offers financing options to businesses for improvements to lighting systems, heating & air conditioning upgrades, food service equipment, building operations & envelope improvements.
	Michigan Saves - Home Energy Loan Program	Michigan Saves is a non-profit that offers energy efficiency financing options for owner-occupied, single-family homes with 1-4 units (primary or secondary residences) for energy efficiency improvements.

MINNESOTA

The Land of 10,000 Lakes³⁰⁷



Renewable Portfolio Standards

Policy Name and Date

Senate Bill 4, February 22, 2007

Standard

Xcel Energy: 31.5% renewable by 2020; Other IOUs: 26.5% by 2025
Other utilities: 25% by 2025

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Hydrogen, Cofiring, Anaerobic Digestion³⁰⁹

MINNESOTA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Next Generation Energy Act, 2007

Standard

1.5% annual reduction over previous 3-year average retail electric sales beginning 2010; 1.5% annual reduction of previous 3-year average retail natural gas sales beginning 2010

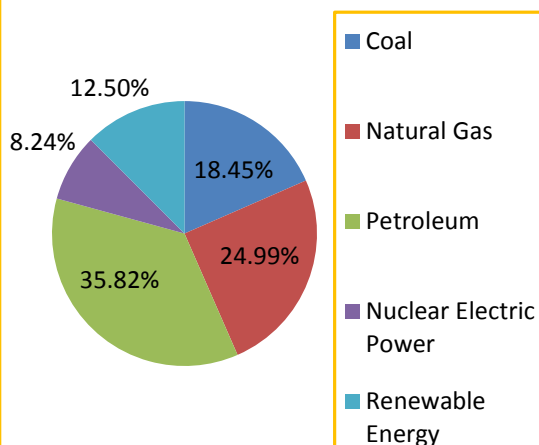
Mandatory/Voluntary

Mandatory³¹⁰

Minnesota Energy Fact

Minnesota ranked fourth in the Nation in net electricity generation from wind energy in 2011; its net generation was 6.8 million megawatt hours in 2011, an increase of 42 percent from 2010. <http://www.eia.gov/beta/state/?sid=MN>

Minnesota Energy Consumption Estimates 2010



Net Metering Standards

Capacity Limit

Per System: Less than 40 kW

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Other Distributed Generation Technologies³¹³

ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

Under the Community-Based Energy Development Tariff, each public utility in Minnesota is required to file with the state Public Utilities Commission to create a 20-year power purchase agreement for community-owned renewable energy projects.³¹¹

MBE Provision/Certification: YES

Minnesota's Department of Transportation certifies MBEs for federally assisted projects.

The Minnesota Minority Business Development Agency Business Center seeks to form strategic alliances for MBEs.³¹²

Clean Energy Potential in Minnesota

Background

Minnesota has been successful in developing a strong wind power industry, mandating that most of its 30% RPS be supplied by wind.³¹⁴



Solar: Minnesota has urban utility-scale PV potential of 33,370 GWh (62.17% of total net generation), rural utility-scale PV potential of 10,792,814 GWh (over 100% of total net generation), rooftop PV potential is 14,322 GWh (26.7% of total net generation).

Wind: The onshore wind power potential is 1,428,525 GWh (over 100% of total net generation) and offshore wind power potential is 100,455 GWh (over 100% of total net generation)

Geothermal: Enhanced geothermal systems potential is 369,785 GWh (over 100% of total net generation).³¹⁵

Incentives in Minnesota

Type	Incentives	Description
Statewide	Agricultural Improvement Loan Program	The Agricultural Improvement Loan Program is administered by the Minnesota Department of Agriculture through the Minnesota Rural Finance Authority (RFA) and provides loans to farmers for improvements or additions to permanent agricultural facilities.
	Fix-Up Loan	The Minnesota Housing Finance Agency's (MHFA) Fix-up Loan provides low-interest financing for energy conservation and other basic improvements to residential properties.
	Home Energy Loan Program	The Home Energy Loan Program is a statewide program of the Minnesota Housing Finance Agency administered by the Center for Energy and Environment Financial Resources.
	Methane Digester Loan Program	Established in 1998, the Minnesota Dept. of Agriculture Methane Digester Loan Program helps livestock producers install on-farm anaerobic digesters used for the production of electricity by providing zero-interest loans to eligible borrowers.
	Minnesota Energy Loan	The Neighborhood Energy Connection (NEC) administers the Minnesota Energy Loan, which offers secured, low-interest loans for qualified energy efficiency and renewable energy improvements to Minnesota residents.

Type	Incentives	Description
Statewide	Renewable Energy Production Incentive	Supported by the state's Renewable Development Fund, Minnesota offers a payment of 1.0¢ to 1.5¢ per kilowatt-hour (kWh) for electricity generated by hydro facilities and on-farm anaerobic manure methane digesters.
	Rental Rehabilitation Loan Program	The Minnesota Housing Finance Agency (MHFA) Rental Rehabilitation Loan Program provides low-interest financing for making energy conservation and other basic improvements to residential rental properties located in participating Minnesota communities.
	Solar Energy Sales Tax Exemption	In Minnesota, solar energy systems purchased on or after August 1, 2005, are exempt from the state's sales tax.
	Sustainable Agriculture Loan Program	The Minnesota Sustainable Agriculture Loan Program will provide loans to Minnesota residents actively engaged in farming for capital expenditures, which enhance the environmental and economic viability of a farm.
	Value-Added Stock Loan Participation Program	The Value-Added Stock Loan Participation Program was created in 1994 and is designed to help farmers finance the purchase of stock in certain types of cooperative, limited liability company, or limited liability partnership that will produce a "value-added agricultural product."

Type	Incentives	Description
Statewide	Wind and Solar-Electric (PV) Systems Exemption	Minnesota excludes the value added by solar-electric (PV) systems installed after January 1, 1992 from real property taxation.
	Wind Energy Sales Tax Exemption	Wind energy conversion systems used as electric power sources are exempt from Minnesota's sales tax.
Utility-Specific	Alexandria Light and Power - Commercial Energy Efficiency Rebate Program	Alexandria Light and Power (ALP) offers the Bright Energy Solutions portfolio of energy efficient incentives to its commercial and industrial customers.
	Alexandria Light and Power - Residential Energy Efficiency Rebate Program	Alexandria Light and Power (ALP) offers residential customers several rebate programs, including Energy Star Appliance Rebates, Residential Central AC or Heat Pump Rebates, and Water Heater rebates.
	Alliant Energy Interstate Power and Light - Farm Equipment Energy Efficiency Incentives	Alliant Energy offers prescriptive rebates for a variety of energy efficient products for agricultural customers.
	Alliant Energy Interstate Power and Light (Electric) - Business Energy Efficiency Rebate Programs	Alliant Energy - Interstate Power and Light (IPL) offers rebates for high efficiency equipment for commercial customers.
	Alliant Energy Interstate Power and Light (Electric) - Residential Energy Efficiency Rebate Program	Interstate Power and Light (Alliant Energy) offers a number of energy efficiency rebates for Minnesota residential customers that implement HVAC, lighting, appliance, window, insulation and water heating upgrades.

Type	Incentives	Description
Utility-Specific	Alliant Energy Interstate Power and Light (Gas and Electric) - Low Interest Energy Efficiency Loan Program	Alliant Energy (Interstate Power and Light - IP&L) offers low-interest financing programs for the installation of energy efficient improvements.
	Alliant Energy Interstate Power and Light (Gas) - Business Energy Efficiency Rebate Programs	Alliant Energy - Interstate Power and Light (IPL) offers rebates for high efficiency equipment for commercial customers.
	Alliant Energy Interstate Power and Light (Gas) - Residential Energy Efficiency Program	Interstate Power and Light (Alliant Energy) offers a number of rebates for energy efficiency for Minnesota residential customers on a variety of high efficiency heating and cooling measures, including water heaters, gas furnaces, gas boilers, windows, insulation, and thermostats.
	Anoka Municipal Utility - Commercial Energy Efficiency Rebate Program	Anoka Municipal Utility (AMU) offers the Commercial and Industrial Lighting and Motor Rebate Program for commercial and industrial customers who install high efficiency lighting, motors, and variable speed drives in eligible facilities.
	Anoka Municipal Utility - Residential Energy Efficiency Rebate Program	Anoka Municipal Utilities (AMU) offers incentives for residential customers to install energy efficient appliances and light bulbs in eligible homes.
	Austin Utilities - Solar Rebate Program	Austin Utilities provides incentives for their residential and commercial customers to install photovoltaic (PV) and solar water heating systems.

Type	Incentives	Description
Utility-Specific	<u>Austin Utilities (Gas and Electric) - Commercial and Industrial Energy Efficiency Rebate Program</u>	Austin Utilities offers incentives to its commercial and industrial customers for the installation of energy efficient equipment in eligible facilities.
	<u>Austin Utilities (Gas and Electric) - Residential Conserve and Save Rebate Program</u>	Austin Utilities offers incentives to its residential customers for the installation of energy efficient equipment in homes.
	<u>Blooming Prairie Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Blooming Prairie Public Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Blooming Prairie Public Utilities - Residential Energy Efficiency Rebate Program</u>	Blooming Prairie Public Utilities provides incentives for its residential and commercial customers to improve the energy efficiency of participating homes.
	<u>Brainerd Public Utilities - Renewable Incentives Program</u>	Brainerd Public Utilities offers a rebate program for customers that install solar photovoltaic systems.
	<u>CenterPoint Energy (Gas) - Commercial Energy Efficiency Rebate Program</u>	CenterPoint Energy offers rebates on a variety of energy efficient equipment to its business customers in Minnesota.
	<u>CenterPoint Energy (Gas) - Residential Energy Efficiency Rebate Program</u>	CenterPoint Energy offers residential high-efficiency heating system and water heater rebates to Minnesota customers.

Type	Incentives	Description
Utility-Specific	Connexus Energy - Commercial Energy Efficiency Rebate Programs	Connexus Energy provides rebates to commercial, industrial and agricultural customers in order to encourage energy efficiency.
	Connexus Energy - Residential Efficient HVAC Rebate Program	Connexus Energy offers rebates for residential customers to improve the energy efficiency of homes.
	Crow Wing Power - Residential Energy Efficiency Rebate Program	Crow Wing Power offers several different incentives for residential customers to increase the energy efficiency of homes.
	Dakota Electric Association - Commercial and Industrial Energy Conservation Loan Program	Dakota Electric provides low-interest loans to help its commercial and industrial customers finance projects that will improve the energy efficiency of participating facilities.
	Dakota Electric Association - Commercial and Industrial Custom Energy Grant Program	Dakota Electric's Custom Energy Grant Program offers grants to any commercial or industrial customer that installs qualifying energy efficient products that exceed conventional models and result in a reduction of electric use, when a specific rebate program is not currently available.
	Dakota Electric Association - Commercial and Industrial Energy Efficiency Rebate Program	Dakota Electric Association provides financial incentives for commercial and industrial customers to increase the energy efficiency of eligible facilities.
	Dakota Electric Association - Residential Energy Efficiency Rebate Program	Dakota Electric Association provides incentives for residential customers to install energy efficient equipment in the home.

Type	Incentives	Description
Utility-Specific	<u>East Central Energy - Commercial Energy Efficiency Rebate Program</u>	East Central Energy (ECE) offers a variety of rebates to commercial, industrial, and agricultural customers for the installation of specific energy efficient equipment.
	<u>East Central Energy - Residential Energy Efficiency Rebate Program</u>	East Central Energy (ECE) provides rebates for residential customers to purchase energy efficient equipment.
	<u>Elk River Municipal Utilities - Commercial Energy Efficiency Rebate Program</u>	Elk River Municipal Utilities offers a variety of rebates to commercial, industrial, and agricultural customers for the installation of specific energy efficient equipment.
	<u>Elk River Municipal Utilities - Residential Energy Efficiency Rebate Program</u>	Elk River Municipal Utilities provides rebates to residential electric customers who purchase and install Energy Star rated appliances and HVAC equipment.
	<u>Fairmont Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Fairmont Public Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of participating facilities.
	<u>Fairmont Public Utilities - Residential Energy Efficiency Rebate Program</u>	Fairmont Public Utilities provides incentives for its residential and commercial customers to improve energy efficiency of homes.
	<u>Grand Marais PUC - Commercial & Industrial Energy Efficiency Rebate Program</u>	Grand Marais Public Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of participating facilities.

Type	Incentives	Description
Utility-Specific	<u>Grand Marais PUC - Residential Energy Efficiency Rebate Program</u>	Grand Marais Public Utilities provides incentives for its residential and commercial customers to improve the energy efficiency of homes.
	<u>Great River Energy (28 Member Cooperatives) - Commercial and Industrial Efficiency Rebates</u>	Great River Energy, a generation and transmission cooperative, which serves 28 electric distribution cooperatives in Minnesota, offers rebates for the installation of certain energy efficiency improvements to residential, commercial, industrial, and agricultural customers of its member utilities.
	<u>Hutchinson Utilities Commission - Commercial Energy Efficiency Program</u>	Hutchinson Utilities Commission (HUC) offers rebates to commercial customers in Hutchinson who perform energy conservation improvements to their businesses.
	<u>Hutchinson Utilities Commission - Residential Energy Efficiency Program</u>	Hutchinson Utilities Commission (HUC) offers a rebate of up to \$500 to residents of Hutchinson who perform energy conservation improvements to their home.
	<u>Lake City Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Lake City Utilities provides incentives for commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Lake City Utilities - Residential Energy Efficiency Rebate Program</u>	Lake City Utilities provides incentives for its residential and commercial customers to improve the energy efficiency of homes.

Type	Incentives	Description
Utility-Specific	<u>Lake Country Power - Residential Energy Efficiency Rebate Program</u>	Lake Country Power (LCP) encourages energy efficiency by offering financial incentives to residential customers.
	<u>Lake Region Electric Cooperative - Commercial Energy Efficiency Grant Program</u>	Lake Region Electric Cooperative (LREC) offers grants to commercial customers for electric energy efficiency improvements, audits, and engineering and design assistance for new and existing facilities.
	<u>Lake Region Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Lake Region Electric Cooperative (LREC) offers a variety of rebates for residential customers to improve the energy efficiency of homes.
	<u>Litchfield Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Litchfield Public Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Litchfield Public Utilities - Residential Energy Efficiency Rebate Program</u>	Litchfield Public Utilities provides incentives for its residential and commercial customers to improve the energy efficiency of homes.
	<u>Marshall Municipal Utilities - Commercial Energy Efficiency Rebate Program</u>	Marshall Municipal Utilities offers incentives to commercial customers, which help cover the installation costs of energy efficient lighting, heating and cooling equipment, motors, variable frequency drives and custom measures.

Type	Incentives	Description
Utility-Specific	Marshall Municipal Utilities - Residential Energy Efficiency Rebate Program	Marshall Municipal Utilities (MMU) offers a variety of incentives for its residential customers to install energy efficient equipment in homes.
	Marshall Municipal Utilities - Solar Thermal Water Heater Rebate Program	Marshall Municipal Utilities (MMU) offers residential customers rebates for installing ENERGY STAR Solar Thermal Water Heaters.
	Minnesota Energy Resources (Gas) - Commercial and Industrial Energy Efficiency Rebate Program	The Building Operators Certification Program provides scholarships for eligible customers who are certified as having successfully completed training on building operation and maintenance.
	Minnesota Energy Resources (Gas) - Home Energy Excellence Program for Builders	Minnesota Energy Resources offers the Home Energy Excellence Program to encourage builders to build energy efficient homes.
	Minnesota Energy Resources (Gas) - Low-Income New Construction Rebates	Minnesota Energy Resources is now offering rebates for non-profits servicing low-income communities.
	Minnesota Energy Resources (Gas) - Residential Energy Efficiency Rebate Program	Minnesota Energy Resources provides rebates to residential customers for the purchase of energy efficient natural gas equipment and set-back thermostats.
	Minnesota Power - Power Grant Program	Minnesota Power Grant Program offers grants of up to \$50,000 to its commercial, industrial, and agricultural customers who use innovative technologies, improve manufacturing processes, undertake renewable electric energy projects or who need project design assistance.

Type	Incentives	Description
Utility-Specific	<u>Minnesota Power - Residential Energy Efficiency Rebate Program</u>	Minnesota Power offers a variety of appliance, lighting, and heating and cooling system rebates to its residential customers to help make homes more energy efficient.
	<u>Minnesota Power - Residential New Construction Rebate Program</u>	Through Minnesota Power's Triple E New Construction Program, homeowners and builders can qualify for special incentive rebates by meeting specific energy standards on new home construction.
	<u>Minnesota Power - Solar-Electric (PV) Rebate Program</u>	Minnesota Power offers a rebate of \$1,000 per kilowatt (kW) DC for grid-connected solar-electric (PV) systems, with a maximum award of \$20,000 per customer or 60% installed costs per customer.
	<u>Minnesota Power - Solar-Thermal Water Heating Rebate Program</u>	Minnesota Power offers a 25% rebate for qualifying solar thermal water heating systems.
	<u>Minnesota Valley Electric Cooperative - Residential Energy Resource Conservation Loan Program</u>	Minnesota Valley Electric Cooperative offers low-interest loans to help residential customers finance energy efficiency improvements through the Energy Conservation Loan Program.
	<u>Minnesota Valley Electric Cooperative - Commercial and Industrial Energy Efficiency Rebate Program</u>	Minnesota Valley Electric Cooperative (MVEC) offers incentives to encourage commercial and industrial customers to increase the energy efficiency of facilities.

Type	Incentives	Description
Utility-Specific	<u>Minnesota Valley Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Minnesota Valley Electric Cooperative (MVEC) offers financial incentives to encourage energy efficiency within the residential sector. Rebates are available for a variety of equipment including air-source heat pumps, ground-source heat pumps, Energy Star appliances, and electric resistance heating products.
	<u>Missouri River Energy Services (23 Member Cooperatives) - Business Energy Efficiency Rebate</u>	Bright Energy Solutions offers energy efficiency cash incentive programs to business customers of municipal utilities that are members of Missouri River Energy Services.
	<u>Missouri River Energy Services (23 Member Cooperatives) - Residential Energy Efficiency Rebate</u>	Bright Energy Solutions offers energy efficiency cash incentive programs to residential customers of municipal utilities that are members of Missouri River Energy Services.
	<u>MMPA - Commercial and Industrial Energy Efficiency Program</u>	The following 8 members participate in the MMPA WE Save Business Program: Arlington, Brownton, Buffalo, Chaska, Le Sueur, North St. Paul, Olivia, and Winthrop.
	<u>MMPA - Residential Energy Efficiency Program</u>	The following eight members participate in the MMPA We Save Program: Arlington, Brownton, Buffalo, Chaska, Le Sueur, North St. Paul, Olivia, and Winthrop.
	<u>Moorhead Public Service Utility - Renewable Energy Incentive</u>	Moorhead Public Service (MPS) offers rebates for qualifying electricity producing solar or wind renewable energy systems.

Type	Incentives	Description
Utility-Specific	<u>Moorhead Public Service Utility - Commercial and Industrial Energy Efficiency Rebate Program</u>	Moorhead Public Service Utility offers the Bright Energy Solutions Programs for commercial and industrial customers that purchase and install qualifying energy efficient lighting, VFDs, and cooling equipment in existing facilities.
	<u>Mora Municipal Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Mora Municipal Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of their facilities.
	<u>Mora Municipal Utilities - Residential Energy Efficiency Rebate Program</u>	Mora Municipal Utilities provides incentives for residential and commercial customers to improve the energy efficiency of their homes.
	<u>New Prague Utilities Commission - Commercial & Industrial Energy Efficiency Rebate Program</u>	New Prague Utilities Commission provides incentives for commercial and industrial customers to improve the energy efficiency of facilities.
	<u>New Prague Utilities Commission - Residential Energy Efficiency Rebate Program</u>	New Prague Utilities Commission provides incentives for residential customers to improve the energy efficiency of homes.
	<u>New Ulm Public Utilities - Energy Efficiency Rebate Program</u>	New Ulm Public Utilities offers incentives for its residential, commercial, and industrial customers to install energy efficient equipment in eligible homes and facilities.
	<u>New Ulm Public Utilities - Solar Electric Rebate Program</u>	New Ulm Public Utilities provides solar photovoltaic (PV) rebates for residential, commercial, and industrial customers.

Type	Incentives	Description
Utility-Specific	<u>North Branch Municipal Water & Light - Commercial & Industrial Energy Efficiency Rebate Program</u>	North Branch Municipal Water & Light provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>North Branch Municipal Water & Light - Residential Energy Efficiency Rebate Program</u>	North Branch Municipal Water & Light provides incentives for residential and commercial customers to improve the energy efficiency of homes.
	<u>Northern Municipal Power Agency - Commercial Energy Efficiency Rebate Program</u>	Northern Municipal Power Agency, in collaboration with Minnkota Power Cooperative, Inc., offers rebates to non-residential customers to improve the energy efficiency of eligible facilities.
	<u>Northern Municipal Power Agency - Residential Energy Efficiency Rebate Program</u>	Northern Municipal Power Agency, in association with the Minnkota Power Cooperative, Inc., offers a variety of rebates for the purchase of qualifying energy efficient equipment.
	<u>Otter Tail Power Company - DollarSmart Energy Efficiency Loan Program</u>	Otter Tail Power Company's DollarSmart Financing Program offers \$150 - \$7,000 loans to residential customers and up to \$100,000 loans to its business customers.
	<u>Otter Tail Power Company - Commercial & Industrial Energy Efficiency Grant Program</u>	Otter Tail Power Company Grants-Commercial & Industrial Energy Efficiency Grant Program allows its commercial and industrial customers to submit energy saving proposals and receive grants for their custom efficiency projects.

Type	Incentives	Description
Utility-Specific	<u>Otter Tail Power Company - Commercial & Industrial Energy Efficiency Rebate Program</u>	Otter Tail Power Company Rebate Program offers rebates to qualifying commercial, industrial, and agricultural customers for the installation of high-efficiency equipment upgrades.
	<u>Otter Tail Power Company - Residential Energy Efficiency Rebate Program</u>	Otter Tail Power Company Rebate Program offers rebates to qualifying residential customers for the installation of high-efficiency equipment upgrades.
	<u>Owatanna Public Utilities - Solar Rebate Program</u>	Owatanna Public Utilities provides rebates for their residential and commercial customers to install photovoltaic (PV) and solar water heating systems.
	<u>Owatanna Public Utilities - Residential Conserve and Save Rebate Program</u>	Owatanna offers incentives to residential customers who install energy efficient equipment in homes through the Conserve and Save Rebate Program.
	<u>Preston Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Preston Public Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Preston Public Utilities - Residential Energy Efficiency Rebate Program</u>	Preston Public Utilities provides incentives for residential and commercial customers to improve the energy efficiency of homes.
	<u>Princeton PUC - Commercial & Industrial Energy Efficiency Rebate Program</u>	Princeton PUC provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.

Type	Incentives	Description
Utility-Specific	<u>Princeton PUC - Residential Energy Efficiency Rebate Program</u>	Princeton PUC provides incentives for residential and commercial customers to improve the energy efficiency of homes.
	<u>Redwood Falls Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Redwood Falls Public Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Redwood Falls Public Utilities - Residential Energy Efficiency Rebate Program</u>	Redwood Falls Public Utilities provides incentives for residential customers to improve the energy efficiency of homes.
	<u>Rochester Public Utilities - Commercial and Industrial Energy Efficiency Rebate Program</u>	Rochester Public Utilities (RPU) offers rebates to commercial and industrial customers that install energy efficient equipment in eligible facilities.
	<u>Rochester Public Utilities - Residential Conserve and Save Rebate</u>	Rochester Public Utilities (RPU) offers incentives to residential customers for installing energy efficient equipment in participating homes through the Conserve and Save Rebate Program.
	<u>Rochester Public Utilities - Solar Rebate Program</u>	Rochester Public Utilities provides incentives for residential and commercial customers to install photovoltaic (PV) and solar water heating systems.
	<u>Saint Peter Municipal Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Saint Peter Municipal Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.

Type	Incentives	Description
Utility-Specific	<u>Saint Peter Municipal Utilities - Residential Energy Efficiency Rebate Program</u>	Saint Peter Municipal Utilities (SMMPA) provides incentives for its residential and commercial customers to improve the energy efficiency of homes.
	<u>Shakopee Public Utilities - Commercial and Industrial Energy Efficiency Rebate Program</u>	Shakopee Public Utilities (SPU) offers a wide array of rebates and incentives encouraging its commercial customers to increase the energy efficiency of their facilities.
	<u>Shakopee Public Utilities - Residential Energy Efficiency Rebate Program</u>	Shakopee Public Utilities offers its residential customers rebates on a variety of energy efficient appliances and equipment.
	<u>Spring Valley Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Spring Valley Public Utilities, a member of SMMPA, provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Spring Valley Public Utilities - Residential Energy Efficiency Rebate Program</u>	Spring Valley Public Utilities provides incentives for residential and commercial customers to improve the energy efficiency of homes.
	<u>Stearns Electric Association - Energy Efficiency Loan Program</u>	Stearns Electric Association, through a program offered by the Rural Utilities Services (RUS), offers its members low-interest Energy Resource Conservation (ERC) loans.
	<u>Stearns Electric Association - Commercial Energy Efficiency Rebate Program</u>	To encourage energy efficiency, Stearns Electric offers rebates to agricultural, industrial and commercial customers.

Type	Incentives	Description
Utility-Specific	<u>Stearns Electric Association - Residential Energy Efficiency Rebate Program</u>	Stearns Electric Cooperative offers a variety of rebates to residential and farm members for making energy efficiency improvements in eligible homes.
	<u>Waseca Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Waseca Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Waseca Utilities - Residential Energy Efficiency Rebate Program</u>	Waseca Utilities provides incentives for residential customers to improve the energy efficiency of homes.
	<u>Wells Public Utilities - Commercial & Industrial Energy Efficiency Rebate Program</u>	Wells Public Utilities provides incentives for its commercial and industrial customers to improve the energy efficiency of facilities.
	<u>Wells Public Utilities - Residential Energy Efficiency Rebate Program</u>	Wells Public Utilities provides incentives for residential and commercial customers to improve the energy efficiency of homes.
	<u>Willmar Municipal Utilities - Residential Energy Efficiency Rebate Program</u>	Willmar Municipal Utilities offer rebates on Energy Star rated appliances, air conditioners and Marathon water heaters.
	<u>Wright-Hennepin Cooperative Electric Association - Non-Residential Energy Efficient Rebate Program</u>	Wright-Hennepin Cooperative Electric Association offers a range of rebates to non-residential customers who purchase and install approved energy efficient equipment.

Type	Incentives	Description
Utility-Specific	<u>Wright-Hennepin Cooperative Electric Association - Residential Energy Efficiency Rebate Program</u>	Wright-Hennepin Cooperative Electric Association provides financial incentives for its residential customers to purchase and install energy efficient HVAC equipment.
	<u>Xcel Energy - Renewable Development Fund Grants</u>	The Xcel Energy Renewable Development Fund (RDF), funds renewable energy technologies, typically wind, biomass, solar, hydroelectric generators and fuel cells.
	<u>Xcel Energy - Solar*Rewards Program and MN Made PV Rebate Program</u>	Xcel Energy's Solar*Rewards Program provides an incentive for residential and commercial customers that install grid-connected photovoltaic (PV) systems of at least 0.5 kilowatts (kW) and less than 40 kW.
	<u>Xcel Energy (Electric) - Business Energy Efficiency Rebate Programs</u>	Xcel Energy offers its Minnesota commercial customers a variety of rebates for energy efficient technologies.
	<u>Xcel Energy (Electric) - Residential Energy Efficiency Rebate Programs</u>	In addition to home energy audits, Xcel Energy offers rebates to Minnesota residential customers for the purchase of energy efficient HVAC systems, insulation, appliances and lighting equipment.
	<u>Xcel Energy (Electric and Gas) - Home Performance with ENERGY STAR Rebates</u>	This program is available only to Minnesota residents who take both electric and natural gas service from Xcel Energy.

Type	Incentives	Description
Utility-Specific	<u>Xcel Energy (Gas) - Business Energy Efficiency Rebate Programs</u>	Xcel Energy offers Minnesota rebates to commercial customers who make certain energy efficiency improvements, such as boilers, furnaces, equipment tune-ups, equipment controls and motors.
	<u>Xcel Energy (Gas) - Residential Energy Efficiency Rebate Programs</u>	In addition to home energy audits, Xcel Energy offers rebates to its Minnesota residential customers for the purchase of natural gas HVAC systems, insulation and water heating equipment.
Local	<u>City of Duluth - Residential Energy Efficiency Rebate Program</u>	The City of Duluth offers an incentive program to residents to upgrade household equipment or install energy efficiency measures.
	<u>City of Duluth - Residential Energy Efficiency Loan Program</u>	The City of Duluth offers a loan program for homeowners to increase the energy efficiency of homes located within the city.



MISSISSIPPI

*The Magnolia State*³¹⁶

State Facts

Capital: Jackson

Area: 47,692 sq mi

Population: 2,967,297

State Bird: Northern Mockingbird and Wood Duck

State Flower: Southern Magnolia³¹⁷

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Mississippi.³¹⁸

Status

No Activity Identified³¹⁹

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Mississippi.³²⁰

Status

No Activity Identified³²¹

MISSISSIPPI at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✗ Net Metering Standards

Net Metering Standards

Capacity Limit

No Net Metering Standards have been defined for the state of Mississippi.³²²

Status

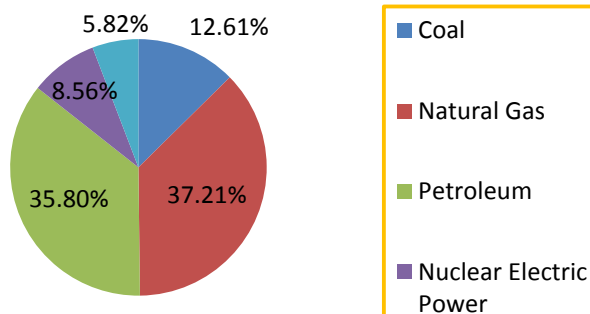
No Activity Identified³²³

Mississippi Energy Fact

Though Mississippi ranked last in the 2012 energy efficiency ranking by the American Council for an Energy Efficiency Economy, this year the state moved up the ranks to 47, with an increase on the 50 point scale from a score of 5.5 to a score of 8.

<http://news.yahoo.com/mississippi-lauded-improving-energy-efficiency-205729003.html>

Mississippi Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

The Mississippi Jobs First bill (SB 2622) requires contractors for public works projects that receive funds related to a federal disaster or major oil spills to first consider potential hires recommended by the Mississippi Department of Employment Security.³²⁴

MBE Provision/Certification: YES

The Minority and Small Business Development Division administers a certification program to identify capable MBEs participating in the procurement activities of educational institutions, governmental agencies, and private entities.³²⁵

Clean Energy Potential in Mississippi

Background

Mississippi has attracted an array of cutting-edge renewable energy companies with its tax incentives and cheap loans leading to hopefully greater potential growth within this sector.³²⁶



Solar: Mississippi has an urban utility-scale PV potential of 26,366 GWh (48.4% of total net generation), rural utility-scale PV potential of 4,981,252 GWh (over 100% of total net generation), and rooftop PV potential is 8,614 GWh (34.05% of total net generation).

Wind: Offshore wind power potential is 10,172 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 559,056 GWh (over 100% of total net generation).³²⁷

Incentives in Mississippi

Type	Incentives	Description
Statewide	Energy Investment Loan Program	Mississippi offers low-interest loans for renewable energy and energy efficiency projects.
	Mississippi Clean Energy Initiative	This program provides an incentive for companies that manufacture systems or components used to generate renewable energy, including biomass, solar, wind and hydro generation.
Utility-Specific	Coast Electric Power Association - Comfort Advantage Home Program	Coast Electric Power Association (CEPA) provides rebates on heat pumps to new homes, which meet certain weatherization standards.
	Coast Electric Power Association - Commercial Energy Efficiency Rebate Program	Coast Electric Power Association provides incentives for commercial customers to increase the energy efficiency of facilities.
	Mississippi Power - EarthCents Commercial Incentives Program	Mississippi Power offers rebates to commercial customers to help offset the cost of conversions from gas equipment to energy efficient electric equipment.
	Mississippi Power - EarthCents New Home Program	Mississippi Power offers incentives to its residential customers to help offset the cost of installing energy efficient measures in new homes.

Type	Incentives	Description
Utility-Specific	Mississippi Power - EarthCents Residential Efficiency Rebate Program	Mississippi Power offers rebates to its residential customers to help offset the cost of conversions from gas equipment to energy efficient electric equipment.
	Mississippi Power (Electric) - EarthCents Financing Program	Mississippi Power offers loans to residential customers to help pay for energy efficiency upgrades.
	Pearl River Valley Electric Power Association - Residential Energy Efficiency Rebate Program	Pearl River Valley Electric Power Association provides incentives through its Comfort Advantage Program to encourage energy efficiency within the residential sector.
	Singing River Electric Power Association - Comfort Advantage Home Program	Singing River Electric Power Association provides rebates on energy efficiency measures in new homes and heat pumps that meet Comfort Advantage weatherization standards.
	Southern Pine Electric Power Association - Residential Energy Efficiency Rebate Program	Southern Pine Electric Power Association offers the Comfort Advantage Home Program, which provides rebates on heat pumps to new homes that meet certain Comfort Advantage weatherization standards.
	TVA - Energy Right Solutions for Business	TVA offers the energy right Solutions Program to commercial and industrial facilities.

Type	Incentives	Description
Utility-Specific	TVA - Green Power Providers	Tennessee Valley Authority (TVA) and participating power distributors of TVA power offer a performance-based incentive program to homeowners and businesses for the installation of renewable generation systems from the following qualifying resources: PV, wind, hydropower, and biomass.
	TVA - Mid-Sized Renewable Standard Offer Program	The Tennessee Valley Authority (TVA) now compliments the small generation Green Power Providers Program by providing incentives for mid-sized renewable energy generators between 50 kW and 20 MW to enter into long-term price contracts.
	TVA Partner Utilities - Energy Right New Homes Program	The Tennessee Valley Authority (TVA) energy right New Homes Plan provides incentives for all electric, energy efficient new homes by offering graduated rebates for new homes.
	TVA Partner Utilities - Energy Right Water Heater Program	The Tennessee Valley Authority (TVA) TVA energy right Water Heater Plan promotes the installation of high efficiency water heaters in homes and small businesses.
	TVA Partner Utilities - In-Home Energy Evaluation Pilot Program	The Tennessee Valley Authority (TVA) energy right In-Home Energy Evaluation Pilot Program encourages the installation of energy efficiency improvements in existing single-family dwellings.
	TVA Partner Utilities - Energy Right Heat Pump Program	The Tennessee Valley Authority (TVA) energy right Heat Pump Plan provides financing to promote the installation of high efficiency heat pumps in homes and small businesses.

MISSOURI

The Show Me State³²⁸



Renewable Portfolio Standards

Policy Name and Date

Missouri Clean Energy Initiative--third state RPS adopted by ballot initiative, November 4, 2008

Standard

15% renewable by 2021

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric³³⁰

State Facts

Capital: Jefferson City

Area: 69,703 sq mi

Population: 5,988,927

State Bird: Eastern

Bluebird

State Flower: Hawthorn

Blossom³²⁹

Energy Efficiency Resource Standards

MISSOURI at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Policy Name and Date

Senate Bill 376: Missouri Energy Efficiency Investment Act, 2009

Standard

9.9% cumulative electricity savings by 2020 (average 1.24% annual reduction rate), an additional 1.9% each year thereafter and .9% cumulative peak reduction by 2020, an additional 1% each year thereafter.

Mandatory/Voluntary

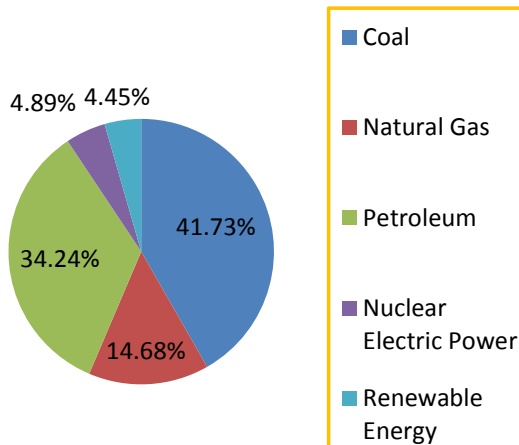
Voluntary³³¹

Missouri Energy Fact

Renewable energy resources accounted for 3 percent of Missouri's net electricity generation in 2011; most of that generation came from conventional hydroelectric power and wind.

<http://www.eia.gov/state/print.cfm?sid=MO>

Missouri Energy Consumption Estimates 2010



Net Metering Standards

Capacity Limit

Per System: 100 kW

Entire State: 5% of utility's single-hour peak load during previous year

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Hydroelectric, Small Hydroelectric, Fuel Cells using Renewable Fuels³³³

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Missouri Office of Equal Opportunity certifies MBEs to provide greater opportunities for these businesses to bid on state contracts.³³²

Clean Energy Potential in Missouri

Background

Although Missouri's renewable energy industry is less developed than some of its neighboring states, it possesses an equally strong renewable energy resource potential.³³⁴ Most of the state's electricity comes from coal, nearly all of it shipped from Wyoming. However, the state's windy land, located relatively close to dense, energy-consuming urban centers, puts Missouri in a prime position to become a national leader in renewable energy. A renewable energy industry in Missouri would create tens of thousands of jobs and new sources of income for farmers.³³⁵



Solar: Missouri has urban utility-scale PV potential of 30,549 GWh (30.09% of total net generation), rural utility-scale PV potential of 5,335,269 GWh (over 100% of total net generation), and rooftop PV potential is 16,160 GWh (17.5% of total net generation).

Wind: The onshore wind power potential is 689,519 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 835,445 GWh (over 100% of total net generation).³³⁶

Incentives in Missouri

Type	Incentives	Description
Statewide	Energy Revolving Fund Loans	The Missouri Energy Revolving Fund Loan Program, administered by the Division of Energy in the Missouri Department of Natural Resources (DNR), is available for energy efficiency and renewable energy projects for public and governmental buildings and structures.
	Missouri Agricultural and Energy Saving Team – A Revolutionary Opportunity (MAESTRO)	The Missouri Agricultural and Small Business Development Authority (MASBDA) is now offering incentives to livestock farmers in the form of assistance with loans for energy efficiency.
	Renewable Energy Generation Zone Property Tax Abatement	Legislation (H.B. 737) allows for new, expanded, or replacement business facilities to receive a property tax exemption from the applicable local government authority.
	Sales Tax Holiday for Energy-Efficient Appliances	The state of Missouri offers consumers a seven-day exemption from state sales taxes on certain Energy Star certified new appliances.
	Tax Deduction for Home Energy Audits and Energy Efficiency Improvements	The state of Missouri enacted legislation that allows homeowners to take an income tax deduction on the cost of home energy audits and associated energy efficiency improvements.

Type	Incentives	Description
Statewide	Wood Energy Production Credit	The Wood Energy Tax Credit, allows individuals or businesses processing Missouri forestry industry residues into fuels an income tax credit of \$5.00 per ton of processed material (e.g., wood pellets).
Utility-Specific	Ameren Missouri - Solar Renewable Energy Credits	Ameren Missouri offers a Standard Offer Contract to customers that generate solar power.
	Ameren Missouri - Photovoltaic Rebate Program	Ameren Missouri offers rebates to its customers for the installation of net metered photovoltaic (PV) systems on their properties.
	Ameren Missouri (Electric) - Business Energy Efficiency Program	Ameren Missouri will give cash incentives to non-residential customers for Standard Electric Efficiency Measures identified in official program materials as well as site-specific custom measures.
	Ameren Missouri (Electric) - Residential Energy Efficiency Rebate Programs	Ameren Missouri offers rebates and discounts to residential electric customers for the purchase and installation of energy efficiency measures.
	Ameren Missouri (Gas) - Business Energy Efficiency Program	Ameren Missouri offers its commercial natural gas customers rebates for the installation of certain energy efficient natural gas equipment and measures, such as programmable thermostats, food service equipment, building insulation and water heating equipment.

Type	Incentives	Description
Utility-Specific	<u>Ameren Missouri (Gas) - Residential Energy Efficiency Rebate Programs</u>	Ameren Missouri offers residential natural gas customers rebates for the installation of certain energy efficiency measures and natural gas equipment.
	<u>Atmos Energy (Gas) - Residential Efficiency Program</u>	Atmos Energy provides rebates for residential natural gas heating equipment through the Missouri High Efficiency Rebate Program.
	<u>Citizens Electric Corporation - Residential Energy Efficiency Rebate Program</u>	Citizens Electric Corporation offers rebates and price reductions to its residential customers for purchasing and installing energy efficient equipment.
	<u>City Utilities of Springfield - Commercial Energy Efficiency Rebate Program</u>	City Utilities of Springfield offers incentives for commercial customers to increase the efficiency of eligible facilities.
	<u>City Utilities of Springfield - Residential Energy Efficiency Rebate Program</u>	City Utilities of Springfield Missouri provides incentives for residential customers to increase the efficiency of eligible homes.
	<u>Columbia Water & Light - Residential Super Saver Loans</u>	The Columbia Water & Light (CWL) Home Performance Super Saver Loan allows Columbia residents to finance energy improvements to homes with affordable, low-interest loans with five to ten year terms.
	<u>Columbia Water & Light - Commercial Super Saver Loans</u>	Columbia Water & Light (CWL) provides Commercial Super Saver Loans, which allow C&I rate customers to replace a furnace along with a new central air conditioner or heat pump with an efficiency rating 11 EER or greater for units 6 tons or larger.

Type	Incentives	Description
Utility-Specific	Columbia Water & Light - Residential HVAC Rebate Program	Columbia Water & Light (CWL) provides an HVAC incentive for residential customers that are replacing an older heating and cooling system.
	Columbia Water & Light - New Home Energy Star Rebate	Columbia Water and Light offers a \$1,000 rebate to customers for the construction of new homes that achieve certification as Energy Star homes.
	Columbia Water & Light - HVAC and Lighting Efficiency Rebates	Columbia Water & Light (CWL) offers rebates to its commercial and industrial customers for the purchase of high efficiency HVAC installations and efficient lighting.
	Columbia Water & Light - Home Performance with Energy Star Rebates	Columbia Water and Light, a municipal utility, offers rebates to its residential customers who make certain energy efficient improvements to the home.
	Columbia Water & Light - Solar Rebates	Columbia Water & Light (CWL) offers rebates to its commercial and residential customers for the purchase of solar water heaters and solar photovoltaic systems.
	Co-Mo Electric Cooperative - Energy Efficiency Rebate Program	Co-Mo Electric Cooperative provides rebates to residential and commercial members who install air source, dual fuel, and/or geothermal heat pumps, and certain energy efficient appliances.
	Cuivre River Electric - Energy Efficiency Rebate Programs	Cuivre River Electric Cooperative, through the Take Control & Save Program, offers rebates for cooperative members who purchase efficient geothermal and dual fuel heat pumps, and electric water heaters.

Type	Incentives	Description
Utility-Specific	<u>Empire District Electric - Commercial and Industrial Efficiency Rebates</u>	Empire District Electric Company offers rebates to certain commercial and industrial customers for the installation of energy efficient equipment.
	<u>Empire District Electric - Low Income New Homes Program</u>	Empire District Electric offers rebates for the utilization of energy efficient measures and appliances in new, low-income homes.
	<u>Empire District Electric - Residential Energy Efficiency Rebate</u>	The Empire District Electric Company offers rebates for customers who construct highly efficient homes and purchase efficient central air conditioners.
	<u>Independence Power and Light - Commercial Energy Efficiency Rebate Program</u>	Independence Power and Light offers rebates to their commercial customers for purchasing and installing energy efficient equipment.
	<u>Independence Power and Light - New Homes Rebate Program</u>	Independence Power and Light offers rebates to builders for constructing new, energy efficient homes that meet Energy Star standards.
	<u>Independence Power and Light - Residential Energy Efficiency Rebate Program</u>	Independence Power and Light (IPL) offers rebates to residential customers for purchasing new, energy efficient appliances.
	<u>Intercounty Electric Cooperative - Energy Efficiency Rebate Program</u>	Intercounty Electric Cooperative provides rebates to its customers for the purchase of a variety of energy efficient equipment and appliances.

Type	Incentives	Description
Utility-Specific	Kansas City Power & Light - Solar Photovoltaic Rebates	Kansas City Power and Light and its affiliate Kansas City Power and Light Greater Missouri Operations (collectively referred to as KCP&L) offer rebates to their customers for the installation of net metered photovoltaic (PV) systems on their properties.
	Kansas City Power & Light - Commercial/Industrial Energy Efficiency Rebate Program	Kansas City Power & Light (KCP&L) provides financial incentives for commercial and industrial customers to increase the energy efficiency of eligible facilities.
	Kansas City Power & Light - Cool Homes Residential Rebate Program	Kansas City Power and Light (KCP&L) offers rebates to residential customers to help offset the cost of replacing inefficient central AC and heat pump systems with newer, more efficient models.
	Kansas City Power & Light - Energy Optimizer Programmable Thermostat Program	Kansas City Power and Light (KCP&L) offers a free Honeywell programmable thermostat, worth \$300, and free installation to qualifying customers to manage energy usage.
	Kansas City Power & Light - ENERGY STAR New Homes Rebate Program	Kansas City Power and Light (KCP&L) offers rebates to residential customers towards the cost of an ENERGY STAR Home Energy Assessment and a portion of the installed efficiency improvements.
	Kansas City Power & Light - Home Performance with ENERGY STAR	Kansas City Power & Light (KCP&L) offers rebates to residential customers towards the cost of an ENERGY STAR Home Energy Assessment and a portion of the installed efficiency improvements.

Type	Incentives	Description
Utility-Specific	Kirkwood Electric - Residential Energy Efficiency Rebate Program	Kirkwood Electric offers rebates to its residential customers who install energy efficient heat pumps and electric hot water heaters in their new and existing homes.
	Laclede Gas Company - Loan Programs for Energy Efficiency	The Laclede Gas Company offers two loan programs for customers to improve energy efficiency.
	Laclede Gas Company - Commercial and Industrial Energy Efficiency Rebate Program	Commercial and Industrial customers can receive rebates for various energy efficiency measures.
	Laclede Gas Company - Residential High Efficiency Heating Rebate Program	Laclede Gas Company offers various rebates to residential customers for investing in energy efficient equipment and appliances.
	Liberty Utilities - Residential and Small Business Energy Efficiency Rebate Program	Liberty Utilities provides a number of general rebate offerings to customers under the company's Residential Firm Service Rate or the Small Firm General Service Rate.
	Missouri Gas Energy (MGE) - Home Performance with ENERGY STAR	Missouri Gas Energy (MGE) offers rebates to its residential customers towards the cost of an ENERGY STAR Home Energy Assessment and a portion of the installed efficiency improvements.
	Missouri Gas Energy (MGE) - Residential and Small Business Efficiency Rebates	Missouri Gas Energy (MGE) offers its residential and small business customers rebates for the purchase and installation of efficient natural gas water heating and space heating equipment within its service territory.

Type	Incentives	Description
Utility-Specific	<u>Missouri Rural Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Missouri Rural Electric Cooperative (MREC) offers a number of rebates to residential customers for the purchase and installation of energy efficient equipment.
	<u>Ozark Border Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Ozark Border Electric Cooperative has made rebates available to residential members for the installation of energy efficient geothermal and air source heat pumps, electric water heaters, and room air conditioners.
	<u>Platte-Clay Electric Cooperative - Residential Energy Efficiency Rebates</u>	Platte-Clay Electric Cooperative offers a variety of rebates to residential and commercial customers who wish to upgrade to energy efficient equipment.
	<u>Residential Energy Efficiency Rebate (Offered by Members of Associated Electric Cooperative)</u>	Associated Electric Cooperative and many of its associated member cooperatives offer rebates to residential customers who purchase and install energy efficient equipment for the home.
	<u>Southwest Electric Cooperative - Energy Efficiency Rebate Program</u>	Southwest Electric Cooperative offers rebates to its customers that purchase energy efficient heating and air conditioning equipment.
	<u>White River Valley Electric Cooperative - Energy Efficiency Rebate Program</u>	The residential and commercial appliance and heating rebate program encourages members to purchase Energy Star equipment that qualifies under the White River Energy Efficiency Program.

Type	Incentives	Description
Local	Kansas City - EnergyWorks KC	The EnergyWorks KC program offers rebates to commercial, residential, and non-profit Kansas City organizations and residents who improve energy efficiency in their homes or buildings.
	St. Louis County - Residential Energy Efficiency Loan Program	St. Louis County SAVES offers loans to residents for energy efficiency improvements in owner-occupied, single-family homes.



MONTANA

The Big Sky Country³³⁷

State Facts

Capital: Helena

Area: 147,039 sq mi

Population: 989,415

State Bird: Western

Meadowlark

State Flower:

Bitterroot³³⁸

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 415: The Montana Renewable Power Production and Rural Economic Development Act, April 28, 2005

Standard

15%renewable by 2015

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Compressed Air Energy Storage (From Eligible Renewables), Anaerobic Digestion, Fuel Cells using Renewable Fuels³³⁹

Montana Energy Fact

Wind electric power generation grew by 34 percent in 2011 and supplied 4.2 percent of the state's net electricity generation.

<http://www.eia.gov/beta/state/?sid=MT>

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Montana.³⁴⁰

Status

No Activity Identified³⁴¹

Net Metering Standards

Capacity Limit

Per System: 50 kW; 10 kW for cooperatives

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

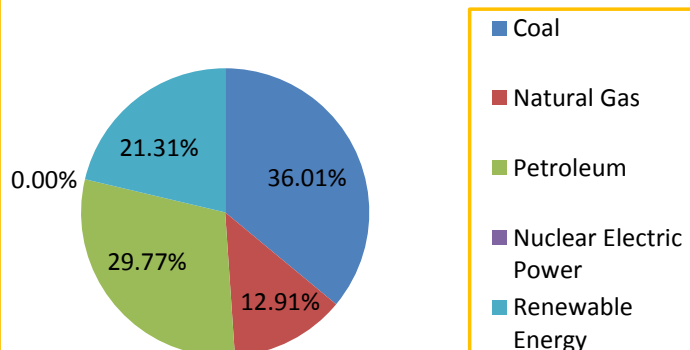
Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Hydroelectric, Geothermal Electric, Fuel Cells, Small Hydroelectric, Fuel Cells using Renewable Fuels³⁴⁴

MONTANA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Montana Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

The RPS includes provisions for community renewable energy projects to stimulate rural economic development, defined as renewable energy projects less than 25 MW where local owners have a controlling interest. For compliance years 2012-2014, public utilities must purchase both the renewable-energy credits and the electricity output from community renewable-energy projects totaling at least 50 MW in nameplate capacity. For each following year, utilities must purchase at least 75 MW in nameplate capacity. In addition, public utilities must enter into contracts that include a preference for Montana workers.³⁴²

MBE Provision/Certification: YES

The Montana Department of Transportation Disadvantaged Business Enterprise Program certifies MBEs to get Montana transportation contracts.³⁴³

Clean Energy Potential in Montana

Background

Montana benefits from strong wind speeds, electricity-grade geothermal resources, and suitable solar installation for further renewable energy development to occur in the state.³⁴⁵



Solar: Montana has urban utility-scale PV potential of 11,371 GWh (38.2% of total net generation), rural utility-scale PV potential of 8,187,341 GWh (over 100% of total net generation), rooftop PV potential is 2,194 GWh (7.36% of total net generation) and concentrated solar power potential is 1,540,288 GWh (over 100% of total net generation).

Wind: Onshore wind power potential is 2,746,272 GWh (over 100% of total net generation).

Geothermal: The potential for hydrothermal potential power is 6,548 GWh (21.9% of total net generation) and enhanced geothermal systems potential is 1,647,304 GWh (over 100% of total net generation).³⁴⁶

Incentives in Montana

Type	Incentive/Rebate	Description
Statewide	Alternative Energy Investment Tax Credit	Alternative Energy Investment Tax Credit applies to taxes due to alternative energy generating equipment in new or existing facilities.
	Alternative Energy Investment Tax Credit (Corporate)	Alternative Energy Investment Tax Credit applies to taxes due to net income produced by a manufacturing plant or a new business or expanding business that supplies basic energy needed from the alternative energy generating equipment.
	Alternative Energy Investment Tax Credit (Personal)	Alternative Energy Investment Tax Credit applies to income tax liability for the cost of purchasing and installing an energy system in a Montana resident's principal home that uses (1) a recognized non-fossil form of energy.
	Alternative Energy Revolving Loan Program	The Alternative Energy Revolving Loan Program (AERLP) provides loans to individuals, small businesses, local government agencies, units of the university system, and non-profit organizations to install alternative energy systems that generate energy for their own use.

Type	Incentives	Description
Statewide	<u>Corporate Property Tax Reduction for New/Expanded Generating Facilities</u>	Montana generating plants producing one megawatt (MW) or more with an alternative renewable energy source are eligible for the new or expanded industry property tax reduction.
	<u>Deduction For Energy-Conserving Investment</u>	A taxpayer may deduct a portion of the cost of a capital investment in a building that promotes energy conservation.
	<u>Energy Conservation Installation Credit</u>	Individual taxpayers may claim a credit against their tax liability for up to 25% of the costs of investment for energy conservation purposes in a building.
	<u>Generation Facility Corporate Tax Exemption</u>	New electricity generating facilities built in Montana with a capacity of up to one megawatt (MW) that use an alternative renewable energy source are exempt from property taxes for five years after operation begins.
	<u>Property Tax Abatement for Production and Manufacturing Facilities</u>	In May 2007, Montana enacted legislation (H.B. 3) that allows a property tax abatement for new renewable energy production facilities, new renewable energy manufacturing facilities, and renewable energy research and development equipment.
	<u>Renewable Energy Systems Exemption</u>	Montana's property tax exemption for recognized non-fossil forms of energy generation and low emission wood or biomass combustion devices may be claimed for 10 years after installation of the property.

Type	Incentives	Description
Statewide	Residential Alternative Energy System Tax Credit	Residential taxpayers who install an energy system using a recognized non-fossil form of energy on their home after December 31, 2001 are eligible for a tax credit equal to the amount of the cost of the system and installation of the system, not to exceed \$500.
	Residential Geothermal Systems Credit	A resident individual taxpayer of Montana who installs a geothermal heating or cooling system in their principal dwelling can claim a tax credit based on the installation costs of the system, not to exceed \$1,500.
Utility-Specific	Black Hills Power - Commercial Energy Efficiency Programs	Black Hills Power provides rebates for its commercial customers who install energy efficient heat pumps, motors, variable frequency drives, lighting, and water heaters.
	Black Hills Power - Residential Customer Rebate Program	Black Hills Power offers cash rebates to residential customers who purchase and install energy efficient equipment in their homes.
	Flathead Electric Cooperative - Commercial Lighting Rebate Program	Flathead Electric Cooperative, in conjunction with Bonneville Power Administration, encourages energy efficiency in the commercial sector by providing a commercial lighting retrofit rebate program and a new construction lighting rebate program.
	Flathead Electric Cooperative - New and Manufactured Home Incentive Program	Flathead Electric encourages its residential customers to occupy energy efficient homes.

Type	Incentives	Description
Utility-Specific	<u>Flathead Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Flathead Electric offers incentives for residential customers to increase energy efficiency in homes through a variety of equipment rebates.
	<u>Montana-Dakota Utilities - Commercial Energy Efficiency Incentive Program</u>	Montana-Dakota Utilities (MDU) offers a variety of rebates to commercial customers for the purchase and installation of energy efficient lighting measures, air conditioning equipment, variable speed drives and motors.
	<u>Montana-Dakota Utilities - Residential Energy Efficiency Rebate Program</u>	Montana-Dakota Utilities (MDU) offers several residential rebates on energy efficient equipment for natural gas and electric customers.
	<u>NorthWestern Energy - USB Renewable Energy Fund</u>	NorthWestern Energy (NWE), formerly Montana Power Company, periodically provides funding to its customers for renewable energy projects.
	<u>NorthWestern Energy - Custom Business Efficiency Program</u>	The E+ Business Partners Program offers funding for local energy conservation and load management projects in new and retrofit applications including commercial, institutional, industrial, agricultural, and multi-family residential facilities/systems.
	<u>NorthWestern Energy (Electric) - Commercial Energy Efficiency Rebate Program</u>	NorthWestern Energy offers multiple rebate programs for commercial and industrial customers to make energy efficient improvements to their businesses.

Type	Incentives	Description
Utility-Specific	NorthWestern Energy (Electric) - Residential Energy Efficiency Rebate Program	NorthWestern Energy offers a variety of rebates for residential customers to make energy efficiency improvements in their existing homes.
	NorthWestern Energy (Gas) - Commercial Energy Efficiency Rebate Program	NorthWestern Energy offers multiple rebate programs for commercial and industrial customers to make energy efficient improvements to their businesses.
	NorthWestern Energy (Gas) - Residential Energy Efficiency Rebate Program	NorthWestern Energy offers a variety of rebates for residential customers to make energy efficiency improvements in their existing homes.
	Yellowstone Valley Electric Cooperative - Residential/Commercial Efficiency Rebate Program	The Yellowstone Valley Electric Cooperative offers rebates to residential and commercial members for purchasing energy efficient add-on heat pumps, geothermal heat pumps, water heaters, dishwashers, refrigerators, and washing machines.

NEBRASKA

The Cornhusker State³⁴⁷



Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Nebraska.³⁴⁹

Status

Proposed: Concluding the Midwestern Governors' Association's Energy Security and Climate Change Summit on November 15, 2007, governors from the eleven Midwestern states signed agreements designed to cut greenhouse gases, promote energy conservation, and fight global warming. The agreements call for greater use of nonpetroleum-based energy sources such as wind power and grain-based ethanol. The governors agreed that wind power, water, and other renewable sources should eventually provide up to 30% of the region's electricity.³⁵⁰

NEBRASKA at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Nebraska.³⁵¹

Status

No Activity Identified³⁵²

State Facts

Capital: Lincoln

Area: 77,349 sq mi

Population: 1,826,341

State Bird: Western

Meadowlark

State Flower: Giant

Goldenrod³⁴⁸

Net Metering Standards

Capacity Limit

Per System: 25 kW

Entire State: 1% of utility's average monthly peak demand

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Small Hydroelectric³⁵³

Nebraska Energy Fact

The National Renewable Energy Laboratory estimates that almost 92 percent of Nebraska has suitable conditions for wind-powered electricity generation.

<http://www.eia.gov/beta/state/?sid=NE>

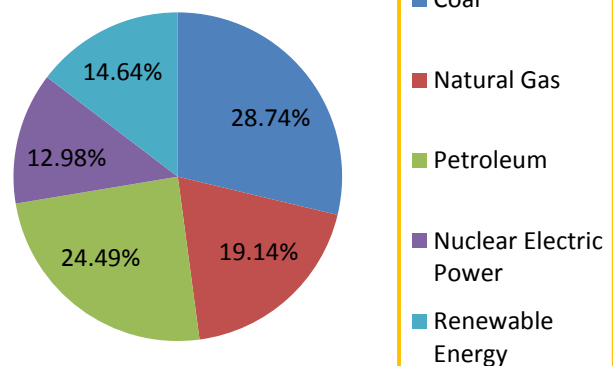
ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Nebraska Department of Roads Disadvantaged Business Enterprise Unified Certification Program certifies DBEs.³⁵⁴

Nebraska Energy Consumption Estimates 2010



Clean Energy Potential in Nebraska

Background

Nebraska has vast wind resources, as well as moderate solar and geothermal resources. Due to its extensive wind resources, the state has attracted wind developers.³⁵⁵



Solar: Nebraska has urban utility-scale PV potential of 12,954 GWh (35.3% of total net generation), rural utility-scale PV potential of 9,266,757 GWh (over 100% of total net generation), rooftop PV potential is 5,337 GWh (14.5% of total net generation) and concentrated solar power potential is 4,846,929 GWh (over 100% of total net generation).

Wind: Onshore wind power potential is 3,011,253 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 927,996 GWh (over 100% of total net generation).³⁵⁶

Incentives in Nebraska

Type	Incentives	Description
Statewide	Dollar and Energy Savings Loans	The Dollar and Energy Savings Loan program makes available low-interest loans for residential and commercial energy efficiency improvements.
	Property Tax Exemption for Wind Energy Generation Facilities	Nebraska Legislative Bill 1048 (LB1048) created a nameplate capacity tax that replaced the Nebraska Department of Revenue's central assessment and taxation of the tangible personal property associated with wind energy generation facilities.
	Renewable Energy Tax Credit (Corporate)	Nebraska offers a production-based tax credit to any producer of electricity generated by wind, solar, geothermal, hydropower, fuel cells or methane gas.
	Renewable Energy Tax Credit (Personal)	Nebraska offers a production-based tax credit to any producer of electricity generated by wind, solar, geothermal, hydropower, fuel cells or methane gas.
	Sales and Use Tax Exemption for Community Wind Projects	In May 2007, Nebraska established an exemption from the sales and use tax imposed on the gross receipts from the sale, lease, or rental of personal property for use in a community-based energy development (C-BED) project.

Type	Incentives	Description
Utility-Specific	Lincoln Electric System (Commercial and Industrial) - Sustainable Energy Program	Lincoln Electric System (LES) offers a variety of energy efficiency incentives for commercial and industrial customers through the Sustainable Energy Program (SEP).
	Lincoln Electric System (Residential) - Sustainable Energy Program	Lincoln Electric System (LES) offers several rebates to residential customers who are interested in upgrading to energy efficient household equipment.
	MidAmerican Energy (Gas) - Residential Energy Efficiency Rebate Programs	MidAmerican Energy offers basic energy efficiency incentives for residential customers in Nebraska to improve the comfort and savings in participating homes.
	Nebraska Public Power District - Commercial Energy Efficiency Rebate Programs	Nebraska Public Power District offers multiple rebates for commercial and industrial customers to save energy in eligible facilities.
	Nebraska Public Power District - Residential Energy Efficiency Rebate Programs	The Nebraska Public Power District offers rebates to homeowners who purchase energy efficient heat pumps, upgrade their insulation, and/or have their cooling system tuned-up.
	Omaha Public Power District - Commercial Energy Efficiency Rebate Programs	Omaha Public Power District (OPPD) offers incentives for commercial and industrial customers to install energy efficient heat pumps and replace/retrofit existing lighting systems.

Type	Incentives	Description
Utility-Specific	Omaha Public Power District - Residential Energy Efficiency Rebate Program	Omaha Public Power District (OPPD) offers energy credit refunds to its residential customers for installing high-efficiency heat pumps through the Energy Conservation Program.
	Southern Power District - Residential Energy Efficiency Rebate Programs	Southern Power District (SPD) offers rebates for the purchase and installation of efficient air source heat pumps, geothermal heat pumps, attic insulation, and HVAC tune-ups.
Local	Nebraska ReEnergize Program	The ReEnergize Program is a collaborative effort between the cities of Omaha and Lincoln to build energy smart communities.

NEVADA

The Silver State³⁵⁷

State Facts

Capital: Carson City

Area: 110,572 sq mi

Population:

2,700,551

State Bird: Mountain

Bluebird

State Flower:

Sagebrush³⁵⁸

Renewable Portfolio Standards

Policy Name and Date

Assembly Bill 3, June 7, 2005

Standard

25% renewable by 2025

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Waste Tires (using microwave reduction), Energy Recovery Processes, Solar Pool Heating, Anaerobic Digestion, Biodiesel, Geothermal Direct-Use³⁵⁹

NEVADA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Nevada.³⁶⁰

Status

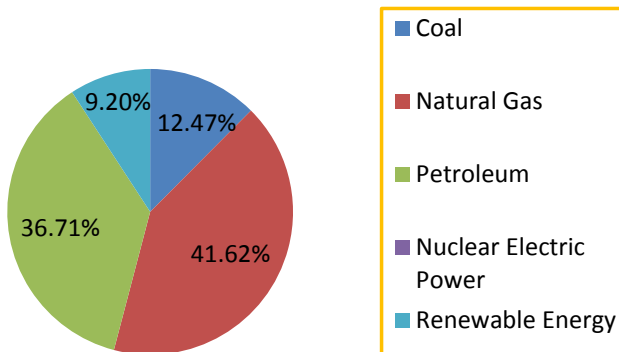
The Governor signed Senate Bill 188 into law on June 18, 2005, allowing electric utilities to receive credits under the portfolio standard for energy savings from certain energy efficiency measures.³⁶¹

Nevada Energy Fact

Nevada ranked second in the Nation in net electricity generation from both geothermal and solar energy in 2011; 9.1 percent of Nevada's net electricity generation came from those two sources. <http://www.eia.gov/beta/state/?sid=NV>

Nevada Energy Consumption Estimates

2010



Net Metering Standards

Capacity Limit

Per System: The lesser of 1,000 kW or 100% of the customer's annual requirements for electricity
 Entire State: Statewide cap of 3% of total peak capacity of all utilities in the state

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Small Hydroelectric³⁶²

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Nevada Department of Transportation certifies MBEs for fair and competitive bidding on transportation project contracts.³⁶³

Clean Energy Potential in Nevada

Background

Nevada's policies have kept the state in the forefront of the renewable energy industry. Its solar and geothermal resources produce a substantial amount of electricity and are among the best in the nation. Nevada is home to the world's first geothermal-solar hybrid power plant and the first commercial-scale wind farms that were both built in 2012.³⁶⁴



Solar: Nevada has urban utility-scale PV potential of 24,894 GWh (70.8% of total net generation), rural utility-scale PV potential of 8,614,454 GWh (over 100% of total net generation), rooftop PV potential is 10,767 GWh (30.6% of total net generation) and concentrated solar power potential is 8,295,753 GWh (over 100% of total net generation).

Wind: Onshore wind power potential is 17,709 GWh (50.3% of total net generation).

Geothermal: The potential for hydrothermal power potential is 45,321 GWh (over 100% of total net generation) and enhanced geothermal systems potential is 1,262,175 GWh (over 100% of total net generation).³⁶⁵

Incentives in Nevada

Type	Incentives	Description
Statewide	EnergyFit Nevada	EnergyFit Nevada is a home energy retrofit program.
	Large Scale Renewable Energy Property Tax Abatement (Nevada State Office of Energy)	New or expanded businesses in Nevada may apply to the Director of the State Office of Energy for a property tax abatement of up to 55% for up to 20 years for real and personal property used to generate electricity from renewable energy resources including solar, wind, biomass, fuel cells, geothermal or hydro.
	NV Energy (Southern Nevada) - Solar Hot Water Incentive Program	NV Energy is providing an incentive for its residential customers to install solar water heaters on their homes.
	Portfolio Energy Credits	Nevada's Energy Portfolio Standard requires NV Energy to derive or save a minimum percentage of the electricity it sells from renewable energy resources or energy efficiency measures.
	Property Tax Abatement for Green Buildings	Nevada provides a property tax abatement for new non-residential and multi-family residential green buildings, and existing buildings or structures that are renovated for use by a manufacturer to meet certain green building standards.
	Renewable Energy Sales and Use Tax Abatement	New or expanded businesses in Nevada may apply to the Director of the State Office of Energy for a sales and use tax abatement for qualifying renewable energy technologies.

Type	Incentives	Description
Statewide	Renewable Energy Systems Property Tax Exemption	Renewable energy systems that serve a residential, commercial or industrial building or irrigation system are exempt from property taxes.
	RenewableGenerations Rebate Program	The budget for the 2013 SolarGenerations Program will support 5,644 kilowatts (kW) of projects in Southern Nevada, and 8,786 kW of projects in Northern Nevada.
	Revolving Loan Program	Assembly Bill 522 of 2009 established a fund for renewable energy, energy efficiency and energy conservation loans.
Utility-Specific	NV Energy -Energy Smart Schools Program	The Energy Smart Schools Program helps Nevada school districts reduce energy consumption, improve learning environments, and save money by implementing energy efficiency improvements in new and existing K-12 schools.
	NV Energy (Northern Nevada) - SureBet Business Energy Efficiency Rebate Program	Commercial, industrial and institutional customers of NV Energy can take advantage of a wide variety of incentives offered through the program for retrofit and new construction projects.
	NV Energy (Northern Nevada) - Solar Hot Water Incentive Program	NV Energy is providing an incentive for its residential customers, small commercial, non-profit, school and other public customers to install solar water heaters on their homes and facilities.

Type	Incentives	Description
Utility-Specific	NV Energy (Northern Nevada Gas) - Residential Energy Efficiency Rebate Program	NV Energy offers rebates for the installation of high efficiency stand-alone gas furnaces and gas boilers for residential customers in northern Nevada.
	NV Energy (Northern Nevada Gas) - SureBet Business Energy Efficiency Rebate Program	Commercial, industrial and institutional natural gas customers of NV Energy can take advantage of a wide variety of incentives for retrofit projects.
	NV Energy (Southern Nevada) - Energy Plus Builder Efficiency Program	NV Energy offers the Energy Plus New Homes Program to provide rebates to certified builders in the NV Energy service territory that build high-efficiency homes.
	NV Energy (Southern Nevada) - Residential Energy Efficiency Rebate Program	NV Energy offers rebates for the installation of high efficiency A/C units, air source heat pumps, and pool pumps for residential customers in southern Nevada.
	NV Energy (Southern Nevada) - SureBet Business Energy Efficiency Rebate Program	Commercial, industrial and institutional customers of NV Energy can take advantage of a wide variety of incentives offered through the program for retrofit and new construction projects.
	Southwest Gas Corporation - Smarter Greener Better Solar Water Heating Program	Southwest Gas is offering rebates to Nevada customers for solar water heating systems installed in private residential, small business, public and other properties.
	Southwest Gas Corporation - Commercial Energy Efficient Equipment Rebate Program	Southwest Gas Corporation (SWG) offers rebates to commercial customers in Nevada who purchase energy efficient natural gas equipment.

Type	Incentives	Description
Utility-Specific	Southwest Gas Corporation - Residential Energy Efficiency Rebate Program	Southwest Gas Corporation (SWG) offers rebates to residential customers in Nevada who purchase energy efficient natural gas tankless water heaters, clothes dryers, windows and smart low-flow showerheads.
	Valley Electric Association - Solar Water Heating Program	Valley Electric Association (VEA), a non-profit member owned cooperative, developed the domestic solar water-heating program to encourage energy efficiency at the request of the membership.

NEW HAMPSHIRE

The Granite State³⁶⁶



Renewable Portfolio Standards

Policy Name and Date

House Bill 873: The Renewable Energy Act, May 11, 2007

Standard

24.8%renewable by 2025

Mandatory/Voluntary

Mandatory

New Hampshire Energy Fact

14 percent of New Hampshire's 2011 net electricity generation came from renewable energy.

<http://www.eia.gov/state/print.cfm?sid=NH>

State Facts

Capital: Concord

Area: 9,280 sq mi

Population: 1,316,470

State Bird: Purple Finch

State Flower: Purple Lilac and Pink Lady's Slipper³⁶⁷

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Geothermal Heat Pumps, CHP/Cogeneration, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Renewable Fuels, Biodiesel, Fuel Cells using Renewable Fuels, Microturbines³⁶⁸

NEW HAMPSHIRE at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of New Hampshire.³⁷⁰

Status

No Activity Identified³⁷¹

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The New Hampshire Department of Transportation's Disadvantaged Business Enterprise Program ensures nondiscrimination in the award of federally assisted contracts.³⁶⁹

Net Metering Standards

Capacity Limit

Per System: 1,000 kW

Entire State: 50 MW

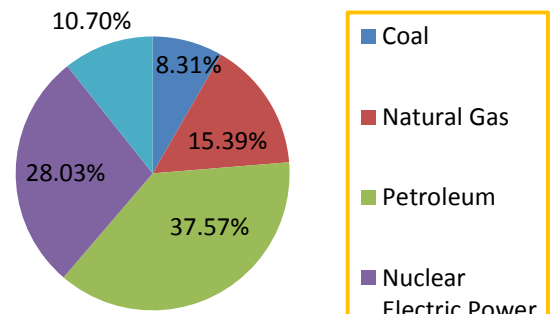
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, CHP/Cogeneration, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Renewable Fuels, Biodiesel, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies³⁷²

New Hampshire Energy Consumption Estimates 2010



Clean Energy Potential in New Hampshire

Background

New Hampshire's renewable resource potential is very large. In the North and West, the White Mountains are a substantial source wind power potential and in the Southeast, solar power is also a viable option. The net electricity generation in the state is among the lowest in the nation.³⁷³



Solar: New Hampshire has urban utility-scale PV potential of 3,790 GWh (17% of total net generation), rural utility-scale PV potential of 57,364 GWh (over 100% of total net generation), and rooftop PV potential is 2,299 GWh (10.35% of total net generation).

Wind: Onshore wind power potential is 5,706 GWh (25.7% of total net generation) and offshore wind power potential is 14,478 GWh (49.6% of total net generation).

Geothermal: Enhanced geothermal systems potential is 104,314 GWh (over 100% of total net generation).³⁷⁴

Incentives in New Hampshire

Type	Incentives	Description
Statewide	Business Energy Conservation Revolving Loan Fund	The New Hampshire Business Finance Authority (BFA) administers a revolving loan program for businesses and non-profit organizations to finance energy efficiency improvements.
	Commercial & Industrial Renewable Energy Grants	The New Hampshire Public Utilities Commission (PUC) offers grant funding for renewable-energy projects installed at commercial, industrial, public, non-profit, municipal or school facilities or multi-family residences with at least three units.
	Commercial & Industrial Solar Rebate Program	The New Hampshire Public Utilities Commission initiated a new solar rebate program for non-residential applicants in November 2010.
	Enterprise Energy Fund Grants	The New Hampshire Community Loan Fund and the New Hampshire Community Development Finance Authority (CDFA) initiated the Enterprise Energy Fund in 2010.
	Enterprise Energy Fund Loans	The New Hampshire Community Loan Fund and the New Hampshire Community Development Finance Authority offer the Enterprise Energy Fund.
	Local Option - Property Tax Exemption for Renewable Energy	New Hampshire allows cities and towns to offer an exemption from residential property taxes in the amount of the assessed value of a solar energy system, wind energy system, or wood-fired central heating system used on the property.

Type	Incentives	Description
Statewide	Municipal Energy Reduction Fund	In March 2010, the New Hampshire Community Development Finance Authority (CDFA) launched a revolving loan program to encourage the state's municipal governments to invest in energy efficiency and alternative energy.
	Pay for Performance Program	The New Hampshire Pay for Performance (P4P) Program works with large energy consumers to improve energy efficiency in their facilities.
	Renewable Energy Rebate Program	New Hampshire enacted legislation (H.B. 1628) in July 2008 requiring the state's Public Utilities Commission (PUC) to establish and administer a rebate program for certain renewable energy systems.
	Residential Bulk-Fed Wood-Pellet Central Boilers and Furnace Rebate Program	The New Hampshire Public Utilities Commission (PUC) is offering rebates of 30% of the installed cost of qualifying new residential bulk-fed, wood-pellet central heating boilers or furnaces.
	Residential Solar Water Heating Rebates	New Hampshire offers a rebate for residential solar water-heating systems and solar space-heating systems.
Utility-Specific	Liberty Utilities (Electric) - Residential Energy Efficiency Rebate Programs	Liberty Utilities offers incentives and technical support to help customers who implement energy efficient upgrades to existing homes or build an ENERGY STAR certified home.

Type	Incentives	Description
Utility-Specific	Liberty Utilities (Electric) - Commercial Energy Efficiency Incentive Programs	Liberty Utilities' program for existing commercial buildings provides incentives for energy efficient equipment installations.
	Liberty Utilities (Electric) - Commercial New Construction Rebate Program	Liberty Utilities' new construction program offers a variety of financial incentives to customers who are building new facilities, adding capacity for manufacturing, replacing failed equipment or undergoing major renovations.
	Liberty Utilities (Gas) - Commercial Energy Efficiency Programs	Liberty Utilities' program for commercial natural gas customers provides incentives for energy efficient equipment installations and upgrades.
	New Hampshire Electric Co-Op - Solar Hot Water Rebate Program	New Hampshire Electric Co-Op (NHEC) offers rebates to residential customers who install qualified solar water-heating systems.
	New Hampshire Electric Co-Op - SmartSTART Energy Efficiency Loan Program	New Hampshire Electric Co-Op's SmartSTART (Savings Through Affordable Retrofit Technologies) Program is a no-money-down option to have energy efficient products installed in a home or business.
	New Hampshire Electric Co-Op - Low-Income Energy Assistance Grant Program	The Energy Assistance Program is designed to help NHEC's income-qualified members manage energy use with the goal of lowering total energy costs.

Type	Incentives	Description
Utility-Specific	New Hampshire Electric Co-Op - Large Business Energy Solutions	New Hampshire Electric Co-Op offers incentives for its large business customers (using 100 kW or more) to increase the energy efficiency of facilities through the Large Business Energy Solutions Program.
	New Hampshire Electric Co-Op - New Equipment and Construction Program	New Hampshire Electric Co-Op offers incentives to its commercial and industrial customers to encourage energy efficiency.
	New Hampshire Electric Co-Op - Residential Energy Efficiency Rebate Programs	New Hampshire Electric Co-Op provides a number of energy efficiency incentive programs for its residential members.
	New Hampshire Electric Co-Op - Small Business Energy Solutions	New Hampshire Electric Co-Op offers incentives for its small commercial customers (those using less than 100 kW) through the Small Business Energy Solutions Program.
	PSNH - Energy Rewards RFP Program	Public Service of New Hampshire (PSNH), the state's largest electric utility, offers incentives on a competitive basis to commercial and industrial customers that achieve measurable energy savings through the installation of energy efficiency measures.
	PSNH - Municipal Smart Start Program	Public Service of New Hampshire (PSNH), an electric utility, offers the Smart Start Program to Municipal customers.

Type	Incentives	Description
Utility-Specific	<u>PSNH - Large Business Energy Efficiency Retrofit Rebate Program</u>	Public Service of New Hampshire (PSNH), in collaboration with NHSaves, encourages large commercial and industrial customers in existing facilities to conserve energy through the Large Business Retrofit Program.
	<u>PSNH - New Construction Energy Efficiency Rebate Program</u>	Public Service of New Hampshire (PSNH), in collaboration with NHSaves, encourages commercial and industrial customers building new facilities or renovating existing facilities to conserve energy through the New Construction and Equipment Program.
	<u>PSNH - Residential Energy Efficiency Rebate Program</u>	Public Service of New Hampshire, in collaboration with NHSaves, provides incentives for residential customers to increase the energy efficiency of participating homes.
	<u>PSNH - Small Business Retrofit Program</u>	Public Service of New Hampshire (PSNH), an electric utility, offers financial incentives and technical advice to small business customers seeking to improve energy efficiency through retrofits.
	<u>Unitil (Electric) - Residential Energy Efficiency Loan Program</u>	Unitil offers its New Hampshire residential customers a no-interest loan program to encourage more energy efficient homes.
	<u>Unitil (Electric) - Commercial and Industrial Energy Efficiency Programs</u>	Unitil offers three different programs for its commercial, industrial, and institutional customers in New Hampshire: the Small Business Energy Efficiency Services Program, the Large Business Retrofit Program, and the Large C&I New Construction Program.

Type	Incentives	Description
Utility-Specific	Unitil (Electric) - Residential Energy Efficiency Programs	Unitil offers New Hampshire residential customers a number of programs to encourage more energy efficient homes.
	Unitil (Gas) - Commercial and Industrial Energy Efficiency Programs	Unitil offers rebates for all non-residential gas customers: commercial, industrial, institutional, educational, multi-family, or municipal facilities within the Unitil service territory.
	Unitil (Gas) - Residential Energy Efficiency Program	Unitil offers its New Hampshire residential customers a number of programs to encourage more energy efficient homes.



NEW JERSEY

The Garden State³⁷⁵

State Facts

Capital: Trenton

Area: 7,812 sq mi

Population: 8,791,894

State Bird: Eastern
Goldfinch

State Flower: Blue
Violet³⁷⁶

Renewable Portfolio Standards

Policy Name and Date

Assembly Bill 3520, April 12, 2006

Standard

20.38% Class I and Class II renewables by energy year 2020-2021 + 4.1% solar-electric by energy year 2027-2028

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric,

Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels³⁷⁷

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of New Jersey.³⁷⁸

Status

Completed/Further Work In Progress: On April 17, 2008, the New Jersey Governor's office released a draft Energy Efficiency Portfolio Standard, including an energy efficiency credit component, as part a draft state energy master plan which was finalized in 2011. The plan calls for a 20% reduction in energy use by the year 2021, as well as a reduction in peak energy demand by 5700 MW.³⁷⁹

Net Metering Standards

Capacity Limit

Per System: No capacity limit specified, but system must be sized so that energy production does not exceed customer's annual on-site energy consumption

Entire State: No limit specified (BPU may limit to 2.5% of peak demand)

Mandatory/Voluntary

Mandatory

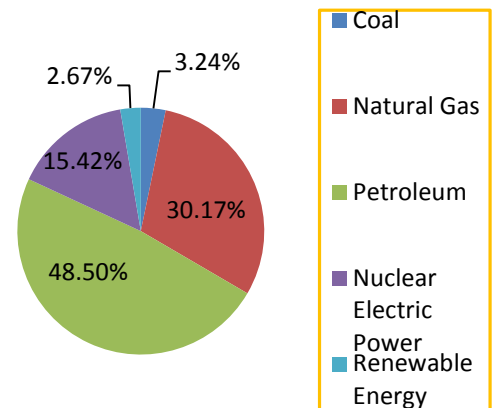
Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Anaerobic Digestion, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels³⁸¹

NEW JERSEY at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

New Jersey Energy Consumption Estimates 2010



New Jersey Energy Fact

New Jersey has enacted the Nation's first offshore wind renewable energy standard, requiring at least 1,100 megawatts by 2021 in its renewable energy portfolio.

<http://www.eia.gov/state/print.cfm?sid=NJ>

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

New Jersey Department of Transportation certifies DBEs and ensures that DBEs have an equal opportunity to receive and participate in U.S. Department of Transportation assisted contracts.³⁸⁰

Clean Energy Potential in New Jersey

Background

New Jersey has become the second largest market for solar energy in the country, with over 17,500 industrial, commercial, academic and residential installations. The state's incentive programs are also designed to take advantage of its wind resources and to attract renewable energy manufacturers to the state.³⁸²



Solar: New Jersey has urban utility-scale PV potential of 44,307 GWh (67.4% of total net generation), rural utility-scale PV potential of 439,774 GWh (over 100% of total net generation), and rooftop PV potential is 15,768 GWh (24% of total net generation).

Wind: The onshore wind power potential is 317 GWh (.48% of total net generation) and offshore wind power potential is 429,808 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 35,230 GWh (53.6% of total net generation).³⁸³

Incentives in New Jersey

Type	Incentives	Description
Statewide	Assessment of Farmland Hosting Renewable Energy Systems	In New Jersey, under the Farmland Assessment Act, farmland actively devoted to an agricultural or horticultural use is assessed at its productivity value.
	Clean Energy Solutions Energy Efficiency Revolving Loan Fund	Under the Clean Energy Solutions Energy Efficiency Revolving Loan Fund (EERLF), the New Jersey Economic Development Authority (EDA) offers loans to commercial, institutional, and industrial entities to finance improvements that receive support under the New Jersey Office of Clean Energy (OCE) Pay for Performance Energy Efficiency Incentive Program, the Large Energy Users Pilot Program, and Small CHP and Fuel Cells Incentive Program.
	Clean Energy Solutions Large Scale CHP and Fuel Cells Program	The New Jersey Economic Development Authority (EDA) is offering grants for the installation of combined heat and power (CHP) or fuel cell systems to commercial, industrial, and institutional entities (including non-profits and public entities).
	COOLAdvantage Program	The COOLAdvantage Program's objective is to improve the energy efficiency of new electric air conditioners and heat pumps.

Type	Incentives	Description
Statewide	Edison Innovation Clean Energy Manufacturing Fund - Grants and Loans	The Edison Innovation Clean Energy Manufacturing Fund (CEMF) is intended to provide assistance for the manufacturing of energy efficient and renewable energy products that will assist Class I renewable energy and energy efficiency technologies in becoming competitive with traditional sources of electric generation.
	Edison Innovation Green Growth Fund Loans	The Edison Innovation Green Growth Fund (EIGGF), administered by the New Jersey Economic Development Authority, offers loans to for-profit companies developing Class I renewable energy (as defined under state renewables portfolio standard) and energy efficiency products.
	ENERGY STAR Homes Program	The New Jersey Board of Public Utilities, in conjunction with New Jersey utilities, offers the ENERGY STAR Homes Program.
	Energy Star Product Rebates	The New Jersey Office of Clean Energy (OCE) offers rebates to state residents who purchase certain energy efficient home appliances.
	Grid-Connected Renewables Program	The New Jersey Grid-Connected Renewables Program offers competitive incentives for onshore wind and biomass electricity generation projects larger than 1 Megawatt (MW) connected to the electric distribution system serving New Jersey.

Type	Incentives	Description
Statewide	Home Performance with Energy Star Program	The New Jersey Board of Public Utilities (NJ BPU) offers a Home Performance with Energy Star Program for residents that want to improve the energy efficiency of their homes.
	New Jersey Comfort Partners Program	The New Jersey Comfort Partners program is a free of charge, direct installation energy efficiency assistance program available to most New Jersey households with significant energy usage and an income at or below 225% of the federal poverty guidelines.
	New Jersey Renewable Energy Incentive Program	New Jersey's 1999 electric restructuring legislation provides for investments in energy efficiency and renewable energy through a "Societal Benefits Charge" (SBC) collected from all customers of electric public utilities.
	New Jersey SmartStart Buildings - Direct Install Program	The Direct Install Program offers turn-key energy efficiency solutions to qualified industrial and commercial customers that, with some exceptions, have a peak electricity demand of 150 kilowatts (kW) or less over the preceding 12 months.
	New Jersey SmartStart Buildings - New Construction and Retrofits	New Jersey SmartStart Buildings is a program sponsored by the New Jersey Board of Public Utilities in partnership with New Jersey's gas and electric utilities.

Type	Incentives	Description
Statewide	New Jersey SmartStart Buildings - Pay for Performance Program	The New Jersey Clean Energy Program (NJCEP) offers the Pay for Performance Incentive Program for energy efficiency improvements in industrial, commercial, and multi-family residential buildings.
	Property Tax Exemption for Renewable Energy Systems	In October 2008, New Jersey enacted legislation exempting renewable energy systems used to meet on-site electricity, heating, cooling, or general energy needs from local property taxes.
	Small Scale CHP and Fuel Cell Incentive Program	The New Jersey Clean Energy Program (NJCEP) offers incentives for several types of small combined heat and power (CHP) and fuel cell systems that have a generating capacity of 1 MW or less and are located behind the meter of an existing electric or natural gas customer that pays the Societal Benefits Charge (SBC).
	Solar Energy Sales Tax Exemption	New Jersey offers a full exemption from the state's sales tax (currently 7%) for all solar energy equipment.
	Solar Renewable Energy Certificates (SRECs)	New Jersey's renewable portfolio standard (RPS) -- one of the most aggressive in the United States -- requires each electricity supplier/provider serving retail customers in the state to include in the electricity it sells at least 20.38% qualifying renewables by 2021 and 4.1% solar-electricity by 2028.

Type	Incentives	Description
Statewide	WARMAdvantage Program	The New Jersey Clean Energy WARMAdvantage Program offers rebates on furnaces, boilers and water heaters with the objective of improving the efficiency of space heating and water heating systems.
	Wind Manufacturing Tax Credit	In August 2010 New Jersey enacted legislation (S.B. 2036) creating an offshore wind resource requirement within the state renewables portfolio standard (RPS) and tax incentives for certain businesses engaged in manufacturing wind energy equipment.
Utility-Specific	New Jersey Natural Gas - SAVEGREEN Residential Rebate Program	Through the SAVEGREEN Project, New Jersey Natural Gas (NJNG) provides rebates that supplement the statewide WARMAdvantage Program.
	New Jersey Natural Gas - SAVEGREEN On-Bill Financing Program	Through the SAVEGREEN Project, New Jersey Natural Gas (NJNG) provides an On-Bill Repayment Program.
	PSE&G - Residential Efficiency Program	PSE&G, in concert with New Jersey's Clean Energy Program (NJCEP), provides a range of incentives for new equipment and energy efficiency measures in residences.
	PSE&G - Commercial Efficiency Program	The PSE&G Small Business Direct Install Program provides recommended efficiency upgrades to business customers with an electric demand of less than 150 kilowatts(kW) or 40,300 kilowatt-hours (kWh) per month.

Type	Incentives	Description
Utility-Specific	PSE&G - Government Facility Efficiency Program	The PSE&G Municipal Direct Install Program provides recommended efficiency upgrades up front with a program budget of \$50 million to government and non-profit facilities including schools with a willingness to repay 20% of the cost over two years.

NEW MEXICO

*The Land of Enchantment*³⁸⁴



Renewable Portfolio Standards

Policy Name and Date

Senate Bill 418, March 5, 2007

Standard

Investor-owned utilities: 20% renewable by 2020;
Rural electric cooperatives: 10% renewable by 2020

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Zero emission technology with substantial long-term production potential, Anaerobic Digestion, Fuel Cells using Renewable Fuels³⁸⁶

State Facts

Capital: Santa Fe

Area: 121,590 sq mi

Population: 2,059,179

State Bird: Roadrunner

State Flower: Yucca

*Flower*³⁸⁵

NEW MEXICO at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Efficient Use of Energy Act, 2005

Standard

8% of 2005 total retail kilowatt-hour sales by 2020 (annual reduction rate of .67%)

Mandatory/Voluntary

Mandatory³⁸⁷

Net Metering Standards

Capacity Limit

Per System: 80 MW

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

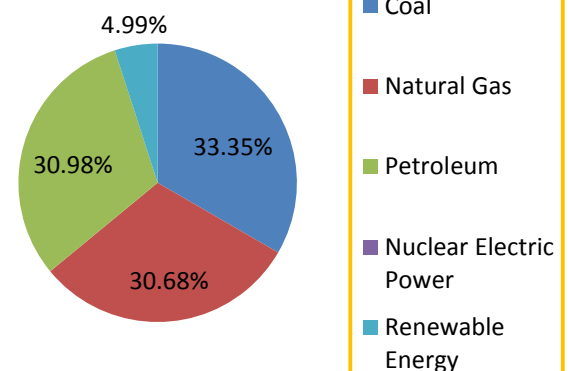
Photovoltaics, Wind, Small Hydroelectric, Other Distributed Generation Technologies³⁸⁸

New Mexico Energy Fact

New Mexico ranked fourth in the Nation in installed solar photovoltaic capacity, which increased from 43 megawatts in 2010 to 116 megawatts in 2011.

<http://www.eia.gov/beta/state/?sid=NM>

New Mexico Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The New Mexico Department of Transportation provides MBE certification to for-profit enterprises.³⁸⁹

Clean Energy Potential in New Mexico

Background

New Mexico ranks 2nd in the nation in solar energy potential. New Mexico hosts over 30 solar energy enterprises. To harness and distribute New Mexico's renewable energy, The Centennial West Clean Line will transport 3,500 megawatts of new renewable energy generation from eastern New Mexico and deliver directly to the southwestern United States.³⁹⁰



Solar: New Mexico has urban utility-scale PV potential of 71,356 GWh (over 100% of total net generation), rural utility-scale PV potential of 16,318,543 GWh (over 100% of total net generation), rooftop PV potential is 6,513 GWh (17.9% of total net generation) and concentrated solar power potential is 16,812,349 GWh (over 100% total net generation).

Wind: The onshore wind power potential is 1,399,517 GWh (over 100% of total net generation).

Geothermal: The potential for hydrothermal power potential is 12,933 GWh (35.6% of total net generation) and enhanced geothermal systems potential is 1,417,978 GWh (over 100% of total net generation).³⁹¹

Incentives in New Mexico

Type	Incentives	Description
Statewide	<u>Advanced Energy Gross Receipts Tax Deduction</u>	New Mexico has a gross receipts tax structure for businesses instead of a sales tax.
	<u>Advanced Energy Tax Credit (Corporate)</u>	As of July 2007, the development and construction costs of solar thermal electric plants and associated energy storage devices are eligible for a 6% tax credit against gross receipts, compensating, or withholding taxes.
	<u>Advanced Energy Tax Credit (Personal)</u>	As of July 2007, the development and construction costs of solar thermal electric plants and associated energy storage devices are eligible for a 6% tax credit against gross receipts, compensating, or withholding taxes.
	<u>Agricultural Biomass Income Tax Credit (Corporate)</u>	Agricultural Biomass Income Tax Credit offers a tax credit for agricultural biomass from a dairy or feedlot transported to a facility that uses agricultural biomass to generate electricity or make biocrude or other liquid or gaseous fuel for commercial use.
	<u>Agricultural Biomass Income Tax Credit (Personal)</u>	Agricultural Biomass Income Tax Credit offers a tax credit for agricultural biomass from a dairy or feedlot transported to a facility that uses agricultural biomass to generate electricity or make biocrude or other liquid or gaseous fuel for commercial use.

Type	Incentives	Description
Statewide	Alternative Energy Product Manufacturers Tax Credit	The Alternative Energy Product Manufacturers tax credit may be claimed for manufacturing alternative energy products and components, including renewable energy systems, fuel cell systems, and electric and hybrid-electric vehicles.
	Biomass Equipment & Materials Compensating Tax Deduction	In 2005, New Mexico adopted a policy to allow businesses to deduct the value of biomass equipment and biomass materials used for the processing of biopower, biofuels or biobased products in determining the amount of Compensating Tax due.
	Drinking Water State Revolving Loan Fund	The Drinking Water State Revolving Loan Fund provides low cost financial assistance to eligible public water systems to finance the cost of repair and replacement of drinking water infrastructure, maintain or achieve compliance with the federal Safe Drinking Water Act (SWDA) requirements, and protect drinking water quality and public health.
	Energy Efficiency & Renewable Energy Bond Program	Energy Efficient & Renewable Energy Bond Program offer bonds to finance energy efficiency and renewable energy improvements in state government and school district buildings.

Type	Incentives	Description
Statewide	Geothermal Heat Pump Tax Credit (Corporate)	Geothermal Heat Pump Tax Credit is for geothermal heat pumps purchased and installed between January 1, 2010 and December 31, 2020 on property owned by the taxpayer.
	Geothermal Heat Pump Tax Credit (Personal)	Geothermal Heat Pump Tax Credit for geothermal heat pumps purchased and installed between January 1, 2010 and December 31, 2020 on property owned by the taxpayer.
	Gross Receipts Tax Exemption for Sales of Wind and Solar Systems to Government Entities	Receipts associated with the sale of certain wind turbine equipment to federal, state or local government entities are exempt from being added to gross receipts.
	Property Tax Exemption for Residential Solar Systems	Property Tax Exemption for Residential Solar Systems provides a tax assessment exemption to residential solar energy systems.
	Renewable Energy Production Tax Credit (Corporate)	Renewable Energy Production Tax Credit provides a tax credit against the corporate income tax of one cent per kilowatt-hour for companies that generate electricity from wind or biomass.
	Renewable Energy Production Tax Credit (Personal)	Renewable Energy Production Tax Credit provides a tax credit against the personal income tax of one cent per kilowatt-hour for companies that generate electricity from wind or biomass.

Type	Incentives	Description
Statewide	Solar Energy Gross Receipts Tax Deduction	Revenue generated by the sale and installation of solar systems used to provide space heat, hot water or electricity to the property on which it is installed may be deducted from gross receipts before the gross receipts tax is calculated.
	Solar Market Development Tax Credit	New Mexico provides a 10% personal income tax credit (up to \$9,000) for residents and businesses (non-corporate), including agricultural enterprises, who purchase and install certified photovoltaic (PV) and solar thermal systems.
	Sustainable Building Tax Credit (Corporate)	Sustainable Building Tax Credit (Corporate) established a corporate tax credit for sustainable buildings in New Mexico.
	Sustainable Building Tax Credit (Personal)	Sustainable Building Tax Credit (Personal) established a personal tax credit for sustainable buildings in New Mexico.
Utility-Specific	Central New Mexico Electric Cooperative - Residential Energy Efficiency Rebate Program	Central New Mexico Electric Cooperative (CNMEC) provides incentives for its residential members to purchase energy efficient water heaters, clothes washers, dishwashers, refrigerators, and freezers.

Type	Incentives	Description
Utility-Specific	<u>El Paso Electric Company - Small and Medium System Renewable Energy Certificate Purchase Program</u>	El Paso Electric purchases renewable energy certificates (RECs) from its New Mexico customers who install small photovoltaic (PV) systems and wind systems up to 10 kilowatts (kW) in capacity, and medium systems between 10 kW and 100 kW.
	<u>El Paso Electric Company - Commercial Efficiency Program</u>	The El Paso Electric (EPE) Commercial Efficiency Program pays incentives to commercial and industrial customers who install energy efficiency measures in facilities located within EPE's New Mexico service territory.
	<u>El Paso Electric Company - Residential Efficiency Program</u>	EPE offers incentives to residential customers in its New Mexico service territory that purchase and install high efficiency equipment for residential use.
	<u>El Paso Electric Company - SCORE Plus Standard Offer Program</u>	The El Paso Electric (EPE) SCORE Plus Program is designed to help participants identify energy efficiency opportunities in existing and newly planned facilities and to provide monetary incentives to help implement the projects.
	<u>New Mexico Gas Company - Commercial Efficiency Programs</u>	The New Mexico Gas Company Commercial Energy Efficiency Programs provide energy savings for businesses using natural gas for cooking and water heating.

Type	Incentives	Description
Utility-Specific	New Mexico Gas Company - Residential Efficiency Programs	The New Mexico Gas Company provides incentives for energy saving measures and improvements to residential homes.
	PNM - Commercial Energy Efficiency Rebate Program	PNM provides a range of incentives for commercial customers to increase the efficiency of new and existing facilities.
	PNM - Performance-Based Solar PV Program	PNM offers a renewable energy credit (REC) purchase program as part of its plan to comply with New Mexico's renewable portfolio standard (RPS).
	PNM - Energy Star Home Builder Rebate Program	PNM offers homebuilders a rebate for each Energy Star qualified home they build in PNM service areas.
	PNM - Residential Energy Efficiency Rebate Program	PNM offers incentives for residential customers to improve the efficiency of eligible homes.
	Xcel Energy - Residential and Low Income Home Energy Service	Xcel's Residential Program provides incentives to install energy efficiency measures in homes and small businesses in Xcel service territory.
	Xcel Energy - Solar*Rewards Program	Through the Solar*Rewards program, Xcel Energy purchases renewable energy credits (RECs) from customers in New Mexico who install photovoltaic (PV) systems.

Type	Incentives	Description
Utility-Specific	Xcel Energy (Electric) - Commercial Energy Efficiency Rebate Program	Xcel Energy offers a variety of incentives to commercial and industrial customers in the New Mexico service territory.



NEW YORK

The Empire State³⁹²

State Facts

Capital: Albany

Area: 53,095 sq mi

Population:

19,378,102

State Bird: Eastern
Bluebird

State Flower:
Rose³⁹³

Renewable Portfolio Standards

Policy Name

NY PSC Order. Case 03-E-0188,
September 24, 2004

Standard

29% renewable by 2015

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Ethanol, Methanol, Biodiesel, Fuel Cells using Renewable Fuels³⁹⁴

New York Energy Fact

In 2011, New York produced more hydroelectric power than any other State east of the Rocky Mountains. <http://www.eia.gov/state/?sid=NY>

NEW YORK at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Energy Efficiency Portfolio Standard, June 23, 2008

Standard

15% reduction relative to projected electricity use in 2015 (annual reduction rate of 1.88%); gas savings of 14.7% annually by 2020 (annual reduction rate of 1.12%).

Mandatory/Voluntary

Mandatory³⁹⁵

Net Metering Standards

Capacity Limit

Per System: Solar: 25 kW for residential; 2 MW for non-residential, Wind: 25 kW for residential; 2 MW for non-residential; 500 kW for farm-based, Micro-hydroelectric: 25 kW for residential; 2 MW for non-residential, Fuel Cells: 10 kW for residential; 1.5 MW for non-residential, Biogas: 1 MW (farm-based only) Micro-CHP: 10 kW (residential only)
Entire State: 1% of utility's 2005 demand for solar, farm-based biogas, fuel cells, micro-hydroelectric, and residential micro-CHP; 0.3% of utility's 2005 demand for wind

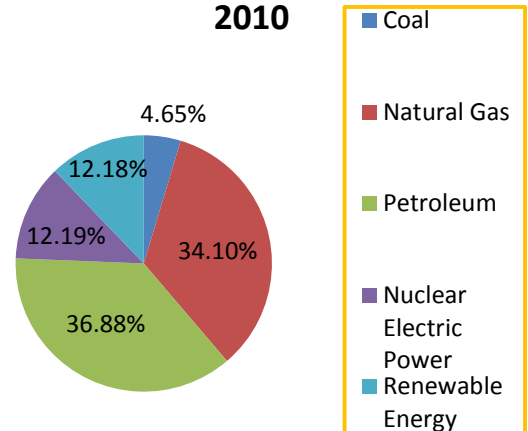
Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass, Fuel Cells, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines³⁹⁸

New York Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

Governor Andrew Cuomo is using a grant of \$27.7 million in federal Disaster National Emergency Grant Funds to hire workers to help clean up communities affected by Hurricane Sandy. Workers who lost their jobs as a direct result of Hurricane Sandy or workers who were unemployed prior to the storm are eligible to apply for temporary positions.³⁹⁶

MBE Provision/Certification: YES

The New York State Division of Minority and Women-Owned Business Development certifies MBEs.³⁹⁷

Clean Energy Potential in New York

Background

Renewable energy technologies are at the core of New York's efforts to move toward a clean energy economy. The state is currently ranked 12th in the nation in installed wind capacity and the sector is steadily expanding. The state also ranks within the top ten states for solar PV capacity. The entire state could be powered entirely by solar, geothermal and wind energy within the near future.³⁹⁹



Solar: New York has urban utility-scale PV potential of 52,803 GWh (38.5% of total net generation), rural utility-scale PV potential of 1,492,566 GWh (over 100% of total net generation), and rooftop PV potential is 28,780 GWh (21% of total net generation).

Wind: Onshore wind power potential is 63,566 GWh (46.4% of total net generation) and offshore wind power potential is 614,280 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 375,401 GWh (over 100% of total net generation).⁴⁰⁰

Incentives in New York

Type	Incentives	Description
Statewide	Agricultural Energy Efficiency Program	The New York State Energy Research and Development Authority (NYSERDA) offers incentives for electric and natural gas efficiency improvements made on farms and by farm producers.
	Anaerobic Digester Gas-to-Electricity Rebate and Performance Incentive	The Anaerobic Digester Gas-to-Electricity Program is designed to support small-sized electricity generation where the energy generated is used primarily at the electric customer's location (third-party project ownership structures are permitted).
	Assisted Home Performance Grants	The Assisted Home Performance Program provides grants to low-income homeowners in 1-4 family buildings for up to 50% of costs for energy efficient improvements.
	EmPower New York	The primary focus of EmPower New York is to provide cost-effective electric reduction measures, such as replacement of refrigerators and installation of high efficiency lighting.
	Energy Conservation Improvements Property Tax Exemption	Qualifying energy conservation improvements to homes are exempt from real property taxation to the extent that the addition would increase the value of the home.

Type	Incentives	Description
Statewide	Energy Smart Multifamily Performance Program	Under NYSERDA's Energy \$mart Multifamily Performance Program, new construction of multi-family buildings and existing multi-family buildings are eligible for incentives that improve energy savings through energy efficiency or innovative energy solutions, such as renewable energy.
	Energy Smart New Construction Program	The New York State Energy Research and Development Authority (NYSERDA) encourages the incorporation of energy efficiency and renewable energy resources into the design, construction and operation of agricultural, commercial, industrial/manufacturing, institutional and multi-family buildings (5 units or more) through the Energy \$mart New Construction Program.
	Existing Facilities Program	The NYSERDA Existing Facilities Program offers a broad array of different incentives to electricity and natural gas customers within the state that pay the System Benefits Charge (SBC).
	Fuel Cell Rebate and Performance Incentive	Under PON 2157 The New York State Energy Research and Development Authority (NYSERDA) offers incentives for the purchase, installation, and operation of customer-sited tier (CST, also called "behind the meter") fuel cell systems used for electricity production.

Type	Incentives	Description
Statewide	Green Residential Building Program	The Green Residential Building Program, administered by the New York State Energy Research and Development Authority (NYSERDA), offers incentives to residential building owners for the construction or substantial renovation of buildings that are built or permanently sited in New York State and meet certain green building requirements.
	Home Performance with Energy Star Financing	NYSERDA offers several options for homeowners to finance energy efficiency improvements made under the Home Performance with Energy Star Program.
	Home Performance with Energy Star High Efficiency Measure Incentive (HEMI)	The New York State Research and Development Authority (NYSERDA) offers an incentive to certain homeowners of 1-4 family homes that participate in the Home Performance with Energy Star Program.
	Industrial and Process Efficiency Performance Incentives	The New York State Energy Research and Development Authority (NYSERDA) offers the Industrial and Process Efficiency (IPE) Program to provide performance-based incentives to manufacturers and data centers implementing energy efficiency and process improvements that reduce energy costs.
	Local Government Energy Efficient Appliance Rebate Program	New York offers rebates to government entities for the purchase and installation of certain energy efficient appliances and power strips.

Type	Incentives	Description
Statewide	Local Option - Solar Sales Tax Exemption	New York exempts the sale and installation of residential solar energy systems from the state's sales and compensating use taxes.
	Local Option - Solar, Wind & Biomass Energy Systems Exemption	Section 487 of the New York State Real Property Tax Law provides a 15-year real property tax exemption for solar, wind energy, and farm-waste energy systems constructed in New York State.
	Local Option - Real Property Tax Exemption for Green Buildings	In July 2012, New York enacted legislation allowing municipal corporations to exempt green buildings from real property taxes.
	New York Power Authority - Energy Services Programs for Public Entities	New York Power Authority (NYPA) provides energy efficiency improvements to eligible public sector organizations at no up-front cost.
	On-Site Small Wind Incentive Program	The New York State Energy Research and Development Authority (NYSERDA) provides incentives for eligible small wind systems.
	PV Incentive Program	The New York State Energy Research and Development Authority (NYSERDA) provides an incentive of \$1.40 per watt (DC) to eligible installers for the installation of approved, grid-connected photovoltaic (PV) systems.

Type	Incentives	Description
Statewide	Refundable Clean Heating Fuel Tax Credit (Personal)	The state of New York offers a personal income tax credit for biodiesel purchases used for residential space heating and water heating.
	Refundable Clean Heating Fuel Tax Credit (Corporate)	The state of New York offers a corporate income tax credit for biodiesel purchases used for residential space heating and water heating.
	Residential Loan Fund	The New York Residential Loan Fund, administered by the NYSERDA, provides reduced-interest rate loans through participating lenders to finance renovation or construction projects that improve a home's energy efficiency.
	Residential Solar Tax Credit	Residential Solar Tax Credit offers a personal income tax credit originally applied to expenditures on solar-electric (PV) equipment used on residential property. The credit, equal to 25% percent of the cost of equipment and installation, was expanded in August 2005 to include solar-thermal equipment.
	Residential Wood Heating Fuel Exemption	New York exempts retail sales of wood used for residential heating purposes from the state sales tax.
	RPS Customer-Sited Tier Regional Program	The New York State Energy Research and Development Authority (NYSERDA) offers incentives for customer-sited photovoltaic (PV) and biogas electricity generators of larger than 50 kilowatts (kW) located in certain regions of the state.

Type	Incentives	Description
Statewide	Solar Sales Tax Exemption	New York exempts the sale and installation of residential solar energy systems from the state's sales and compensating use taxes.
	Solar Thermal Incentive Program	The New York State Energy Research and Development Authority (NYSERDA) offers incentives for the installation of solar water heating systems to residential and non-residential customers of the state's major investor-owned utilities.
Utility-Specific	Central Hudson Gas & Electric (Electric) - Commercial Lighting Rebate Program	Central Hudson Gas & Electric's (Central Hudson) Commercial Lighting Rebate Program is for businesses, retailers, institutional customers and non-profit customers of Central Hudson.
	Central Hudson Gas & Electric (Electric) - Residential Energy Efficiency Rebate Program	The Home Energy SavingsCentral Program offers customers rebates of between \$25 and \$600 for energy efficient equipment and measures.
	Central Hudson Gas & Electric (Gas) - Commercial Energy Efficiency Program	The Business Energy SavingsCentral program is for non-residential gas customers of Central Hudson.
	Central Hudson Gas & Electric (Gas) - Residential Energy Efficiency Rebate Program	The Home Energy SavingsCentral Program offers customers rebates of up to \$700 on energy efficient equipment and measures for residential gas customers who upgrade heating, cooling or ventilation systems with specific types of energy efficient equipment.

Type	Incentives	Description
Utility-Specific	<u>ConEd (Electric) - Commercial and Industrial Energy Efficiency Program</u>	Con Edison offers commercial electric customers a rebate program for energy efficient equipment in buildings inside the eligible service area.
	<u>ConEd (Electric) - Multifamily Energy Efficiency Incentives Program</u>	Con Edison offers New York multi-family electric customers a rebate program for energy efficient cooling and lighting equipment in 5-75 unit buildings in the eligible service areas.
	<u>ConEd (Electric) - Residential Energy Efficiency Incentives Program</u>	Con Edison offers energy efficiency incentives through its Residential HVAC Electric Rebate Program.
	<u>ConEd (Gas) - Commercial and Industrial Energy Efficiency Program</u>	Con Edison offers New York Commercial natural gas customers a rebate program for energy efficient equipment in buildings inside eligible service areas.
	<u>ConEd (Gas) - Multi-family Energy Efficiency Incentives Program</u>	Con Edison offers energy efficiency incentives for 5-75 unit buildings through the Multi-family Natural Gas Heating Rebate Program.
	<u>ConEd (Gas) - Residential Energy Efficiency Incentives Program</u>	Con Edison offers energy efficiency incentives through the Residential HVAC Gas Rebate Program.
	<u>Long Island Power Authority - Solar Initiative Feed-in Tariff</u>	The Long Island Power Authority's (LIPA) Solar Initiative Feed-in Tariff (FIT) program provides fixed payments for electricity produced by approved photovoltaic systems over a fixed period.
	<u>Long Island Power Authority - Commercial Energy Efficiency Rebate Program</u>	The Commercial Energy Efficiency Program offers a variety of incentives for its non-residential customers to increase the energy efficiency of facilities.

Type	Incentives	Description
Utility-Specific	Long Island Power Authority - Residential Energy Efficiency Rebate Program	Long Island Power Authority offers a variety of incentive programs that help residential customers upgrade to more energy efficient equipment and appliances in their homes.
	Long Island Power Authority - PV Rebate Program	LIPA offers its customers rebates for grid-connected photovoltaic (PV) systems as part of the Solar Pioneer and Solar Entrepreneur Programs.
	Long Island Power Authority - Residential Solar Water Heating Rebate Program	The Long Island Power Authority (LIPA) offers homeowners rebates for the installation of solar water heaters.
	Long Island Power Authority - Wind Energy Rebate Program	The Long Island Power Authority (LIPA) offers rebates to its residential and commercial electric customers -- including non-profits, schools, and governments -- for the installation of grid-connected wind energy systems.
	National Fuel (Gas) - Large Non-Residential Conservation Program	National Fuel Large Non-Residential Conservation Program provides an energy efficient equipment application for custom and standard rebates.
	National Fuel (Gas) - Residential Energy Efficiency Rebates	National Fuel offers pre-qualified equipment rebates for the installation of certain energy efficiency measures to residential customers in Western New York.
	National Fuel (Gas) - Small Commercial Conservation Program	National Fuel (Gas) - Small Commercial Conservation Program provides an energy efficient equipment application for custom and standard rebates.

Type	Incentives	Description
Utility-Specific	<u>National Grid (Electric) - Non-Residential Energy Efficiency Program (Upstate New York)</u>	National Grid's Non-Residential Program provides energy efficiency incentives for electric business customers in upstate New York.
	<u>National Grid (Electric) - Residential Energy Efficiency Rebate Programs (Upstate New York)</u>	National Grid offers residential electric customers in upstate New York several incentives for properly recycling inefficient refrigerators and for the improvement of multi-family residential units.
	<u>National Grid (Gas) - Residential Energy Efficiency Rebate Programs (Metro New York)</u>	National Grid's High Efficiency Heating Rebates are offered to residential gas heating customers in the New York City metro area and Long Island.
	<u>National Grid (Gas) - Residential Energy Efficiency Rebate Programs (Upstate New York)</u>	National Grid's High Efficiency Heating Rebates are offered to residential gas heating customers in upstate New York.
	<u>National Grid (Gas) - Commercial Energy Efficiency Rebate Programs (Metro New York)</u>	National Grid's Commercial Energy Efficiency Program provides support services and incentives to commercial customers who install energy efficient natural gas related measures in the New York Metro area.
	<u>National Grid (Gas) - Commercial Energy Efficiency Rebate Programs (Upstate New York)</u>	National Grid's Commercial Energy Efficiency Program provides support services and incentives to commercial customers who install energy efficient natural gas related measures in eligible upstate New York counties.
	<u>NYSEG (Electric) - Commercial and Industrial Efficiency Program</u>	NYSEG and RG&E offer rebates to non-residential customers installing energy efficient equipment that have an electricity Systems Benefits Charge (SBC) included in their energy bills.

Type	Incentives	Description
Utility-Specific	NYSEG (Electric) - Residential Efficiency Program	NYSEG offers residential electric customers rebates for recycling refrigerators, and its multi-family customers free CFLs and 50% off common area lighting equipment.
	NYSEG (Electric) - Small Business Lighting Retrofit Program	NYSEG offers a lighting incentive program designed to serve small business customers with a demand of 100 kilowatts (kW) or less.
	NYSEG (Gas) - Commercial and Industrial Efficiency Program	NYSEG and RG&E offer rebates to non-residential customers installing energy efficiency equipment that pay a natural gas Systems Benefits Charge (SBC).
	NYSEG (Gas) - Residential Efficiency Program	NYSEG is offering residential natural gas customers rebates for installing energy efficient equipment.
	Orange and Rockland Utilities (Electric) - Commercial Efficiency Programs	Orange and Rockland Utilities (O&R) provides a simple energy efficiency rebate program for small businesses in New York.
	Orange and Rockland Utilities (Electric) - Refrigerator Recycling Program	Orange and Rockland Utilities (O&R) provides rebates for residential customers for recycling older, inefficient refrigerators and freezers.
	Orange and Rockland Utilities (Gas) - Residential Efficiency Program	Orange and Rockland Utilities (O&R) provides rebates for residential customers purchasing energy efficient natural gas equipment.

Type	Incentives	Description
Utility-Specific	RG&E (Electric) - Commercial and Industrial Efficiency Program	NYSEG and RG&E offer rebates to non-residential customers installing energy efficient equipment that have an electricity Systems Benefits Charge (SBC) included in their energy bills.
	RG&E (Electric) - Residential Efficiency Programs	RG&E offers residential electric customers rebates for recycling refrigerators, and multi-family customers free CFLs and 50% off common area lighting equipment.
	RG&E (Electric) - Small Business Lighting Retrofit Program	RG&E offers a lighting incentive program designed to serve small business customers with a demand of 100 kilowatts (kW) or less.
	RG&E (Gas) - Commercial and Industrial Efficiency Program	NYSEG and RG&E offer rebates to non-residential customers installing energy efficiency equipment that pay a natural gas Systems Benefits Charge (SBC).
	RG&E (Gas) - Residential Efficiency Program	RG&E offers residential natural gas customers rebates for installing energy efficient equipment.
Local	City of Riverhead - Energy Conservation Device Permitting Fees	In its building permit fee structure, the Town of Riverhead on Long Island provides a discount to people wishing to install energy conservation devices on residential or commercial buildings.
	New York City - Residential Solar Sales Tax Exemption	New York State allows local governments to grant a local sales tax exemption for residential solar energy systems.

Type	Incentives	Description
Local	New York City - Property Tax Abatement for Photovoltaic (PV) Equipment Expenditures	The State of New York provides a property tax abatement for photovoltaic (PV) system expenditures made on buildings located in cities with a population of 1 million or more people.

NORTH CAROLINA

*The Tar Heel State*⁴⁰¹



Renewable Portfolio Standards

Policy Name and Date

Session Law 2007-397, August 20, 2007

Standard

Investor-owned utilities: 12.5% renewable or energy efficiency by 2021; Electric cooperatives, municipal utilities: 10% renewable or energy efficiency savings by 2018

North Carolina Energy Fact

In 2011, 5.3 percent of North Carolina's net electricity generation came from renewable energy resources, almost all from conventional hydroelectric power and biomass.

<http://www.eia.gov/state/?sid=NC>

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, CHP/Cogeneration, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy⁴⁰³

Energy Efficiency Resource Standards

Policy Name and Date

Session Law 2007-397, August 20, 2007

Standard

0.75% annual reduction of prior year sales since 2012, rising to 0.83% annual reduction of prior year sales by 2021

Mandatory/Voluntary

Mandatory⁴⁰⁴

Net Metering Standards

Capacity Limit

Per System: 1,000 kW
Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Hydrogen, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels⁴⁰⁶

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The North Carolina Department of Administration certifies MBEs.⁴⁰⁵

State Facts

Capital: Raleigh

Area: 52,663 sq mi

Population: 9,535,483

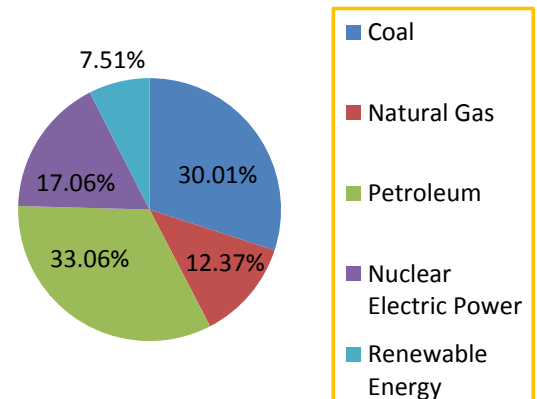
State Bird: Northern Cardinal

State Flower: Flowering Dogwood⁴⁰²

NORTH CAROLINA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

North Carolina Energy Consumption Estimates 2010



Clean Energy Potential in North Carolina

Background

North Carolina was the first state in the southeast to enact an RPS. The state has implemented a variety of initiatives to encourage its citizens, utilities and commercial entities to increase the use of renewable energy systems. The state has above average solar and geothermal resources. Furthermore, because North Carolina's coastline, situated at the point where the Labrador Current and the Gulf Stream meet in the Atlantic Ocean, there is significant wind energy potential that has not yet been developed.⁴⁰⁷



Solar: North Carolina has urban utility-scale PV potential of 68,346 GWh (53.1% of total net generation), rural utility-scale PV potential of 1,492,566 GWh (over 100% of total net generation), and rooftop PV potential is 28,420 GWh (22% of total net generation).

Wind: The onshore wind power potential is 2,037 GWh (1.5% of total net generation) and offshore wind power potential is 1,269,627 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 375,401 GWh (over 100% of total net generation).⁴⁰⁸

Incentives in North Carolina

Type	Incentives	Description
Statewide	Active Solar Heating and Cooling Systems Exemption	Active solar heating and cooling systems may not be assessed at more than the value of a conventional system for property tax purposes.
	Local Option - Financing Program for Renewable Energy and Energy Efficiency	North Carolina authorizes cities and counties to establish revolving loan programs to finance renewable energy and energy efficiency projects that are permanently affixed to residential, commercial or other real property.
	Local Option - Green Building Incentives	To encourage sustainable building practices, North Carolina law allows all counties and cities to provide reductions or partial rebates for building permit fees.
	Property Tax Abatement for Solar Electric Systems	North Carolina exempts 80% of the appraised value of a "solar energy electric system" (also known as a photovoltaic or PV system), from property tax.

Type	Incentives	Description
Statewide	Renewable Energy Equipment Manufacturer Tax Credit	North Carolina provides a tax credit for costs incurred in the construction or retooling of a facility to manufacture renewable energy property or "a major component subassembly for a solar array or wind turbine".
	Renewable Energy Tax Credit (Corporate)	North Carolina offers a tax credit equal to 35% of the cost of eligible renewable energy property constructed, purchased or leased by a corporate taxpayer and placed into service in North Carolina during the taxable year.
	Renewable Energy Tax Credit (Personal)	North Carolina offers a tax credit equal to 35% of the cost of eligible renewable energy property constructed, purchased or leased by a taxpayer and placed into service in North Carolina during the taxable year.
	Sales Tax Holiday for Energy-Efficient Appliances	North Carolina provides a "sales tax holiday" for certain Energy Star-certified products.
	SystemVision Energy Guarantee Program	The North Carolina Housing Finance Agency provides incentives for the construction of energy efficient affordable housing through their SystemVision Energy Guarantee Program.

Type	Incentives	Description
Utility-Specific	<u>Carteret-Craven Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Carteret Craven Electric Cooperative (CCEC) offers a variety of energy efficiency rebates to residential customers.
	<u>City of Concord Electric Department - Residential Energy Efficiency Rebate Program</u>	The City of Concord Electric Department offers an incentive program to its residential customers to replace their existing HVAC system with a more energy efficient heat pump system.
	<u>City of High Point Electric - Residential Energy Efficiency Rebate Program</u>	The City of High Point offers rebates that are available for newly constructed energy efficient homes, heat pumps, and electric water heaters.
	<u>City of New Bern Electric Department - Residential Energy Efficiency Rebate Program</u>	The City of New Bern's Electric Department offers rebates to its residential customers for installing new replacement energy efficient water heaters and heat pumps.
	<u>City of Statesville Electric Utility Department - Residential Energy Efficiency Rebate Program</u>	The City of Statesville's Electric Utility Department offers rebates to its residential customers for installing new, energy efficient water heaters and heat pumps.
	<u>Duke Energy (Electric) - Non-Residential Energy Efficiency Rebate Program</u>	Duke Energy's Smart \$aver® Incentive Program offers rebates to non-residential customers to install energy efficient equipment in their facilities.

Type	Incentives	Description
Utility-Specific	Duke Energy (Electric) - Residential Energy Efficiency Rebate Program	The Smart \$aver® program offers incentives for residential customers to increase residential energy efficiency.
	EnergyUnited - Commercial Energy Efficient Lighting Rebate Program	Commercial and industrial members who upgrade to energy efficient light bulbs, which meet EnergyUnited's standards, are eligible for a prescriptive, "per unit" rebate.
	EnergyUnited - Residential Energy Efficient Heat Pump Rebate Program	EnergyUnited offers rebates to residential customers who upgrade to high efficiency heat pumps.
	Four-County EMC - Residential Energy Efficiency Loan Program	Four-County EMC offers the Comfort Loan Program to residential customers.
	Four-County EMC - Residential Energy Efficiency Appliance Rebate Program	Four-County EMC offers its customers \$50 rebates for purchasing certain Energy Star appliances.
	Haywood EMC - Residential Heat Pump and Weatherization Loan Program	Haywood EMC offers a low interest loan to residential customers to finance the purchase of an energy efficient heat pump and certain weatherization measures.
	Jones-Onslow EMC - Residential Heating and Cooling Rebate Program	Jones-Onslow Electric Membership Corporation offers rebates to residential members who install energy efficient heating and cooling equipment.

Type	Incentives	Description
Utility-Specific	Lumbee River EMC - Residential Weatherization Loan Program	Lumbee River Electric Membership Corporation (LREMC) offers low-interest loans to help residential members increase the energy efficiency of their homes.
	Lumbee River EMC - Solar Water Heating Loan Program	Lumbee River EMC is offering 1.50% loans to residential customers for the installation of solar water heaters on their homes.
	Lumbee River EMC - Residential Energy Efficiency Program	Lumbee River EMC (LREMC) offers rebates to its residential customers who purchase and install qualified energy efficient products or services.
	Lumbee River EMC - Energy Efficient Homes Program for Builders	Lumbee River EMC (LREMC) offers rebates to builders who construct single-family Energy Star Homes in the LREMC service territory.
	Lumbee River EMC - Solar Water Heating Rebate Program	Lumbee River EMC is offering \$850 rebates to residential customers who install solar water heaters in their homes.
	Piedmont EMC - Residential Energy Efficiency Loan Program	Piedmont Electric Membership Corporation's (PEMC) Energy Efficiency and Renewable Energy Loan Program is available to eligible consumers to finance the purchase and installation of energy efficient residential upgrades.

Type	Incentives	Description
Utility-Specific	Piedmont EMC - Residential Solar Loan Program	Piedmont Electric Membership Corporation's (PEMC) Energy Efficiency and Renewable Energy Loan Program is available to eligible consumers to finance the purchase and installation of photovoltaic (PV) and solar water heating systems.
	Piedmont EMC - Residential Energy Efficiency Rebate Program	Piedmont Electric Membership Corporation (PEMC) offers a financial incentive for residential members to install energy efficient heat pumps and compact fluorescent lighting in eligible homes.
	Piedmont EMC - Solar Water Heating Rebate Program	Piedmont Electric Membership Corporation offers a \$500 rebate to its residential members who install solar water heaters on their homes.
	Piedmont Natural Gas - Commercial Equipment Efficiency Program	Piedmont Natural Gas offers rebates to commercial customers for purchasing and installing high-efficiency natural gas tankless water heaters.
	Piedmont Natural Gas - Residential Equipment Efficiency Program	Piedmont Natural Gas offers rebates on high-efficiency natural gas tankless water heaters, tank water heaters and furnaces.
	Progress Energy Carolinas - Residential Energy Efficiency Rebate Program	Progress Energy provides incentives for residential customers to increase home energy efficiency.

Type	Incentives	Description
Utility-Specific	Progress Energy Carolinas - Commercial and Industrial Energy-Efficiency Program	Progress Energy provides rebates for energy efficiency measures in new construction or retrofits, as well as Technical Assistance for feasibility/energy studies to commercial, industrial and government organizations.
	Progress Energy Carolinas - CFL Rebate Program	Progress Energy works with lighting manufacturers and local retailers to offer discounted pricing on CFLs.
	Progress Energy Carolinas - SunSense Residential PV Incentive Program	Progress Energy offers incentives for their residential customers to install photovoltaics (PV) systems on their homes through their SunSense Program.
	PSNC Energy (Gas) - Energy-Efficient Appliance Rebate Program	PSNC offers rebates to customers who purchase energy efficient natural gas water heaters or natural gas furnaces.
	Randolph EMC - Agricultural Efficient Lighting Rebate Program	Agricultural members of Randolph EMC (REMC) who upgrade to energy efficient CFL bulbs in agricultural facilities are eligible for an incentive to help cover the initial cost of installation.

Type	Incentives	Description
Utility-Specific	Randolph EMC - Commercial and Industrial Efficient Lighting Rebate Program	Commercial and industrial members who upgrade to energy efficient light bulbs that meet Randolph EMC's standards are eligible for a prescriptive incentive payment.
	South River EMC - Energy Star Homes Rebate Program	South River EMC offers incentives to homebuyers and builders who purchase or construct Energy Star certified single-family site built homes, manufactured homes, and multi-family dwellings.
	South River EMC - Energy Efficiency Rebate Program	South River EMC offers a variety of rebates encouraging its members to invest in energy efficient appliances, equipment, and home upgrades.
	South River EMC - Business Energy Efficient Lighting Rebate Program	South River EMC (SREMC) offers a rebate to eligible business customers who wish to upgrade the energy efficiency of their lighting systems.
	South River EMC - Solar Water Heating Rebate Program	South River Electric Membership Corporation (EMC) provides rebates to encourage their customers to install solar water heating systems.
	Tideland EMC - Weatherization Loan Program	Home, farm and business owners are able to take advantage of TEMC's five percent-interest Weatherization Loan Program.

Type	Incentives	Description
Utility-Specific	TVA - Mid-Sized Renewable Standard Offer Program	The Tennessee Valley Authority (TVA) now compliments the small generation Green Power Providers Program by providing incentives for mid-sized renewable energy generators between 50 kW and 20 MW to enter into long-term price contracts.
	TVA - Green Power Providers	Tennessee Valley Authority (TVA) and participating power distributors of TVA power offer a performance-based incentive program to homeowners and businesses for the installation of renewable generation systems from the following qualifying resources: PV, wind, hydropower, and biomass.
	TVA - Energy Right Solutions for Business	The Tennessee Valley Authority (TVA) offers the energy right Solutions Program to commercial and industrial facilities.
	TVA Partner Utilities - Energy Right Heat Pump Program	The Tennessee Valley Authority (TVA) energy right Heat Pump Plan provides financing to promote the installation of high efficiency heat pumps in homes and small businesses.
	TVA Partner Utilities - Energy Right New Homes Program	The Tennessee Valley Authority (TVA) energy right New Homes Plan provides incentives for all energy efficient new homes by offering graduated rebates for new homes.

Type	Incentives	Description
Utility-Specific	TVA Partner Utilities - Energy Right Water Heater Program	The Tennessee Valley Authority (TVA) energy right Water Heater Plan promotes the installation of high efficiency water heaters in homes and small businesses.
	Union Power Cooperative - Residential Energy Efficient Heat Pump Loan Program	Union Power Cooperative offers low-interest loans to help its residential customers finance new, energy efficient heat pumps.
Local	Catawba County - Green Construction Permitting Incentive Program	Catawba County provides incentives to encourage the construction of sustainably built homes and commercial buildings.
	City of Asheville - Building Permit Fee Waiver	The City of Asheville waives fees for building permits and plans reviews for certain renewable energy technologies and green building certifications for homes and mixed-use commercial buildings.
	City of Greensboro - Energy Saver Rebate Program	Better Buildings Greensboro Rebate Program offers residents in Greensboro incentives for increasing energy efficiency in their homes.
	City of Greensboro - Energy Saver Grant Program	Better Buildings Greensboro (BBG) Grant Program offers residents in Greensboro grants for implementing energy efficient upgrades in their homes.

Type	Incentives	Description
Local	Lincoln County - LEED-Certified Building Incentive Program	Lincoln county is providing an incentive for the construction of certified green buildings in the commercial and industrial sector.
	Town of Carrboro - Worthwhile Investments Save Energy (WISE) Homes and Buildings Program	The Town of Carrboro provides loans to Carrboro businesses and non-profits with fewer than 50 employees to increase their energy efficiency.
	Town of Chapel Hill - Worthwhile Investments Save Energy (WISE) Homes and Buildings Program	Chapel Hill uses funding made available to it from the American Recovery and Reinvestment Act of 2009 to help subsidize energy efficiency improvements in Chapel Hill homes.
Non-Profit	NC GreenPower Production Incentive	NC GreenPower offers production payments for grid-tied electricity generated by solar, wind, small hydro (10 megawatts or less) and biomass resources.



NORTH DAKOTA

The Peace Garden State⁴⁰⁹

State Facts

Capital: Bismarck

Area: 70,698 sq mi

Population: 672,591

State Bird: Western
Meadowlark

State Flower: Wild Prairie
Rose⁴¹⁰

Renewable Portfolio Standards

Policy Name and Date

House Bill 1506, March 23, 2007

Standard

10% by 2015

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Hydrogen, Electricity from Waste Heat, Anaerobic Digestion⁴¹¹

North Dakota Energy Fact

North Dakota has abundant wind resources and ranked sixth in the Nation in wind energy potential and installed capacity in 2009.

<http://www.eia.gov/beta/state/?sid=NC>

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of North Dakota.⁴¹²

Status

No Activity Identified⁴¹³

Net Metering Standards

Capacity Limit

Per System: 100 kW

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

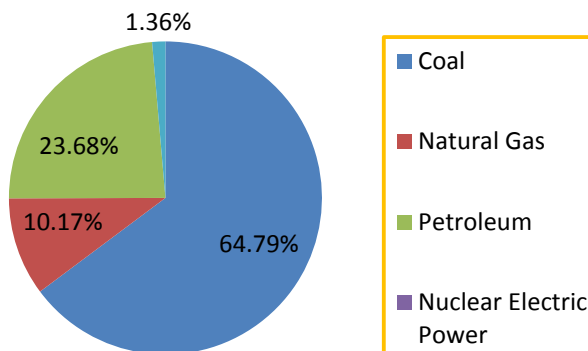
Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric⁴¹⁴

NORTH DAKOTA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

North Dakota Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The North Dakota Department of Commerce certifies MBEs whose businesses relate to some facet of the transportation industry, and is applicable to metropolitan planning organizations, transit organizations, highways, and airports.⁴¹⁵

Clean Energy Potential in North Dakota

Background

A large portion of the state's electricity is produced from coal, yet the state is rich with potential clean energy sources, like wind, solar and geothermal. A wide variety of tax incentives, state loan programs and other programs have and will continue to encourage developers to tap into clean energy resources.⁴¹⁶



Solar: North Dakota has an urban utility-scale PV potential of 4,871 GWh (14.02% of total net generation), rural utility-scale PV potential of 9,734,448 GWh (over 100% of total net generation), and rooftop PV potential is 1,917 GWh (5.5% of total net generation).

Wind: Onshore wind power potential is 36,050 GWh (over 100% of total net generation) and offshore wind power potential is 2,537,825 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 820,226 GWh (over 100% of total net generation).⁴¹⁷

Incentives in North Dakota

Type	Incentives	Description
Statewide	Geothermal Tax Credit	North Dakota offers an income tax credit to individuals, estates and trusts for the cost of acquiring and installing a geothermal energy system in a building or on property owned or leased by the taxpayer in North Dakota.
	Large Wind Property Tax Reduction	North Dakota offers property tax reductions for commercial wind turbines constructed before 2011.
	Renewable Energy Property Tax Exemption	North Dakota exempts from local property taxes any locally-assessed* solar, wind, or geothermal energy device serving a new or existing building or structure.
	Renewable Energy Tax Credit	North Dakota offers a corporate income tax credit for the cost of acquiring and installing a geothermal, solar, biomass or wind-energy system in a building or on property owned or leased by the taxpayer in North Dakota.
	Sales and Use Tax Exemption for Electrical Generating Facilities	Electrical generating facilities are exempt from sales and use taxes in North Dakota.
	Sales and Use Tax Exemption for Gas Processing Facilities	North Dakota exempt from sales and use taxes, materials purchased for building or expending gas processing facilities.

Type	Incentives	Description
Statewide	Sales Tax Exemption for Hydrogen Generation Facilities	North Dakota exempts from sales tax, hydrogen sold to power an internal combustion engine or a fuel cell.
Utility-Specific	Business Energy Efficiency Rebates (Offered by 5 Utilities)	Bright Energy Solutions offers energy efficiency cash incentive programs to residential and business customers of municipal utilities that are members of Missouri River Energy Services.
	Northern Plains EC - Residential and Commercial Energy Efficiency Loan Program	This EMC offers a low-interest loan program to residential and commercial customers that wish to install energy efficient electric space conditioning systems, electric water heaters, and pursue weatherization improvements.
	Otter Tail Power Company - Energy Efficiency Rebate Program	Otter Tail Power Company offers incentives to all of its customers to install energy efficient equipment in their homes or facilities.
	Otter Tail Power Company - Dollar Smart Financing Program	Otter Tail Power Company's Dollar Smart Financing Program offers \$150 - \$40,000 loans to its residential and business customers.
	Residential Energy Efficiency Rebates (Offered by 5 Utilities)	Bright Energy Solutions offers energy efficiency cash incentive programs to residential and business customers of municipal utilities that are members of Missouri River Energy Services.
	Xcel Energy - Residential Energy Efficiency Rebate Programs	In addition to home energy audits, Xcel Energy offers rebates to North Dakota residential customers for the purchase of energy efficient heating and water heating technologies.

OHIO*The Buckeye State*⁴¹⁸

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 221, May 1, 2008

Standard

12.5% Renewable Energy Resources by 2024

12.5% Advanced Energy Resources by 2025

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Waste Heat, Energy Storage, Clean Coal, Coal Mine Methane, Advanced Nuclear, Anaerobic Digestion, Fuel Cells using Renewable Fuels, Microturbines⁴²⁰

State Facts

Capital: Columbus

Area: 44,825 sq mi

Population: 11,536,504

State Bird: Northern Cardinal

State Flower: Scarlet Carnation and White Trillium⁴¹⁹

OHIO at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Senate Bill 221, May 2008

Standard

From 1% annual electric sales reduction beginning in 2014, to 2% after 2019 resulting in 22% cumulative reductions by the end of 2025

Mandatory/Voluntary

Mandatory⁴²³

Net Metering Standards

Capacity Limit

Per System: No capacity limit specified, but system must be sized primarily to offset part or all of customer's electricity requirements.
Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Small Hydroelectric, Fuel Cells using Renewable Fuels, Microturbines⁴²⁴

Ohio Energy Fact

Ohio ranked fifth in the Nation in 2010 in energy consumption by the industrial sector; in 2011, Ohio ranked third in manufacturing employment, with 5.4 percent of U.S. manufacturing jobs.

<http://www.eia.gov/state/print.cfm?sid=OH>

ECONOMIC OPPORTUNITIES

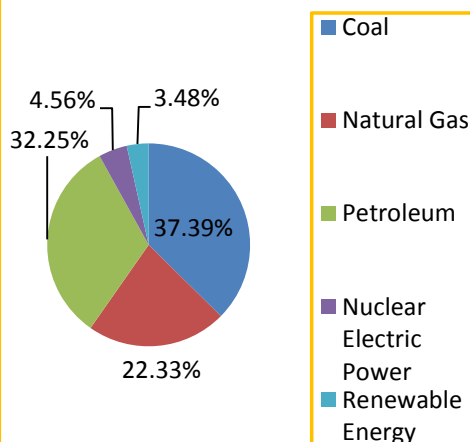
Local Hire Provision: YES

Cleveland, Ohio's Lewis Law requires that 20% of work on a project be performed by city residents.⁴²¹

MBE Provision/Certification: YES

The Ohio Department of Administrative Services has the responsibility of implementing Ohio's minority business set-aside program and certifications for the program.⁴²²

Ohio Energy Consumption Estimates 2010



Clean Energy Potential in Ohio

Background

Ohio is gaining a reputation as a leader in research and development of solar and wind energy technologies. Ohio is also a key player in the Midwest supply chain due to its proximity to large wind energy markets. With significant renewable energy resources from on and offshore wind power, solar power and geothermal power, the state has great potential to expand its emerging renewable energy markets.⁴²⁵



Solar: Ohio has urban utility-scale PV potential of 86,496 GWh (60.23% of total net generation), rural utility-scale PV potential of 3,626,182 GWh (over 100% of total net generation), and rooftop PV potential is 30,064 GWh (20.9% of total net generation).

Wind: Onshore wind power potential is 129,143 GWh (89.9% of total net generation) and offshore wind power potential is 170,561 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 495,922 GWh (over 100% of total net generation).⁴²⁶

Incentives in Ohio

Type	Incentive/Rebate	Description
Statewide	Advanced Energy Job Stimulus Program	This bond-funded program creates an Advanced Energy Job Stimulus Fund that is administered through a public process previously managed by the Ohio Air Quality Development Authority (OAQDA).
	Energy Conservation for Ohioans (ECO-Link) Program	The Energy Conservation for Ohioans (ECO-Link) Program offers Ohio homeowners reduced rate financing for energy efficiency and renewable energy home upgrades.
	Energy Conversion and Thermal Efficiency Sales Tax Exemption	Ohio provides a sales and use tax exemption for certain tangible personal property used in energy conversion, solid waste energy conversion, or thermal efficiency improvement facilities designed, constructed, or installed after December 31, 1974.
	Energy Loan Fund	The Ohio Development Services Agency (ODSA) is administering the Energy Loan Fund to projects must result in energy savings of at least 15%.
	Qualified Energy Property Tax Exemption for Projects 250 kW or Less	Energy facilities with nameplate capacity of 250 kilowatts (kW) or less (AC) are permanently exempt from public utility tangible personal property tax and real property taxes.

Type	Incentives	Description
Statewide	Qualified Energy Property Tax Exemption for Projects over 250 kW (Payment in Lieu)	The Ohio Development Services Agency (ODSA) provides a property tax exemption for renewable energy facilities upon certification as a "qualified energy project."
	Solar Renewable Energy Credits (SRECs)	Ohio provides advanced energy and renewable energy generation and procurement requirements for the state's electric distribution utilities and electric service companies.
Utility-Specific	AEP Ohio - Renewable Energy Credit (REC) Purchase Program	As part of AEP Ohio's Renewable Energy Credit (REC) Purchase Program, customers can sell their RECs produced from solar photovoltaic or wind energy systems.
	AEP Ohio - Commercial Self Direct Rebate Program	AEP Ohio offers incentives for commercial customers who have implemented energy efficiency upgrades if the customer commits the energy efficiency savings and/or peak demand reductions to AEP Ohio.
	AEP Ohio - Commercial New Construction Energy Efficiency Rebate Program	AEP Ohio offers incentives to commercial customers who are building a new facility or are performing a major renovation, such as upgrading lighting, lighting controls, HVAC measures, commercial cooking equipment, variable frequency drives and custom measures.
	AEP Ohio - Commercial Energy Efficiency Rebate Program	AEP Ohio offers commercial customers incentives to upgrade equipment in eligible facilities to more energy efficient models.

Type	Incentives	Description
Utility-Specific	AEP Ohio - Renewable Energy Technology Program	As part of the Renewable Energy Technology (RET) Program, AEP Ohio offers incentives to customers that commit their Renewable Energy Credits (RECs) to AEP Ohio for 15 years.
	AEP Ohio - Commercial Custom Project Rebate Program	AEP Ohio offers commercial customers incentives to upgrade inefficient equipment in their facilities.
	AEP Ohio (Electric) - Residential Energy Efficiency Rebate Program	The AEP Ohio gridSMART® In-home Energy Assessment and In-home Energy Audit Programs offer rebates for the installation of energy-saving measures recommended by a program-approved auditor.
	AEP Ohio (Gas) - Residential Energy Efficiency Rebate Program	The AEP Ohio gridSMART® In-home Energy Assessment and In-home Energy Audit Programs offer rebates for the installation of energy-saving measures recommended by a program-approved auditor.
	American Municipal Power (Public Electric Utilities) - Commercial Efficiency Smart Program	Efficiency Smart™ provides energy efficiency incentives and technical assistance to the American Municipal Power, Inc. (AMP) network of public power communities.
	American Municipal Power (Public Electric Utilities) - Residential Efficiency Smart Program	Efficiency Smart™ provides energy efficiency incentives to the American Municipal Power, Inc. (AMP) network of public power communities.
	Butler Rural Electric Cooperative - Energy Efficiency Improvement Loan Program	Butler Rural Electric Cooperative, Inc. provides low-interest loans (3%) for members to make energy efficiency improvements in eligible homes.

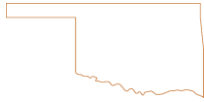
Type	Incentives	Description
Utility-Specific	<u>Butler Rural Electric Cooperative - Residential Rebate Program</u>	Butler Rural Electric Cooperative provides rebates for geothermal heat pumps, dual fuel heating systems, and water heaters.
	<u>Columbia Gas of Ohio - Home Performance Solutions Loan Program</u>	Columbia Gas of Ohio (CGO) partners with Huntington National Bank's Energy Performance Solutions Program to offer a loan complementing rebates for energy efficient equipment to residential customers.
	<u>Columbia Gas of Ohio - Home Performance Solutions Program</u>	Columbia Gas of Ohio (CGO) offers a number of rebates on energy efficient equipment and measures to residential customers.
	<u>Columbia Gas of Ohio - Innovative Energy Solutions Program</u>	Columbia Gas of Ohio offers professional Facility/Building Energy Audits to determine the potential for natural gas savings encouraging matching funds and requiring submittal of final energy audit report for payment.
	<u>Consolidated Electric Cooperative - Heat Pump and Water Heating Rebates</u>	Consolidated Electric Cooperative provides rebates to residential customers who install electric water heaters, dual-fuel heating systems or geothermal heat pumps.
	<u>Dayton Power and Light - Business and Government Energy Efficiency Rebate Program</u>	Dayton Power and Light's (DP&L) non-residential electricity customers are eligible for energy efficient technology rebates.

Type	Incentives	Description
Utility-Specific	<u>Dayton Power and Light - Residential Energy Efficiency Rebate Program</u>	Dayton Power and Light offers rebates to residential customers who purchase and install energy efficient products for the home.
	<u>Dominion East Ohio (Gas) - Home Performance Program</u>	The Home Performance with ENERGY STAR Program uses a whole-house approach to lower energy costs.
	<u>Duke Energy - Solar Renewable Energy Credits Program</u>	Duke Energy Ohio offers the Solar Renewable Energy Credits program to residential customers in Ohio that install solar photovoltaic (PV) systems on their homes.
	<u>Duke Energy (Electric) - Commercial/Industrial Energy Efficiency Rebate Program</u>	Duke Energy's Smart \$aver® Incentive program offers rebates to non-residential customers to install energy efficient equipment in commercial/industrial facilities.
	<u>Duke Energy (Gas & Electric) - Residential and Builder Energy Efficiency Rebate Program</u>	Duke Energy provides a financial incentive for its residential customers to purchase energy efficient HVAC products through the Smart \$aver® program.
	<u>Firelands Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Firelands Electric Cooperative (FEC) is offering rebates on energy efficient equipment to residential customers receiving electric service from FEC.
	<u>First Energy Ohio - Renewable Energy Credit Procurements</u>	As part of its Electric Security Plan, FirstEnergy will periodically solicit proposals for Renewable Energy Credits (RECs) and Solar Renewable Energy Credits (SRECs).

Type	Incentives	Description
Utility-Specific	<u>First Energy Ohio - Commercial Efficiency Rebates</u>	Ohio subsidiaries of FirstEnergy (Ohio Edison, The Illuminating Company, Toledo Edison) offer rebates for the installation of certain energy efficiency improvements for commercial customers.
	<u>First Energy Ohio - New Home Builder Incentive Program</u>	Ohio subsidiaries of FirstEnergy (Ohio Edison, The Illuminating Company, Toledo Edison) offer rebates for builders of new, energy efficient homes.
	<u>First Energy Ohio - Residential Efficiency Rebates</u>	Ohio subsidiaries of FirstEnergy (Ohio Edison, The Illuminating Company, Toledo Edison) offer rebates for the installation of certain energy efficiency improvements for residential and small business customers.
	<u>The Energy Cooperative - Residential Energy Efficiency Rebate Program</u>	The Energy Cooperative offers incentives to residential customers for the installation of dual fuel heating systems, water heaters, geothermal heat pumps and central air conditioners.
	<u>Vectren Energy Delivery of Ohio (Gas) - Commercial Energy Efficiency Rebates</u>	Vectren Energy Delivery offers commercial natural gas customers in Ohio rebates for the installation of certain types of efficient natural gas equipment.
	<u>Vectren Energy Delivery of Ohio (Gas) - Energy Star Home Rebate</u>	Vectren Energy Delivery of Ohio offers a flat rebate to builders of residential single-family Energy Star certified homes that receive gas service from the company.

Type	Incentives	Description
Utility-Specific	Vectren Energy Delivery of Ohio (Gas) - Residential Energy Efficiency Rebates	Vectren Energy Delivery offers residential natural gas customers in Ohio rebates for the installation of certain high efficiency natural gas appliances and building insulation.
Local	City of Cincinnati - Property Tax Abatement for Green Buildings	The City of Cincinnati offers property tax abatements for residential and commercial buildings constructed or renovated to meet LEED certification standards.
	City of Cleveland - Residential Property Tax Abatement for Green Buildings	The City of Cleveland, in cooperation with the Cuyahoga County Auditor's Office, provides a 100% tax abatement for residential properties built to the Cleveland Green Building Standard.
	City of Columbus - Green Columbus Fund	The Green Columbus Fund incentivizes sustainable development and redevelopment in Columbus, Ohio.
	Greater Cincinnati Energy Alliance - Residential Rebate Program	The Greater Cincinnati Energy Alliance provides rebate incentives for homeowners in Hamilton, Boone, Kenton, and Campbell counties.
	Greater Cincinnati Energy Alliance - Residential Loan Program	The Greater Cincinnati Energy Alliance provides loans for single-family residences and owner occupied duplexes in Hamilton county in Ohio and Boone, Kenton, and Campbell counties in Kentucky.
	Hamilton County - Home Improvement Program	The Home Improvement Program (HIP) in Hamilton County, Ohio, originally opened in 2002, and was reinstated in May 2008.

Type	Incentives	Description
Non-Profit	Green Energy Ohio - GEO Solar Thermal Rebate Program	With funding from The Sierra Club, Green Energy Ohio (GEO) is offering rebates on residential properties in Ohio for solar water heating systems purchased after April 1, 2009.



OKLAHOMA

The Sooner State⁴²⁷

State Facts

Capital: Oklahoma City

Area: 69,899 sq mi

Population: 3,751,351

State Bird: Scissor-Tailed Flycatcher and Wild Turkey

State Flower: Oklahoma Hybrid Rose, American Mistletoe, Indian Blanket⁴²⁸

Renewable Portfolio Standards

Policy Name and Date

House Bill 3028, May 27, 2010

Standard

15%renewable by 2015

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies⁴²⁹

Oklahoma Energy Fact

In 2011, Oklahoma ranked seventh in net electricity generation from wind, which provided 7.1% of the state's net generation.

<http://www.eia.gov/state/?sid=OK>

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Oklahoma.⁴³⁰

Status

No Activity Identified⁴³¹

Net Metering Standards

Capacity Limit

Per System: 100 kW or 25,000 kWh/year (whichever is less)

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

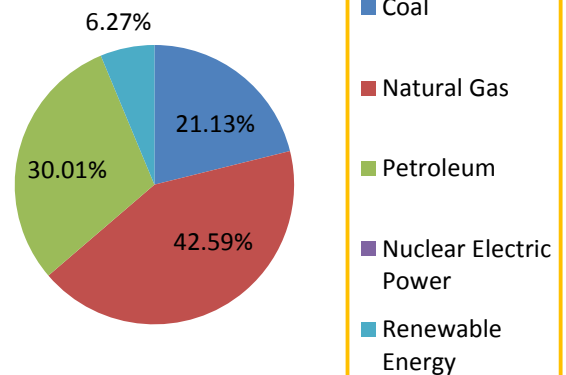
Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric⁴³²

OKLAHOMA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Oklahoma Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

Oklahoma's Department of Transportation certifies MBEs for federally assisted projects.

The Oklahoma Minority Supplier Development Council provides MBE certifications for minority owned business.⁴³³

Clean Energy Potential in Oklahoma

Background

Oklahoma is known for its large wind energy industry and continues to invest in its wind resources. While the state has several wind energy projects currently under development, it also has the potential to invest in the development of solar and geothermal power. It also exports wind energy to other states, like Alabama.



Solar: Oklahoma has urban utility-scale PV potential of 50,041 GWh (69.2% of total net generation), rural utility-scale PV potential of 9,341,920 GWh (over 100% of total net generation), rooftop PV potential is 12,443 GWh (17.2% of total net generation) and concentrated solar power potential is 5,068,036 GWh (over 100% of total net generation).

Wind: Onshore wind power potential is 1,521,652 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 779,667 GWh (over 100% of total net generation).⁴³⁴

Incentives in Oklahoma

Type	Incentives	Description
Statewide	Community Energy Education Management Program	The Oklahoma Department of Commerce offers a revolving loan fund for local governments to make energy efficient improvements to government buildings.
	Energy Efficient Residential Construction Tax Credit (Corporate)	Oklahoma allows a contractor who is the primary builder of an energy efficient home or manufactured home substantially completed after December 31, 2005 to claim an income tax credit beginning in tax year 2006.
	Energy Efficient Residential Construction Tax Credit (Personal)	Oklahoma allows a contractor who is the primary builder of an energy efficient home or manufactured home substantially completed after December 31, 2005 to claim an income tax credit beginning in tax year 2006.
	Energy Loan Fund for Schools	The Oklahoma Department of Commerce has established a loan/lease fund for public and non-profit K-12 schools to improve energy efficiency.
	Higher Education Energy Loan Program	The Oklahoma Department of Commerce has established a loan/lease fund for institutions of higher education to improve energy efficiency.
	Property Tax Exemption for Wind Generators	The state of Oklahoma offers a five-year ad valorem property tax exemption for certain wind power generators.

Type	Incentives	Description
Statewide	Tax Credit for Manufacturers of Small Wind Turbines	Oklahoma offers an income tax credit to the manufacturers of small wind turbines for tax years 2003 through 2012.
	Zero-Emission Facilities Production Tax Credit	For tax years beginning on or after January 1, 2003, a state income tax credit is available to producers of electric power using renewable energy resources from a zero-emission facility located in Oklahoma.
Utility-Specific	AEP Public Service Company of Oklahoma - Non-Residential Efficiency Rebate Program	AEP's Public Service Company Commercial & Industrial Standard Offer Program pays incentives to customers who install energy efficiency measures in commercial or industrial facilities that are located within AEP's Oklahoma service territory.
	AEP Public Service Company of Oklahoma - Residential Efficiency Rebate Program	The Public Service Company of Oklahoma (PSO), an electric utility, encourages residential energy efficiency under a variety of incentive programs.
	CenterPoint Energy (Gas) - Commercial Efficiency Rebates	To encourage customers to install high-efficiency natural gas equipment in their homes and businesses, CenterPoint Energy offers new construction and retrofit residential and commercial customer's rebates on furnaces, water heating, or space heating systems.

Type	Incentives	Description
Utility-Specific	CenterPoint Energy (Gas) - Residential Efficiency Rebates	To encourage customers to install high-efficiency natural gas equipment in eligible homes and businesses, CenterPoint Energy offers new construction and retrofit residential and commercial customer's rebates on furnace, water heating, or space heating systems.
	East Central Electric Cooperative - Residential Rebate Program	East Central Electric Cooperative offers rebates to residential customers to install energy efficient ground source heat pumps, electric water heaters, and appliances.
	Edmond Electric - Residential Heat Pump Rebate Program	Edmond Electric offers rebates to residential customers who install energy efficient heat pumps.
	OG&E - Commercial Energy Efficiency Rebate Programs	OG&E offers lighting and custom rebates to commercial customers in Oklahoma to improve the energy efficiency of facilities.
	OG&E - Residential Energy Efficiency Program	The Oklahoma Gas and Electric (OG&E) Home Energy Efficiency Program provides financial incentives to encourage OG&E customers to pursue energy efficiency home improvements.
	Oklahoma Electric Cooperative - Energy Efficiency Rebate Program	Oklahoma Energy Cooperative (OEC) offers rebates to residential customers for the purchase of air-source heat pumps, dual-fuel heat pumps, geothermal heat pumps and water heaters.

Type	Incentives	Description
Utility-Specific	Oklahoma Municipal Power Authority - WISE Energy Efficiency Loan Program	The Oklahoma Municipal Power Authority (OMPA) offers loans for a variety of energy efficiency measures through the WISE Loan Program.
	Oklahoma Municipal Power Authority - WISE Energy Efficiency Rebate Program	The Oklahoma Municipal Power Authority (OMPA) offers rebates on a variety of HVAC equipment through its WISE Rebate Program.
	Oklahoma Municipal Power Authority - Commercial and Industrial Energy Efficiency Program	The Oklahoma Municipal Power Authority (OMPA) offers the Demand and Energy Efficiency Program (DEEP) to eligible commercial, industrial, and municipal government customers served by OMPA.
	Oklahoma Municipal Power Authority - Geothermal Heat Pump Rebate Program	The Oklahoma Municipal Power Authority (OMPA) and the Oklahoma Department of Commerce currently offer the Oklahoma Comfort Program for geothermal heat pumps.
	Oklahoma Natural Gas - Residential Efficiency Rebates	To encourage customers to install high-efficiency natural gas equipment in homes, Oklahoma Natural Gas offers rebates to residential customers and builders for furnaces, water heating, or space heating systems.
	Red River Valley REA - Heat Pump Loan Program	The Red River Valley Rural Electric Association (RRVREA) offers a loan program to its members for air-source and geothermal heat pumps.

Type	Incentives	Description
Utility-Specific	Residential Energy Efficiency Rebate (Offered by Several Cooperative Utilities)	Associated Electric Cooperative and many of its member cooperatives offer rebates to residential customers who purchase and install energy efficient equipment for the home.
	Verdigris Valley Electric Cooperative - Residential Energy Efficiency Rebate Program	Verdigris Valley Electric Cooperative (VVEC) offers rebates for residential customers who purchase energy efficient home equipment.
Local	Oklahoma City - Residential Energy Efficiency Loan Program	Residential Energy Efficiency Loan Program provides homeowners in Oklahoma City energy efficiency loans up to \$10,000.

OREGON

The Beaver State⁴³⁵



Renewable Portfolio Standards

Policy Name and Date

Senate Bill 838, June 6, 2007

Standard

Large utilities: 25% renewable by 2025
Small utilities: 10% renewable by 2025
Smallest utilities: 5% renewable by 2025

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Hydrogen, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal⁴³⁷

State Facts

Capital: Salem

Area: 97,048 sq mi

Population: 3,831,074

State Bird: Western

Meadowlark

State Flower: Oregon

Grape⁴³⁶

OREGON at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Standard

Electricity: annual reduction of 1% in 2013-2014
Natural Gas: annual reduction of 0.4% in 2014

Mandatory/Voluntary
Voluntary (goal achievement requires funding increases from 2009 levels)

Oregon Energy Fact

In 2011, 80 percent of Oregon's net electricity generation was from conventional hydroelectric power plants and other renewable energy resources. <http://www.eia.gov/state/?sid=OR>

Net Metering Standards

Capacity Limit

Per System: 2,000 kW for non-residential & 25 kW for residential PGE and PacifiCorp customers; 25 kW for muni, co-op and PUD customers

Entire State: No limit specified for PGE and PacifiCorp; 0.5% of utility's historic single-hour peak load for munis, co-ops, PUDs
No limit specified for Ashland customers

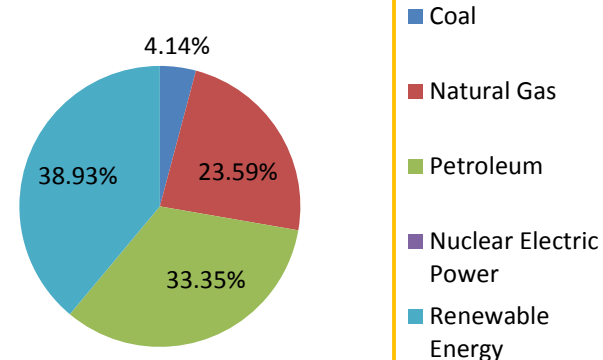
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels⁴⁴⁰

Oregon Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

The Clean Energy Works Oregon High Roads Agreement helps residential homeowners save energy, lower utility bills, improve home comfort, and reduce carbon pollution. Approximately 80% of the 1,300 jobs created by this program will be from local communities.⁴³⁸

MBE Provision/Certification: YES

Business Oregon certifies MBEs for contracting opportunities with city, county, state, and special jurisdictions.⁴³⁹

Clean Energy Potential in Oregon

Background

Oregon is one the leading states in renewable energy production. It is home to the second largest land-based wind farm in the world.⁴⁴¹



Solar: Oregon has urban utility-scale PV potential of 25,783 GWh (46.7% of total net generation), rural utility-scale PV potential of 3,740,479 GWh (over 100% of total net generation), rooftop PV potential is 8,323 GWh (15% of total net generation) and concentrated solar power potential is 2,812,126 GWh (over 100% of total net generation).

Wind: Onshore wind power potential is 68,767 GWh (over 100% of total net generation) and offshore wind power potential is 962,723 GWh (over 100% of total net generation).

Geothermal: The potential for hydrothermal power potential is 18,200 GWh (33% of total net generation) and enhanced geothermal systems potential is 914,105 GWh (over 100% of total net generation).⁴⁴²

Incentives in Oregon

Type	Incentives	Description
Statewide	Biomass Producer or Collector Tax Credit	The Oregon Department of Energy provides a tax credit for agricultural producers or collectors of biomass.
	Business Energy Efficiency Rebate for Existing Buildings	Energy Trust of Oregon offers incentives for commercial, agricultural and institutional customers of any of the state's investor owned utilities to increase the energy efficiency of their existing buildings.
	Clean Energy Works Oregon	Clean Energy Works is a state loan program for energy efficiency improvements such as duct/air sealing, building insulation, window upgrades, etc.
	Commercial Scale Wind Incentive Program	Energy Trust of Oregon's Commercial Scale Wind offering provides resources and cash incentives to help communities, businesses land owners, and government entities install wind turbine systems up to 20 megawatts (MW) in capacity.
	Community Renewable Energy Feasibility Fund Program	The Oregon Department of Energy (ODOE) provides grants for feasibility studies for renewable energy, heat, and fuel projects under the Community Renewable Energy Feasibility Fund (CREFF).

Type	Incentives	Description
Statewide	Custom Renewable Energy Projects	Energy Trust of Oregon offers cash incentives and project development assistance for renewable energy projects that are 20 megawatts (MW) or less in capacity.
	Energy Conservation Tax Credits - Small Premium Projects (Corporate)	The Oregon Department of Energy periodically releases Opportunity Announcements for tax credits for corporate energy conservation projects with a total cost of less than \$20,000.
	Energy Conservation Tax Credits - Competitively-Selected Projects (Corporate)	The Oregon Department of Energy periodically releases Opportunity Announcements for tax credits for corporate energy conservation projects with a total cost of more than \$20,000.
	Energy Conservation Tax Credits - Competitively-Selected Projects (Personal)	The Oregon Department of Energy periodically releases Opportunity Announcements for tax credits for personal energy conservation projects with a total cost of more than \$20,000.
	Energy Conservation Tax Credits - Small Premium Projects (Personal)	The Oregon Department of Energy periodically releases Opportunity Announcements for personal energy conservation projects with a total cost of less than \$20,000.
	Home Energy Solutions for Existing Homes	Energy Trust of Oregon offers a variety of incentives and services through their Home Energy Solutions Program.

Type	Incentives	Description
Statewide	<u>Industrial and Agricultural Production Efficiency Program</u>	Energy Trust of Oregon offers the Industrial and Agricultural Production Efficiency Program to customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas.
	<u>Multifamily Home Energy Solutions Program</u>	Energy Trust of Oregon offers owners of multi-family properties, with five or more units, cash incentives for upgrades to windows, appliances, water heaters, building envelope, heating and cooling, energy efficient lighting and more.
	<u>New Buildings Program</u>	Energy Trust of Oregon offers commercial businesses in Oregon a menu of services and incentives for new building construction or major renovation projects that utilize energy efficient equipment and design standards.
	<u>New Homes Incentive Program</u>	Energy Trust's New Homes Program offers builders cash incentives for energy efficient measures included in new homes, where the measures exceed the building code.
	<u>Pilot Solar Volumetric Incentive and Payments Program</u>	Under this incentive program, systems are paid for the kilowatt-hours (kWh) generated over a 15-year period, at a rate set at the time a system is initially enrolled in the program.

Type	Incentives	Description
Statewide	Renewable Energy Development Grant Program	The Oregon Department of Energy (ODOE) offers competitive grants to renewable energy projects as part of ODOE's Energy Incentives Program.
	Renewable Energy Systems Exemption	Oregon law states that any change in real market value to property due to the installation of a qualifying renewable energy system is exempt from assessment of the property's value for property tax purposes.
	Residential Energy Star Appliance Rebate Program	Energy Trust of Oregon offers rebates for Energy Star refrigerators, freezers and clothes washers to Oregon residential electric service customers of Portland General Electric (PGE) and Pacific Power and to Oregon residential natural gas service customers of NW Natural and Cascade Natural Gas.
	Residential Energy Tax Credit	Homeowners, renters and third-party owners who pay Oregon income taxes are eligible for the Residential Energy Tax Credit if they purchase premium efficiency heating systems, duct systems, premium efficiency biomass combustion devices, closed-loop geothermal space or water heating systems, solar water and space heating systems, photovoltaic systems, wind systems and fuel cells.

Type	Incentives	Description
Statewide	Small-Scale Energy Loan Program	The Oregon Small-Scale Energy Loan Program (SELP) - created in 1981 after voters approved a constitutional amendment authorizing the sale of bonds to finance small-scale, local energy projects - is administered by the Oregon Department of Energy.
	Small Wind Incentive Program	The Energy Trust of Oregon's Small Wind Incentive Program provides resources and cash incentives for customers of Portland General Electric and Pacific Power that are installing turbines up to 50 kilowatts (kW).
	Solar Electric Incentive Program	Energy Trust of Oregon's Solar Electric Incentive Program, launched in May 2003, is available to customers of Pacific Power and PGE who install new photovoltaic (PV) systems on new or existing homes, commercial and community buildings, farms, and municipal facilities.
	Solar Water Heating Incentive Program	Energy Trust of Oregon's Solar Water Heating (SWH) Incentive Program offers incentives to customers of Pacific Power, PGE, NW Natural Gas and Cascade Natural Gas who install solar water or pool heating systems on their homes, office buildings, community buildings, agricultural, and municipal facilities.

Type	Incentives	Description
Statewide	State Home Oil Weatherization (SHOW) Program	Oregon homeowners and renters who heat with oil, wood, propane, kerosene, or butane are eligible for home weatherization rebates of up to \$500.
	Tax Credit for Renewable Energy Equipment Manufacturers	Oregon offers the Tax Credit for Renewable Energy Resource Equipment for Manufacturing Facilities as a part of Oregon's Business Energy Tax Credit (BETC).
Utility-Specific	Ashland Electric Utility - Residential Energy Efficiency Loan Program	City of Ashland Conservation Division has no-interest loans to help its residential customers finance energy efficiency improvements to homes.
	Ashland Electric Utility - Commercial Conservation Loan Program	City of Ashland Conservation District has no-interest loans to help commercial customers finance energy efficiency improvements in facilities.
	Ashland Electric Utility - Bright Way to Heat Water Loan	The Bright Way to Heat Water Program offers homeowners who use electric water heaters no-interest loans.

Type	Incentives	Description
Utility-Specific	<u>Ashland Electric Utility - Residential Energy Efficiency Rebate Programs</u>	The City of Ashland Conservation District offers a wide variety of incentives for residential customers to increase the energy efficiency of eligible homes, or build new homes that meet efficient design standards.
	<u>Ashland Electric Utility - Bright Way to Heat Water Rebate</u>	The Bright Way to Heat Water Program offers homeowners who use electric water heaters cash rebates.
	<u>Ashland Electric Utility - Photovoltaic Rebate Program</u>	The City of Ashland Conservation Division offers electric customers installing photovoltaic systems a rebate of either \$0.75 per watt (residential) or \$1.00 per watt (commercial), up to a maximum of \$7,500 per system.
	<u>Avista Utilities (Gas) - Oregon Residential Energy Efficiency Rebate Program</u>	Avista Utilities offers a variety of equipment rebates to Oregon residential customers.
	<u>Avista Utilities (Gas) - Prescriptive Commercial Incentive Program</u>	Avista Utilities offers Natural Gas saving incentives to commercial customers on rate schedule 420 and 424.
	<u>Central Electric Cooperative - Non-Residential Lighting Rebate</u>	The Central Electric Cooperative offers a commercial lighting system improvement incentive for any customer not on a residential utility rate.

Type	Incentives	Description
Utility-Specific	<u>Central Electric Cooperative - Residential Energy Efficiency Rebate Programs</u>	The Central Electric Cooperative (CEC) offers a variety of financial incentives to promote energy efficiency among residential members.
	<u>Central Lincoln People's Utility District - Residential Energy Efficiency Rebate Programs</u>	Central Lincoln People's Municipal Utility District (CLPUD) offers a variety of energy efficiency programs for residential customers to save energy in eligible homes.
	<u>Central Lincoln People's Utility District - Renewable Energy Incentive Program</u>	Central Lincoln People's Utility District provides financial incentives for its commercial and residential customers to install photovoltaic (PV), solar water heating, wind, and hydroelectric systems on their property.
	<u>Columbia River PUD - Commercial Energy Efficiency Rebate Programs</u>	Columbia River PUD offers a variety of rebates to commercial and industrial customers who make energy saving improvements to facilities.
	<u>Columbia River PUD - Residential Energy Efficiency Rebate Programs</u>	Columbia River PUD offers a variety of rebates to residential customers for making energy efficient improvements to electrically heated homes.
	<u>Consumers Power, Inc. - New Homes Energy Efficiency Program</u>	Consumer's Power, Inc. (CPI) offers a \$1,500 incentive for homes that attain Northwest Energy Star Certification.

Type	Incentives	Description
Utility-Specific	<u>Consumers Power, Inc. - Residential Energy Efficiency Rebate Program</u>	Consumers Power Inc. offers rebates to its residential members for a wide variety of energy efficient products and measures.
	<u>Consumers Power, Inc. - Solar Energy System Rebate</u>	Consumers Power, Inc. (CPI) offers rebates to its residential customers who install solar water heating systems or solar photovoltaic (PV) systems from October 1, 2012 to September 30, 2013.
	<u>Douglas Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	Douglas Electric Cooperative offers rebates to its members for the purchase of energy efficient products and measures.
	<u>Douglas Electric Cooperative - Residential Energy Efficiency Loans</u>	Douglas Electric Cooperative offers financing for heat pumps and weatherization.
	<u>EWEB - Solar Electric Program (Performance-Based Incentive)</u>	The Eugene Water & Electric Board's (EWEB) Solar Electric Program offers financial incentives for residential and commercial customers who generate electricity using solar photovoltaic (PV) systems.
	<u>EWEB - Residential Energy Efficiency Loan Programs</u>	Eugene Water and Electric Board (EWEB) assists residential customers in financing energy efficiency improvements through a variety of loan programs.

Type	Incentives	Description
Utility-Specific	EWEB - Residential Solar Water Heating Loan Program	Eugene Water & Electric Board (EWEB) offers residential customers a loan and cash discount program called, "The Bright Way To Heat Water."
	EWEB - Energy Management Services Loan	The Eugene Water & Electric Board (EWEB) offers cash incentives and low-interest loans to businesses as part of the Energy Management Services Program for the installation of solar domestic, process, and pool water heating.
	EWEB - Existing Facilities Energy Efficiency Rebate Program	Eugene Water and Electric Board (EWEB) offers an extensive list of energy efficiency rebates for existing facilities that apply to both specific equipment, as well as customized rebates for more comprehensive facility improvements.
	EWEB - Residential Energy Efficiency Rebate Programs	Eugene Water and Electric Board (EWEB) provides cash incentives to help residential customers increase the energy efficiency of homes through several different rebate programs.
	EWEB - New Facilities Energy Efficiency Rebate Program	Eugene Water and Electric Board (EWEB) provides design assistance and rebate incentives for new construction and major renovation projects.

Type	Incentives	Description
Utility-Specific	<u>EWEB - Energy Management Services Rebate</u>	The Eugene Water & Electric Board (EWEB) offers cash incentives and low-interest loans to businesses as part of the Energy Management Services Program for the installation of solar domestic, process, and pool water heating.
	<u>EWEB - Solar Electric Program (Rebate)</u>	The Eugene Water & Electric Board's (EWEB) Solar Electric Program offers financial incentives for residential and commercial customers who generate electricity using solar photovoltaic (PV) systems.
	<u>EPUD - Residential Energy Efficiency Loan Programs</u>	Emerald People's Utility District (EPUD) has two different loan programs to help residential customers improve the energy efficiency of their homes.
	<u>EPUD - Commercial and Industrial Energy Efficiency Rebate Program</u>	Emerald People's Utility District (EPUD) offers financial incentives for commercial customers to increase the energy efficiency of their facilities.
	<u>EPUD - Residential Energy Efficiency Rebate Program</u>	Emerald People's Utility District (EPUD) offers several incentives for its residential customers to increase the energy efficiency of homes.
	<u>Forest Grove Light & Power - Energy Efficiency Rebate Programs</u>	Forest Grove Light & Power offers a variety of rebates through Conservation Services Department.

Type	Incentives	Description
Utility-Specific	Idaho Power - Commercial Custom Efficiency Program	Large commercial and industrial Idaho Power customers that reduce energy usage through more efficient electrical commercial and industrial processes may qualify for an incentive that is the lesser of either 12 cents per kilowatt-hour (kWh) saved per year or 70% of the project cost.
	Idaho Power - Easy Upgrades for Simple Retrofits Rebate Program	Idaho Power offers incentives for its commercial and industrial customers in Idaho and Oregon to upgrade to more efficient equipment in their facilities.
	Idaho Power - Irrigation Efficiency Rewards Rebate Program	Through Idaho Power's Irrigation Efficiency Rewards Program, agricultural irrigation customers qualify to receive an incentive for a portion of the cost to install a new, more efficient irrigation system or to make energy efficient improvements to an existing one.
	Idaho Power - New Building Efficiency Program	Idaho Power offers incentives for its commercial and industrial customers in Idaho and Oregon to install new equipment above code in participating facilities.
	Idaho Power - Residential Energy Efficiency Rebate Programs	Idaho Power offers a variety of incentives for the installation of energy efficient appliances and heating and cooling systems for residential customers living in both Oregon and Idaho.

Type	Incentives	Description
Utility-Specific	<u>Lane Electric Cooperative - Manufactured Homes Rebate Program</u>	Lane Electric Cooperative offers its customers an incentive for buying a new, EnergyStar manufactured permanent residence home within the service area.
	<u>Lane Electric Cooperative - Residential Energy Efficiency Loan Programs</u>	Lane Electric provides 0% loans to residents for the installation of efficient heat pumps and weatherization measures through the Home Energy Loan Program.
	<u>Lane Electric Cooperative - Residential and Commercial Weatherization Grant Program</u>	Lane Electric Cooperative offers energy efficient Weatherization Grant Programs to Lane Electric residential and commercial members: a residential cash grant for 25% of measure costs up to \$1,000, and a commercial direct fund payment for 50% of total measure costs up to \$2,500.
	<u>Lane Electric Cooperative - Residential Efficiency Rebate Program</u>	Lane Electric Cooperative provides rebates for clothes washers, duct sealing measures, heat pumps, and newly constructed Energy Star Homes.
	<u>McMinnville Water & Light - Commercial Energy Efficiency Rebate Programs</u>	McMinnville Water and Light Company offers a variety of rebates for commercial and industrial customers to make energy efficient improvements to eligible facilities.

Type	Incentives	Description
Utility-Specific	<u>McMinnville Water & Light - Conservation Service Loan Program</u>	McMinnville Water & Light (MWL) offers financing to residential and commercial customers to make energy efficient improvements to eligible facilities and homes.
	<u>McMinnville Water & Light - Residential Energy Efficiency Rebate Program</u>	McMinnville Water and Light (MWL) offers rebates on energy efficient homes, appliances and equipment to residential customers.
	<u>Midstate Electric Cooperative - Commercial and Industrial Energy Efficiency Rebate Program</u>	Midstate Electric Cooperative (MEC) encourages energy efficiency in the commercial and industrial sectors by giving customers a choice of several different financial incentive programs.
	<u>Midstate Electric Cooperative - Residential Conservation Rebates</u>	Midstate Electric Cooperative offers its residential customers a variety of cash rebates for energy efficient improvements and new energy efficient homes.
	<u>Monmouth Power & Light - Residential Energy Efficiency Program</u>	Monmouth Power & Light offers a wide range of energy efficiency rebates that encourage residential customers to save energy in their homes.
	<u>OTEC - Residential Energy Efficiency Rebate Program</u>	Oregon Trail Electric Cooperative (OTEC) assists residential members in reducing electric consumption by providing rebates for energy efficient equipment.

Type	Incentives	Description
Utility-Specific	<u>OTEC - Commercial Lighting Retrofit Rebate Program</u>	The Oregon Trail Electric Consumers Cooperative (OTEC) offers a commercial lighting retrofit program that provides rebates for commercial businesses that change existing lighting to more energy efficient lighting.
	<u>OTEC - Agricultural Energy Efficiency Rebate Programs</u>	Oregon Trail Electric Consumers Cooperative (OTEC) offers two programs to agricultural customers. The first offers rebates for energy and water saving irrigation systems. The second offers rebates for installing an electric-free stock watering tank.
	<u>OTEC - Residential Photovoltaic Rebate Program</u>	Customers of Oregon Trail Electric Consumers Cooperative (OTEC) who install photovoltaic systems are eligible for a rebate of \$500 for the first kilowatt (kW) of installed capacity per year.
	<u>Portland General Electric - Heat Pump Rebate Program</u>	Portland General Electric's (PGE) Heat Pump Rebate Program offers residential customers a \$200 rebate for an energy efficient heat pump installed to PGE's standards by a PGE-approved contractor.
	<u>Salem Electric - Photovoltaic Rebate Program</u>	Salem Electric offers a rebate to residential customers who install solar photovoltaic (PV) systems.
	<u>Salem Electric - Solar Water Heater Rebate</u>	Salem Electric residential customers with electric water heating are eligible for a \$600 rebate through Salem's Bright Way program.

Type	Incentives	Description
Utility-Specific	Salem Electric - Residential, Commercial, and Industrial Efficiency Rebate Program	Salem Electric provides incentives for members to increase the energy efficiency of eligible homes and facilities.
	Salem Electric - Low-Interest Loan Program	Salem Electric residential customers participating in the WeatherWise, Heat Pump, Bright Way Solar or Photovoltaic Programs are eligible for a loan with a 5% interest rate from a local bank.
	Springfield Utility Board - Residential Energy Efficiency Loan Program	The Springfield Utility Board offers qualifying customers a 0% loan for the purchase of qualifying energy efficient heat pumps, insulation upgrades, duct sealing, and energy efficient windows.
	Springfield Utility Board - Energy Savings Plan Program	The Springfield Utility Board provides industrial customers with a comprehensive report to identify cost effective efficiency improvements.
	Springfield Utility Board - Energy Smart Lighting Program	The Springfield Utility Board (SUB) works with their commercial customers to identify opportunities to improve new and existing facilities' lighting efficiency.
	Springfield Utility Board - Residential Energy Efficiency Rebate Program	Springfield Utility Board (SUB) offers a rebate program targeting heat pumps, weatherization measures and various household appliances to its residential customers.

Type	Incentives	Description
Utility-Specific	Springfield Utility Board - Super Good Cents Manufactured Homes Rebate Program	The Springfield Utility Board offers a \$600 incentive for the purchase of a Super Good Cents Manufactured Home.
	Tillamook County PUD - Residential Energy Efficiency Loan Program	Tillamook PUD offers residential customers a variety of rebates and loans to make energy efficiency improvements to participating homes.
	Tillamook County PUD - Dairy Lighting Retrofit Rebate Program	Tillamook PUD offers the Dairy Lighting Retrofit Program for its agricultural members to save energy on lighting in eligible barns/facilities.
	Tillamook County PUD - Residential Energy Efficiency Rebate Program	The Tillamook County Public Utility District (PUD) offers residential customers standard rebates on efficient appliances, weatherization measures, and HVAC measures.
Local	City of Ashland - Green Building Incentive	Developers in Ashland may increase the base density of units in residential developments by incorporating energy efficiency, architectural creativity and innovation, and the use of natural features of the landscape.
Non-Profit	BEF - Solar 4R Schools	This competitive grant program seeks to install small-scale photovoltaic systems at K-12 schools interested in increasing the visibility of renewable energy.



PENNSYLVANIA

The Keystone State⁴⁴³

State Facts

Capital: Harrisburg

Area: 46,055 sq mi

Population: 12,702,379

State Bird: Ruffed Grouse

State Flower: Mountain Laurel⁴⁴⁴

Renewable Portfolio Standards

Policy Name and Date

73 P.S. § 1648.1 Alternative Energy Portfolio Standards Act, December 16, 2004

Standard

18% renewable and alternative energy by 2021

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar

Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Geothermal Heat Pumps, Municipal Solid Waste, CHP/Cogeneration, Waste Coal, Coal Mine Methane, Coal Gasification, Anaerobic Digestion, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies⁴⁴⁵

Pennsylvania Energy Fact

In 2011, renewable energy accounted for 3.3 percent of Pennsylvania's net electricity generation.

<http://www.eia.gov/state/print.cfm?sid=PA>

PENNSYLVANIA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Act 129, October 2008

Standard

From June 2009 – May 2010 electricity consumption. Phase I: Electricity Savings of 1% by May 31, 2011 and 3% by May 31, 2013. Phase II (tentative): Electricity savings vary by utility from 1.6% to 2.9% by May 31, 2016.

Mandatory/Voluntary

Mandatory⁴⁴⁶

Net Metering Standards

Capacity Limit

Per System: 5 MW for micro-grid and emergency systems; 3 MW for non-residential; 50 kW for residential
Entire State: No limit specified

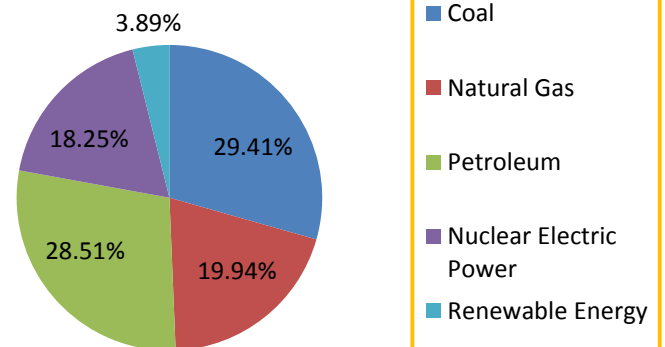
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, CHP/Cogeneration, Waste Coal, Coal-Mine Methane, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels, Other Distributed Generation Technologies⁴⁴⁸

Pennsylvania Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Bureau of Small Business Opportunities verifies MBE certifications from third party entities.⁴⁴⁷

Clean Energy Potential in Pennsylvania

Background

Pennsylvania's wind and solar energy markets continue to develop and may experience further expansion. However, in 2011, the state cut funding for existing renewable energy programs in favor of increased natural gas development. While this could slow deployment of renewable energy systems in the foreseeable future, there is still potential for the development of wind, solar and geothermal power within the state.⁴⁴⁹



Solar: Pennsylvania has urban utility-scale PV potential of 56,162 GWh (24.4% of total net generation), rural utility-scale PV potential of 553,356 GWh (over 100% of total net generation), and rooftop PV potential is 22,215 GWh (9.6% of total net generation).

Wind: The onshore wind power potential is 8,231 GWh (3.58% of total net generation) and offshore wind power potential is 23,571 GWh (10.25% total net generation).

Geothermal: Enhanced geothermal systems potential is 327,341 GWh (over 100% total net generation).⁴⁵⁰

Incentives in Pennsylvania

Type	Incentives	Description
Statewide	Alternative and Clean Energy Program	Pennsylvania provides support for alternative energy and clean energy projects in the form of loans, grants and loan guarantees
	Energy Efficiency Loan Program	The Keystone HELP Energy Efficiency Loan Program is designed to help homeowners improve energy efficiency with special financing for high-efficiency heating, air conditioning, insulation, windows, doors, geothermal and “whole house” improvements.
	High Performance Building Incentives Program	Pennsylvania provides support for high-performing building projects in the form of loans, grants and loan guarantees.
	High Performance Green Schools Planning Grants	The Governor's Green Government Council of Pennsylvania provides an incentive for new schools to be built according to green building standards.
	Pennsylvania Sunshine Solar Rebate Program	The Pennsylvania Sunshine Program offers rebates to residential and small commercial residents that install photovoltaic (PV) and solar thermal systems.

Type	Incentives	Description
Statewide	Property Tax Assessment for Commercial Wind Farms	Pennsylvania exempts wind turbines and related equipment (including towers and foundations) from tax assessments when setting property values.
	Small Business Advantage Grant Program	Established in July 2004, the PA Small Business Advantage Grant Program provides matching funds to for-profit businesses with a maximum of 100 full-time employees for improvements in energy efficiency and pollution prevention.
	Small Business Pollution Prevention Assistance Account Loan Program	The Pollution Prevention Assistance Account (PPAA) offers low-interest loans to help small businesses (100 full-time employees or less) located within the state to implement energy efficiency and pollution prevention projects.
	Solar Alternative Energy Credits	Pennsylvania's Alternative Energy Portfolio Standard (AEPS), created by S.B. 1030 on November 30, 2004, requires each electric distribution company (EDC) and electric generation supplier (EGS) to retail electric customers in Pennsylvania to supply roughly 18% of its electricity using alternative-energy resources -- roughly 8% from Tier I technologies and 10% from Tier II technologies -- by 2021.

Type	Incentives	Description
Statewide	Solar Energy Incentives Program	Pennsylvania supports businesses, non-profits, economic development organizations and political subdivisions in solar energy technology investments.
	Wind and Geothermal Incentives Program	Pennsylvania supports businesses, non-profits, economic development organizations and political subdivisions in wind and geothermal energy technology investments.
Utility-Specific	Adams Electric Cooperative - Energy Efficiency Loan Program	Adams Electric Cooperative offers financing to help residential customers increase the energy efficiency of homes through the Energy Resource Conservation (ERC) and Supplemental Loan Program.
	Duquesne Light Company - Residential Solar Water Heating Program	Duquesne Light provides rebates to its residential customers for purchasing and installing qualifying solar water heating systems.
	Duquesne Light Company - Commercial and Industrial Energy Efficiency Program	Duquesne Light provides rebates on energy saving equipment to commercial and industrial customers in the eligible service territory.
	Duquesne Light Company - Residential Energy Efficiency Program	Duquesne Light provides rebates to its residential customers for purchasing and installing energy saving equipment.

Type	Incentives	Description
Utility-Specific	<u>FirstEnergy (MetEdison, Penelec, Penn Power) - Commercial and Industrial Energy Efficiency Program</u>	In order to help meet the goals established in Pennsylvania's Act 129, FirstEnergy's Pennsylvania companies (MetEdison, Penelec, and Penn Power) provide energy efficiency incentives for a variety of equipment.
	<u>FirstEnergy (MetEdison, Penelec, Penn Power) - Residential Solar Water Heating Program</u>	First Energy Utilities (MetEd, Penelec, Penn Power) in Pennsylvania provide rebates to residential customers for purchasing and installing qualifying solar water heating systems.
	<u>FirstEnergy (MetEdison, Penelec, Penn Power) - Residential Energy Efficiency Programs</u>	The Residential HVAC Program offers rebates on the purchase of qualifying central air conditioners, air source heat pumps, and geothermal heat pumps.
	<u>FirstEnergy (West Penn Power) - Residential Energy Efficiency Rebate Program</u>	FirstEnergy (West Penn Power) offers a variety of incentives to Pennsylvania residential customers who are interested in upgrading to more energy efficient appliances and equipment.
	<u>FirstEnergy (West Penn Power) - Commercial and Industrial Energy Efficiency Rebate Program</u>	FirstEnergy (West Penn Power) offers various rebates to eligible commercial, industrial, non-profit, local government and institutional customers in the Pennsylvania service territory who upgrade to energy efficient equipment.

Type	Incentives	Description
Utility-Specific	FirstEnergy (West Penn Power) - Residential Solar Water Heating Program	West Penn Power, a First Energy utility, provides rebates to residential customers for purchasing and installing qualifying solar water heating systems.
	PECO Energy (Electric) – Non-Residential Energy Efficiency Rebate Program	PECO energy provides custom and prescriptive incentives for commercial energy efficiency retrofits including HVAC systems, lighting, drives and motors, refrigeration and food services.
	PECO Energy (Electric) – Residential Energy Efficiency Rebate Program	PECO electric service customers are eligible for rebates on ENERGY STAR qualified appliances and HVAC equipment.
	PECO Energy (Gas) – Heating Efficiency Rebate Program	The PECO Smart Gas Efficiency Upgrade Program offers rebates and incentives to commercial and residential customers that install an ENERGY STAR qualified high efficiency natural gas furnace or boiler, and to residential customers who install an ENERGY STAR qualified storage tank water heater.
	Philadelphia Gas Works - Commercial and Industrial Equipment Rebate Program	Philadelphia Gas Works' (PGW) Commercial and Industrial Equipment Rebates are available to all PGW commercial and industrial customers installing high efficiency boilers or eligible commercial food service equipment.

Type	Incentives	Description
Utility-Specific	Philadelphia Gas Works - Commercial and Industrial Retrofit Program	Philadelphia Gas Works' (PGW) Commercial and Industrial Retrofit Incentive Program is part of EnergySense, PGW's portfolio of energy efficiency programs designed to help customers save energy and money.
	Philadelphia Gas Works - Residential and Commercial Construction Incentives Program	Philadelphia Gas Works (PGW) provides incentives to developers, homebuilders and building owners that build new or gut/rehab facilities to conserve gas beyond the level consumed at code (IECC 2009).
	Philadelphia Gas Works - Residential and Small Business Efficiency Program	Philadelphia Gas Works' (PGW) Residential Heating Equipment rebates are available to all PGW residential or small business customers installing high efficiency boilers and furnaces, and programmable thermostats.
	PPL Electric Utilities - Commercial and Industrial Energy Efficiency Rebate Program	PPL Electric Utilities offers rebates and incentives for commercial and industrial products installed in their service area.
	PPL Electric Utilities - Custom Energy Efficiency Program	To receive custom incentives, applicants can submit an application for a technical study to install measures not covered by any of PPL's other programs, such as the Commercial and Industrial Energy Efficiency Rebate Program.
	PPL Electric Utilities - Residential Energy Efficiency Rebate Program	PPL Electric Utilities offers numerous rebates and incentives for commercial and industrial customers.

Type	Incentives	Description
Local	<u>Keystone HELP - EnergyWorks Efficiency Loan Program</u>	The Keystone HELP Program helps homeowners improve energy efficiency with special financing for high efficiency heating, air conditioning, insulation, windows, doors, and “whole house” improvements.
	<u>Metropolitan Edison Company SEF Grants (FirstEnergy Territory)</u>	Metropolitan Edison Company (Met-Ed) Sustainable Energy Fund offers grants to establish renewable energy technologies, energy efficiency and conservation initiatives, and sustainable energy businesses.
	<u>Metropolitan Edison Company SEF Loans (FirstEnergy Territory)</u>	Metropolitan Edison Company (Met-Ed) Sustainable Energy Fund offers loans to establish renewable energy technologies, energy efficiency and conservation initiatives, and sustainable energy businesses.
	<u>Penelec Sustainable Energy Fund Grant Program (FirstEnergy Territory)</u>	Penelec Sustainable Energy fund offers grants to establish renewable energy technologies, energy efficiency and conservation initiatives, and sustainable energy businesses.
	<u>Penelec SEF of the Community Foundation for the Alleghenies Loan Program (FirstEnergy Territory)</u>	Penelec Sustainable Energy fund offers loans to establish renewable energy technologies, energy efficiency and conservation initiatives, and sustainable energy businesses.
	<u>Sustainable Development Fund Financing Program (PECO Territory)</u>	Sustainable Development Fund (SDF) provides financial assistance for new wind development, solar photovoltaics and renewable energy education.
	<u>Sustainable Energy Fund (SEF) Loan Program (PPL Territory)</u>	Sustainable Development Fund (SDF) provides flexible business loans for new wind development, solar photovoltaics and renewable energy education.

Type	Incentives	Description
Local	West Penn Power SEF Commercial Loan Program	The West Penn Power Sustainable Energy Fund (WPPSEF) promotes the use of renewable energy and clean energy among commercial, industrial, institutional and residential customers in the West Penn market region.

RHODE ISLAND

The Ocean State⁴⁵¹



Renewable Portfolio Standards

Policy Name and Date

The Clean Energy Act, June 29, 2004

Standard

16% renewable by 2019

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Biodiesel, Fuel Cells using Renewable Fuels⁴⁵³

Rhode Island Energy Fact

Electric companies in Rhode Island have committed to reduce peak demand by up to nine percent upon the New England grid operator's request.

<http://www.eia.gov/state/print.cfm?sid=RI>

State Facts

Capital: Providence

Area: 1,221 sq mi

Population: 1,052,567

State Bird: Rhode Island

Red Chicken

State Flower: Blue

Violet⁴⁵²

Energy Efficiency Resource Standards

Policy Name and Date

Rhode Island Statute 39, 2006

Standard

Varies by utility.

Mandatory/Voluntary

Mandatory⁴⁵⁴

RHODE ISLAND at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: 5,000 kW (systems must be "reasonably designed" to generate only up to 100% of annual electricity consumption)
Entire State: 3% of peak load (2 MW reserved for systems under 50 kW)

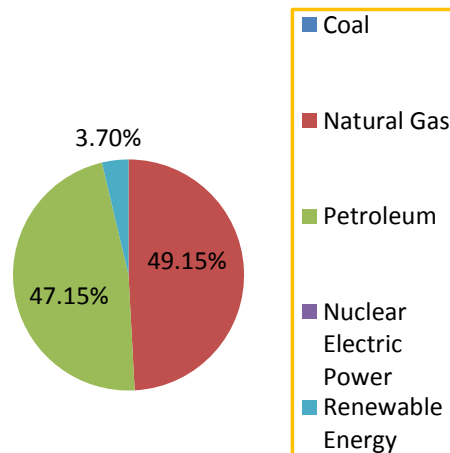
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Small Hydroelectric, Ocean Thermal, Fuel Cells using Renewable Fuels⁴⁵⁷

Rhode Island Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: YES

Providence has a First Source Program designed to recruit, screen, and refer to businesses a pool of qualified, local job seekers, and for Providence residents to gain access to employment opportunities.⁴⁵⁵

MBE Provision/Certification: YES

The Minority Business Enterprise Compliance Office promotes the development of certified MBEs. Under Rhode Island General Law 37-14.1, MBEs are targeted for participation in all procurement and construction projects and shall be awarded a minimum of 10% of all dollar value.⁴⁵⁶

Clean Energy Potential in Rhode Island

Background

Rhode Island has some of the highest electricity prices in the nation and a strong dependence on imported electricity. The state is in a prime location for generating electricity through offshore wind energy, and has the potential to develop solar and geothermal energy sources.⁴⁵⁸



Solar: Rhode Island has urban utility-scale PV potential of 1,788 GWh (1.7% of total net generation), rural utility-scale PV potential of 13,636 GWh (over 100% of total net generation), and rooftop PV potential is 1,711 GWh (22.1% of total net generation).

Wind: The onshore wind power potential is 130 GWh (1.68% of total net generation) and offshore wind power potential is 89,115 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 11,492 GWh (over 100% of total net generation).⁴⁵⁹

Incentives in Rhode Island

Type	Incentives	Description
Statewide	Commercial-Scale Renewable-Energy Grants	The Rhode Island Economic Development Corporation (RIEDC) provides incentives for renewable energy projects to eligible commercial customers.
	Distributed Generation Standard Contracts	Rhode Island enacted legislation (H.B. 6104) in June 2011 establishing a feed-in tariff for new distributed renewable energy generators up to five megawatts (MW) in capacity.
	Local Option - Property Tax Exemption for Renewable Energy Systems	Rhode Island allows cities and towns to exempt, by ordinance, renewable energy systems from property taxation.
	Renewable Energy Products Sales and Use Tax Exemption	Certain renewable energy systems and equipment sold in Rhode Island are exempt from the state's sales and use tax.
	Residential Solar Property Tax Exemption	Rhode Island law provides that for purposes of local municipal property tax assessment, certain residential solar energy systems may not be assessed at more than the value of a conventional heating system, a conventional water-heating system, or energy production capacity that otherwise would be necessary to install in a building.

Type	Incentives	Description
Statewide	Small-Scale Solar Grants	The Rhode Island Economic Development Corporation (RIEDC) provides incentives for renewable energy projects.
Utility-Specific	National Grid (Electric) - Large Commercial Energy Efficiency Incentive Programs	National Grid offers electric energy efficiency programs for large commercial and industrial customers.
	National Grid (Electric) - Residential EnergyWise Incentive Program	National Grid offers a variety of energy efficiency incentives for residential customers.
	National Grid (Electric) - Small Business Energy Efficiency Program	National Grid's Small/Mid-Sized Business Program offers energy efficiency incentives for business customers with an average demand of 200 kilowatts or less per month.
	National Grid (Gas) - Commercial Energy Efficiency Programs	National Grid's Commercial Energy Efficiency Program provides support services and incentives to commercial customers who install energy efficient natural gas related measures.
	National Grid (Gas) - Residential EnergyWise Rebate Programs	National Grid's EnergyWise Programs encourage energy efficiency for its residential customers.



SOUTH CAROLINA

The Palmetto State⁴⁶⁰

State Facts

Capital: Columbia

Area: 31,114 sq mi

Population: 4,625,364

State Bird: Carolina Wren, Wild Turkey, and Wood Duck

State Flower: Yellow Jessamine and Canada Goldenrod⁴⁶¹

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of South Carolina.⁴⁶²

Status

No Activity Identified⁴⁶³

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of South Carolina.⁴⁶⁴

Status

No Activity Identified⁴⁶⁵

SOUTH CAROLINA at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: Varies by utility
Entire State: Varies by utility

Mandatory/Voluntary

Voluntary

Allowable Sources

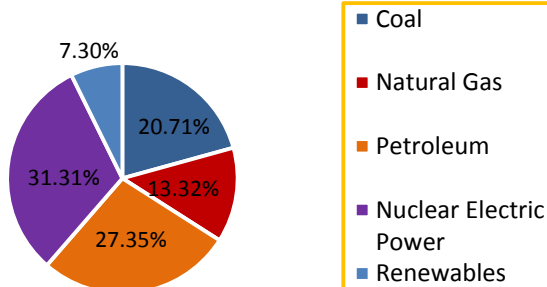
Varies by utility⁴⁶⁶

South Carolina Energy Fact

In 2011, renewable energy resources accounted for 4.0 percent of South Carolina's net electricity generation; almost half of that generation came from conventional hydroelectric power.

<http://www.eia.gov/state/?sid=SC>

South Carolina Energy Consumption Estimates 2011



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

South Carolina's Department of Transportation certifies MBEs for federally assisted projects.

The Carolinas Minority Supplier Development Council certifies MBEs.⁴⁶⁷

Clean Energy Potential in South Carolina

Background

South Carolina has heavily invested in fossil fuel energy sources that are both risky and costly. The state also has the highest percentage of nuclear power of any state in the country. Thus, South Carolina residents are facing rising electricity prices. Yet, these electricity prices could decrease if the state tapped into solar, geothermal and offshore wind resources, which offer the greatest potential for renewables in the state.⁴⁶⁸



Solar: South Carolina has urban utility-scale PV potential of 33,835 GWh (32.4% of total net generation), rural utility-scale PV potential of 2,754,973 GWh (over 100% of total net generation), and rooftop PV potential is 14,413 GWh (13.8% of total net generation).

Wind: Onshore wind power potential is 428 GWh (.4% of total net generation) and offshore wind power potential is 542,218 GWh (over 100% of total net generation).

Geothermal: The potential for enhanced geothermal systems potential is 364,105 GWh (over 100% of total net generation).⁴⁶⁹

Incentives in South Carolina

Type	Incentives	Description
Statewide	Biomass Energy Production Incentive	South Carolina provides production incentives for certain biomass energy facilities.
	Biomass Energy Tax Credit (Corporate)	In 2007 South Carolina enacted the Energy Freedom and Rural Development Act (S.B. 243), that amended previous legislation concerning a landfill methane tax credit.
	Biomass Energy Tax Credit (Personal)	In 2007 South Carolina enacted the Energy Freedom and Rural Development Act (S.B. 243), that amended previous legislation that provides a biomass energy tax credit.
	ConserFund Loan Program	The South Carolina Energy Office offers the ConserFund Loan Program to fund energy efficiency improvements in state agencies, local governments, public colleges and universities, school districts and private non-profit organizations.
	Energy Efficient Manufactured Homes Incentive Tax Credit	South Carolina offers a tax credit to individuals that purchase a home that meets federal energy efficiency standards.
	Renewable Energy Manufacturing Tax Credit	South Carolina offers a ten percent income tax credit to the manufacturers of renewable energy operations for tax years 2010 through 2015.

Type	Incentives	Description
Statewide	Sales Tax Exemption for Hydrogen Fuel Cells	South Carolina offers a sales tax exemption for any device, equipment, or machinery operated by hydrogen or fuel cells, any device, equipment or machinery used to generate, produce, or distribute hydrogen and designated specifically for hydrogen applications or for fuel cell applications, and any device, equipment, or machinery used predominantly for the manufacturing of, or research and development involving hydrogen or fuel cell technologies.
	Sales Tax Incentives for Energy-Efficient Manufactured Homes	In July 2008, SB 1141 (known as the Energy-Efficient Manufactured Homes Incentive Program) was enacted, which amended the sales tax cap to provide for a full sales tax exemption for manufactured homes purchased between July 1, 2009, and July 1, 2019, if the home has been designated by the U.S. Environmental Protection Agency and the U.S. Department of Energy as meeting or exceeding each agency's energy saving efficiency requirements or has been designated as meeting or exceeding such requirements under the federal Energy Star Program.
	Solar Energy and Small Hydropower Tax Credit (Corporate)	In South Carolina, corporate taxpayers may claim a credit of 25% of the costs of purchasing and installing a solar energy system or small hydropower system for heating water, space heating, air cooling, energy efficient daylighting, heat reclamation, energy efficient demand response, or the generation of electricity in a building owned by the taxpayer.

Type	Incentives	Description
Statewide	Solar Energy and Small Hydropower Tax Credit (Personal)	In South Carolina, individual taxpayers may claim a credit of 25% of the costs of purchasing and installing a solar energy system or small hydropower system for heating water, space heating, air cooling, energy efficient daylighting, heat reclamation, energy efficient demand response, or the generation of electricity in a building owned by the taxpayer.
Utility-Specific	Aiken Electric Cooperative Inc. - Residential Water Heater Rebate Program	Aiken Electric Cooperative offers residential members rebates for installing high efficiency electric water heaters and/or timers in their homes.
	Berkeley Electric Cooperative - HomeAdvantage Efficiency Loan Program	Berkeley Electric Cooperative provides HomeAdvantage Loans to qualifying homeowners for energy efficiency upgrades to residences. Measures typically include air infiltration measures, insulation measures, ductwork leakage, airflow improvement and HVAC system upgrades.
	Berkeley Electric Cooperative - Energy Efficiency Rebate Program	Berkeley Electric Cooperative (BEC) offers several rebates to residential customers for energy efficiency upgrades.
	Blue Ridge Electric Cooperative - Heat Pump Loan Program	Blue Ridge Electric Cooperative (BREC) offers low-interest loans to help members finance the purchase of energy efficient heat pumps.
	Duke Energy (Electric) - Non-Residential Energy Efficiency Rebate Program	Duke Energy's Smart \$aver® Incentive Program offers rebates to non-residential customers to install energy efficient equipment in their facilities.

Type	Incentives	Description
Utility-Specific	Duke Energy (Electric) - Residential Energy Efficiency Rebate Program	The Smart \$aver® program offers incentives for residential customers to increase residential energy efficiency.
	EnergyUnited - Commercial Energy Efficient Lighting Rebate Program	Commercial and industrial members who upgrade to energy efficient light bulbs, which meet EnergyUnited's standards, are eligible for a prescriptive, "per unit" rebate.
	Palmetto Electric Cooperative - Buried Treasure Rebate Program	Palmetto Electric Cooperative offers rebates for its members who install ground-source heat pumps through the Buried Treasure Rebate Program.
	Pee Dee Electric Cooperative - Energy Efficient Home Improvement Loan Program	Pee Dee Electric Cooperative offers financing for members through the Energy Efficient Home Improvement Loan Program.
	Pee Dee Electric Cooperative - Residential Energy Efficiency Rebate Program	Pee Dee Electric Cooperative offers a variety of programs for residential members to save energy in participating homes.
	Piedmont Natural Gas - Commercial Equipment Efficiency Program	Piedmont Natural Gas offers rebates to commercial customers for purchasing and installing high efficiency natural gas tankless water heaters.
	Piedmont Natural Gas - Residential Equipment Efficiency Program	Piedmont Natural Gas offers rebates on high efficiency natural gas tankless water heaters, tank water heaters and furnaces to residential customers.
	Progress Energy Carolinas - CFL Rebate Program	Progress Energy is working with lighting manufacturers and local retailers to offer discounted pricing on CFLs.

Type	Incentives	Description
Utility-Specific	Progress Energy Carolinas - Commercial Energy Efficiency Program	Progress Energy provides rebates for energy efficiency measures in new construction or retrofits, as well as Technical Assistance for feasibility/energy studies to commercial, industrial and government organizations.
	Progress Energy Carolinas - Residential Energy Efficiency Rebate Program	Progress Energy provides incentives for residential customers to increase home energy efficiency.
	Rock Hill Utilities - Water Heater and Heat Pump Rebate Program	Through the SmartChoice program, Rock Hill Utilities offers rebates for water heater and heat pump replacements.
	Santee Cooper - Smart Energy Loan Program	Santee Cooper provides low-interest loans to residential customers to improve the efficiency of homes through the Smart Energy Loan Program.
	Santee Cooper - Renewable Energy Resource Loans	Santee Cooper offers low-interest loans to residential customers who have a licensed contractor install photovoltaic (PV) systems, wind energy systems, micro-hydropower systems, biomass energy systems, or solar water heaters.
	Santee Cooper - Business Custom Rebates	Santee Cooper has developed a Business Custom Rebate as part of their Reduce the Use: Business Prescriptive Rebate Program, which is designed to reduce a business's overall electricity use.

Type	Incentives	Description
Utility-Specific	Santee Cooper - Commercial Energy Efficiency Rebate Program	Santee Cooper, through its Reduce The Use Program, provides rebates to commercial customers for the purchase and installation of energy efficient equipment and measures.
	Santee Cooper - Residential Energy Efficiency Rebate Program	Santee Cooper, through its Reduce The Use Program, provides rebates to residential customers for the purchase and installation of energy efficient equipment and measures.
	SCE&G (Electric) - Commercial EnergyWise Program	South Carolina Electric and Gas (SCE&G) provides EnergyWise efficiency incentives to any non-residential customers in its service territory that have not opted out of the DSM programs by notifying SCE&G in writing through the Opt-Out form.
	SCE&G (Electric) - Residential EnergyWise Program	South Carolina Electric and Gas (SCE&G) provides incentives for energy efficiency to homeowners in its service territory.
	SCE&G (Gas) - Residential EnergyWise Program	South Carolina Electric and Gas (SCE&G) provides incentives for energy efficient natural gas improvements to homeowners in its service territory.
	York Electric Cooperative - Dual Fuel Heat Pump Rebate Program	York Electric Cooperative, Inc. (YEC) offers a \$400 rebate to members who install a dual-fuel heat pump in homes or businesses.
Local	City of Charleston - CharlestonWISE Program	CharlestonWISE provides up to \$500 in instant rebates on completed home performance improvements.

Type	Incentives	Description
Non-Profit	Palmetto Clean Energy (PaCE) Program	The Palmetto Clean Energy (PaCE) Program, a green-power program designed to encourage the use of renewable energy in South Carolina, currently offers premium payments for electricity generated by customer-owned, grid-tied solar, wind, biomass, geothermal and small-scale hydropower systems.

SOUTH DAKOTA

The Mount Rushmore State⁴⁷⁰



Renewable Portfolio Standards

Policy Name and Date

House Bill 1272, February 21, 2008

Standard

10% renewable by 2015

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Hydrogen, Electricity Produced from Waste Heat, Anaerobic Digestion⁴⁷²

State Facts

Capital: Pierre

Area: 77,116 sq mi

Population: 814,180

State Bird: Ring-Necked

Pheasant

State Flower: American

Pasqueflower⁴⁷¹

SOUTH DAKOTA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✗ Net Metering Standards

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of South Dakota.⁴⁷³

Status

Proposed: The Midwestern Regional Greenhouse Gas Reduction Accord commits participating states to an overall 2% reduction in energy use by 2015. As of November 15, 2007, South Dakota is an observer to this agreement.⁴⁷⁴

Net Metering Standards

Capacity Limit

No Net Metering Standards have been defined for the state of South Dakota.⁴⁷⁵

Status

No Activity Identified⁴⁷⁶

South Dakota Energy Fact

The National Renewable Energy Laboratory estimates that 88 percent of South Dakota's land area has high wind power potential.

<http://www.eia.gov/state/print.cfm?sid=SD>

ECONOMIC OPPORTUNITIES

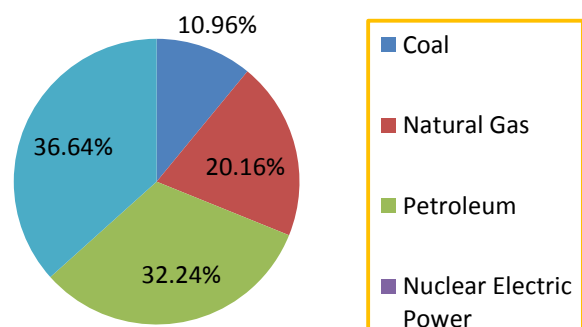
Local Hire Provision: NO

MBE Provision/Certification: YES

South Dakota's Department of Transportation certifies MBEs for federally assisted projects.

The Midwest Minority Supplier Development Council certifies MBEs and promotes the exchange of information between corporate members and MBEs.⁴⁷⁷

South Dakota Energy Consumption Estimates 2010



Clean Energy Potential in South Dakota

Background

South Dakota has substantial renewable energy potential that includes flat open areas for wind and solar power, and geothermal resources particularly located in the south-central part of the state.⁴⁷⁸



Solar: South Dakota has urban utility-scale PV potential of 4,574 GWh (45.5% of total net generation), rural utility-scale PV potential of 10,008,873 GWh (over 100% of total net generation), rooftop PV potential is 2,083 GWh (20.7% of total net generation) and concentrated solar power potential is 1,629,660 GWh (over 100% of total net generation).

Wind: Onshore wind power potential is 2,901,858 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 921,973 GWh (over 100% of total net generation).⁴⁷⁹

Incentives in South Dakota

Type	Incentives	Description
Statewide	Energy Efficiency Revolving Loan Program	South Dakota offers loans to non-profits, schools, and government agencies located in South Dakota to pay for energy audits, energy efficiency improvements, and renewable energy installations.
	Large Commercial Wind Exemption and Alternative Taxes	In South Dakota, wind farms constructed after July 1, 2007, are subject to an alternative taxation calculation in lieu of all taxes on real and personal property levied by the state, counties, municipalities, school districts and other political subdivisions.
	Renewable Energy System Exemption	In March 2010, South Dakota established a new property tax incentive that replaced two existing property tax incentives for renewable energy.
	Wind and Transmission Construction Tax Refund	In March 2010, South Dakota established a tax refund for new or expanded wind energy facilities, new or upgraded electric transmission lines and associated facilities, and business facilities that manufacture or distribute wind or transmission components.

Type	Incentives	Description
Utility-Specific	Black Hills Power - Commercial Energy Efficiency Programs	Black Hills Power provides rebates for its commercial customers who install energy efficient heat pumps, motors, variable frequency drives, lighting, and water heaters.
	Black Hills Power - Residential Customer Rebate Program	Black Hills Power offers cash rebates to residential customers who purchase and install energy efficient equipment in their homes.
	Business Energy Efficiency Rebate (Offered by 11 Utilities)	Bright Energy Solutions offers energy efficiency cash incentive programs to residential and business customers of municipal utilities that are members of Missouri River Energy Services.
	MidAmerican Energy (Electric) - Commercial EnergyAdvantage Rebate Program	MidAmerican Energy offers a variety of incentives for their commercial customers to improve the energy efficiency of their facilities.
	MidAmerican Energy (Electric) - Residential Energy Efficiency Rebate Programs	MidAmerican Energy offers a variety of incentives for residential customers to improve the energy efficiency of their homes.
	MidAmerican Energy (Gas) - Commercial EnergyAdvantage Rebate Program	MidAmerican Energy offers rebates for their commercial customers to improve the energy efficiency of facilities.

Type	Incentives	Description
Utility-Specific	MidAmerican Energy (Gas) - Residential Energy Efficiency Rebate Programs	MidAmerican Energy offers a variety of incentives for residential customers to improve the energy efficiency of homes.
	Montana-Dakota Utilities (Gas) - Commercial Natural Gas Efficiency Rebate Program	Montana-Dakota Utilities (MDU) offers rebates on energy efficient natural gas furnaces to its eligible commercial customers.
	Montana-Dakota Utilities (Gas) - Residential Energy Efficiency Rebate Program	Montana-Dakota Utilities (MDU) offers several residential rebates on energy efficient measures and natural gas equipment.
	Montana-Dakota Utilities (Gas) - Residential New Construction Rebate Program	Montana-Dakota Utilities (MDU) offers rebates to customers who install energy efficient natural gas equipment in new construction.
	Otter Tail Power Company - Commercial Energy Efficiency Rebate Program	Otter Tail Power Company offers incentives to commercial customers in South Dakota for installing energy efficient equipment in eligible facilities.
	Otter Tail Power Company - Dollar Smart Financing Program	Otter Tail Power Company's Dollar Smart Financing Program offers loans of \$150 - \$40,000 to residential and business customers.
	Otter Tail Power Company - Residential Energy Efficiency Rebate Program	Otter Tail Power Company offers incentives to all residential customers in South Dakota to install energy efficient equipment in residences.

Type	Incentives	Description
Utility-Specific	Residential Energy Efficiency Rebates (Offered by 11 Utilities)	Bright Energy Solutions offers energy efficiency cash incentive programs to residential and business customers of municipal utilities that are members of Missouri River Energy Services.
	Southeastern Electric - Residential Energy Efficiency Rebate Program	Southeastern provides an assortment of incentives to encourage customers to purchase energy efficient appliances and equipment.
	Southeastern Electric - Electric Equipment Loan Program	Southeastern offers a loan program for customers who want to install energy efficient heating and cooling systems in homes or businesses.



TENNESSEE

The Volunteer State⁴⁸⁰

State Facts

Capital: Nashville

Area: 42,145 sq mi

Population: 6,346,105

State Bird: Northern

Mockingbird and

Bobwhite Quail

State Flower: Iris and
Purple Passionflower⁴⁸¹

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Tennessee.⁴⁸²

Status

No Activity Identified⁴⁸³

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Tennessee.⁴⁸⁴

Status

No Activity Identified⁴⁸⁵

TENNESSEE at a Glance:

- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✗ Net Metering Standards

Net Metering Standards

Capacity Limit

No Net Metering Standards have been defined for the state of Tennessee.⁴⁸⁶

Status

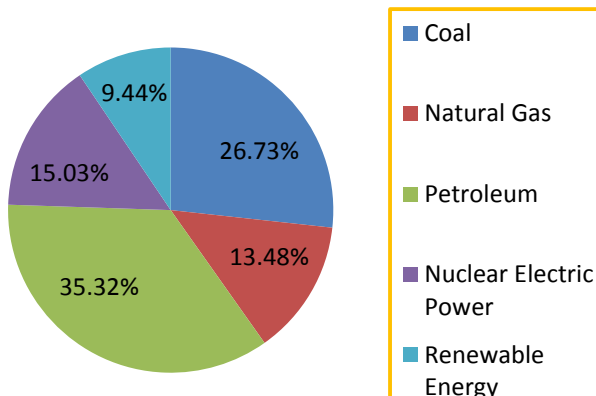
No Activity Identified⁴⁸⁷

Tennessee Energy Fact

Tennessee's largest solar farm opened in April 2012 in Stanton; the facility has the capacity to produce 5 megawatts of electricity.

<http://www.eia.gov/beta/state/?sid=TN>

Tennessee Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Governor's Office of Diversity Business Enterprise certifies MBEs.⁴⁸⁸

Clean Energy Potential in Tennessee

Background

Tennessee, like many Southeastern states, spends billions of dollars importing energy resources into their state to power the state and provide for their residents. Due to its geographic location, the state has an abundance of renewable energy resources. Tennessee is home to the Southeast's only wind farm – the Buffalo Mountain Wind Farm.⁴⁸⁹



Solar: Tennessee has urban utility-scale PV potential of 50,243 GWh (61% of total net generation), rural utility-scale PV potential of 2,225,990 GWh (over 100% of total net generation), and rooftop PV potential is 19,685 GWh (23.9% of total net generation).

Wind: Onshore wind power potential is 766 GWh (.93% of total net generation).

Geothermal: Enhanced geothermal systems potential is 428,380 GWh (over 100% total net generation).⁴⁹⁰

Incentives in Tennessee

Type	Incentives	Description
Statewide	Commercial Energy Efficiency Loan Program	Based on a U.S. Department of Energy Industrial Loan Program, Pathway Lending's Energy Efficiency Loan Program provides Tennessee business and non-profit entities with below-market loans for energy efficiency and renewable energy improvements.
	Energy Efficient Schools Initiative – Grants	The Energy Efficient Schools Initiative (EESI) was created in May 2008 to provide grants and loans to Tennessee school systems for capital outlay projects that meet energy efficient design and technology guidelines for school facilities.
	Energy Efficient Schools Initiative – Loans	The Energy Efficient Schools Initiative was created in May 2008 to provide grants and loans to Tennessee school systems for capital outlay projects that meet energy efficient design and technology guidelines for school facilities.
	Green Energy Production Property Credit	The state of Tennessee offers a special ad valorem property tax assessment for certified green energy production facilities.
	Green Energy Tax Credit	Tennessee provides tax credits to industries in the green energy supply chain that invest more than \$250 million into the state.

Type	Incentives	Description
Statewide	Sales and Use Tax Credit for Emerging Clean Energy Industry	In June 2009, Tennessee enacted the Tennessee Clean Energy Future Act of 2009 and expanded its Sales and Use Tax Credit for emerging industries to manufacturers of clean energy technologies on the sale or use of qualified tangible personal property.
	Sales Tax Credit for Clean Energy Technology	Tenn. Code Ann. Section 67-6-346 allows a taxpayer to take a credit, to apply for a refund of taxes paid, or to apply for authority to make tax-exempt purchases of machinery and equipment used to produce electricity in a certified green energy production facility.
	Wind Energy Systems Exemption	Tennessee House Bill 809, enacted into law in Public Chapter 377, Acts of 2003 and codified under Title 67, Chapter 5, states that wind energy systems operated by public utilities, businesses or industrial facilities shall not be taxed at more than one-third of their total installed cost.
Utility-Specific	Bristol Tennessee Electric Service - Energy Savings Loan Program	Bristol Tennessee Electric Service (BTES) offers financing to its residential customers to help pay for energy efficient home improvements through the Energy Savings Loan Program.
	Cookeville Electric Department - Residential Energy Efficiency Rebate Program	Cookeville Electric Department, in collaboration with the Tennessee Valley Authority, offers an incentive for its residential customers to install energy efficient equipment through the energy right rebate program.

Type	Incentives	Description
Utility-Specific	<u>Cumberland EMC - Energy Efficient New Homes Program</u>	Cumberland Electric Membership Corporation (CEMC), in collaboration with The Tennessee Valley Authority, provides a financial incentive for its customers to build new energy efficient homes through the energy right New Homes Program.
	<u>Electric Power Board of Chattanooga - Energy Efficient New Homes Program for Builders & Developers</u>	The Electric Power Board of Chattanooga, in collaboration with the Tennessee Valley Authority, offers an incentive to builders and developers of single-family and multi-family homes to build energy efficient homes that meet the energy right Program guidelines.
	<u>Gibson Electric Membership Corporation - Residential Energy Efficient Water Heater Loan Program</u>	Gibson Electric Membership Corporation provides loans to its residential customers to finance new, energy efficient water heaters.
	<u>Gibson Electric Membership Corporation - Energy Efficiency Rebates</u>	Gibson Electric Membership Corporation, in collaboration with the Tennessee Valley Authority, promotes energy efficient building design through its energy right New Homes Program.
	<u>Memphis Light, Gas and Water (Electric) - Commercial Efficiency Advice and Incentives Program</u>	Memphis Light, Gas and Water (MLGW), in partnership with the Tennessee Valley Authority (TVA), offers a variety of energy efficient incentives to non-residential customers.

Type	Incentives	Description
Utility-Specific	Middle Tennessee EMC - Residential Energy Efficiency Rebate Program	Middle Tennessee Electric Membership Corporation (MTEMC) and the Tennessee Valley Authority (TVA) offers a total one-time rebate of 50% of installed costs, up to \$500, to participating customers who pursue recommendations made by their evaluator.
	Murfreesboro Electric Department - Energy Efficiency Rebate Program	Murfreesboro Electric Department, in collaboration with the Tennessee Valley Authority, offers incentives to homebuilders and homeowners for the construction of energy efficient homes through the energy right New Home Program.
	Southwest Tennessee EMC - Residential Energy Efficiency Rebate Program	Southwest Tennessee Electric Membership Corporation (STEMC), in collaboration with The Tennessee Valley Authority, offers water heater rebates for residential customers.
	TVA - Green Power Providers	Tennessee Valley Authority (TVA) and participating power distributors of TVA power offer a performance-based incentive program to homeowners and businesses for the installation of renewable generation systems from the following qualifying resources: PV, wind, hydropower, and biomass.
	TVA - Energy Right Solutions for Business	TVA offers rebates and complimentary energy assessments through the energy right Solutions Program to commercial and industrial facilities.

Type	Incentives	Description
Utility-Specific	TVA - Mid-Sized Renewable Standard Offer Program	The Tennessee Valley Authority (TVA) now compliments the small generation Green Power Providers Program by providing incentives for mid-sized renewable energy generators between 50 kW and 20 MW to enter into long-term price contracts.
	TVA Partner Utilities - Energy Right Heat Pump Program	The Tennessee Valley Authority (TVA) energy right Heat Pump Plan provides financing to promote the installation of high efficiency heat pumps in homes and small businesses.
	TVA Partner Utilities - Energy Right New Homes Program	The Tennessee Valley Authority (TVA) energy right New Homes Plan provides incentives for all electric, energy efficient new homes by offering graduated rebates for new homes.
	TVA Partner Utilities - Energy Right Water Heater Program	The TVA energy right Water Heater Plan promotes the installation of high efficiency water heaters in homes and small businesses.
	TVA Partner Utilities - In-Home Energy Evaluation Program	The Tennessee Valley Authority (TVA) energy right In-Home Energy Evaluation Pilot Program encourages the installation of energy efficiency improvements in existing single-family dwellings.
	Upper Cumberland EMC - Energy Efficiency Rebate Programs	Upper Cumberland Electric Membership Corporation (UCEMC), in collaboration with the Tennessee Valley Authority, offers incentives for its customers to purchase and install energy efficient equipment through the energy right Program.

Type	Incentives	Description
Local	City of Nashville - Energy Works Rebate Program	The Nashville Energy Works Program offers residents in Nashville rebates for implementing energy efficient improvements in their homes.



Renewable Portfolio Standards

Policy Name and date

Senate Bill 20, August 1, 2005

Standard

5,880 MW (5%) renewable by 2015 required; 10,000 MW (8.6%) renewable by 2025 goal; the state's RPS exceeded its target more than 15 years early in 2009 and has a current renewable capacity of 11,586 MW (10%)

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, Tidal Energy, Wave Energy, Ocean Thermal⁴⁹³

Energy Efficiency Resource Standards

Policy Name and Date

Senate Bill 1125, 2011

Standard

20% reduction in annual growth in demand 2010 and 2011; 25% reduction in annual growth in demand 2012; 30% reduction in annual growth in demand 2013 and beyond

Mandatory/Voluntary

Voluntary⁴⁹⁴

Net Metering Standards

Capacity Limit

Per System: Varies by utility

Entire State: Varies by utility

Mandatory/Voluntary

Voluntary

Allowable Sources

Varies by utility⁴⁹⁶

ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Texas Department of Transportation certifies DBEs. Upon approval, these companies can be used to meet the DBE goals established for federally funded contracts required by law (49CFR Part 26).⁴⁹⁵

State Facts

Capital: Austin

Area: 266,833 sq mi

Population: 25,145,561

State Bird: Northern

Mockingbird

State Flower:

Bluebonnet⁴⁹²

TEXAS at a Glance:

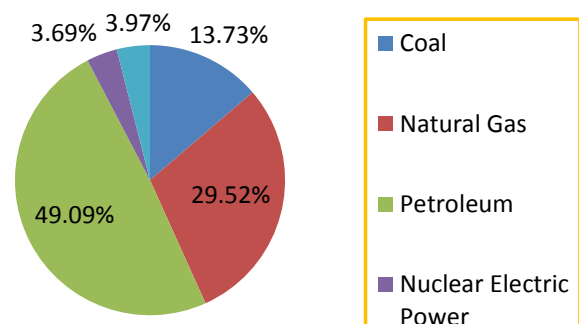
- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Texas Energy Fact

Texas led the Nation in wind-powered generation capacity in 2010 and was the first state to reach 10,000 megawatts of wind capacity.

<http://www.eia.gov/beta/state/?sid=TX>

Texas Energy Consumption Estimates 2010



Clean Energy Potential in Texas

Background

Renewable energy has been growing rapidly in Texas within the past several years, and there is still potential for further growth. Texas is now the leading state for wind generation, with over 22% of the nation's installed wind capacity. It also ranks first nationally for wind generation potential due to its plentiful wind resources from the Great Plains and along the Gulf Coast. In addition to wind energy, Texas has significant potential for solar and geothermal energy.⁴⁹⁷



Solar: Texas has urban utility-scale PV potential of 294,684 GWh (71.5% of total net generation), rural utility-scale PV potential of 38,993,582 GWh (over 100% of total net generation), rooftop PV potential is 78,717 GWh (19.1% of total net generation) and concentrated solar power potential is 22,786,750 GWh (over 100% of total net generation).

Wind: The onshore wind power potential is 5,552,400 GWh (over 100% of total net generation) and offshore wind power potential is 1,101,063 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 3,030,251 GWh (over 100% of total net generation).⁴⁹⁸

Incentives in Texas

Type	Incentives	Description
Statewide	LoanSTAR Revolving Loan Program	Through the State Energy Conservation Office (SECO), the LoanSTAR Program offers low-interest loans to all public entities, including state facilities, public schools, colleges, universities, and non-profit hospital facilities for Energy Cost Reduction Measures (ECRMs).
	Memorial Day Weekend Sales Tax Holiday for Energy-Efficient Products	Purchases of certain energy efficient products during Memorial Day weekend are exempt from the state sales and use tax.
	Renewable Energy Systems Property Tax Exemption	The Texas property tax code allows an exemption of the amount of the appraised property value that arises from the installation or construction of a solar or wind powered energy device that is primarily for the production and distribution of thermal, mechanical, or electrical energy for on-site use, or devices used to store that energy.
	Solar and Wind Energy Business Franchise Tax Exemption	Companies in Texas engaged solely in the business of manufacturing, selling, or installing solar energy devices are exempt from the franchise tax.
	Solar and Wind Energy Device Franchise Tax Deduction	Texas allows a corporation or other entity subject the state franchise tax to deduct the cost of a solar energy device from the franchise tax.

Type	Incentives	Description
Utility-Specific	<u>AEP (Central and North) - CitySmart Program</u>	The CitySmart Program is designed to help participants identify energy efficiency opportunities in existing and newly planned city facilities.
	<u>AEP (Central and North) - Residential Energy Efficiency Programs</u>	The Residential Standard Offer Program and Hard to Reach Standard Offer Program provide incentives to Project Sponsor contractors for installing energy efficiency measures at the homes of residential customers.
	<u>AEP (Central and SWEPCO) - Coolsaver A/C Tune Up</u>	Participating customers are eligible to receive a \$75 coupon for A/C and heat pump efficiency services performed as a result of the program's tune-up analysis.
	<u>AEP (Central, SWEPCO and North) - Commercial Solutions Program</u>	The no-cost Commercial Solutions Program is designed to help businesses, cities and counties address rising energy costs through energy efficiency improvements.
	<u>AEP (Central, SWEPCO and North) - SCORE Program for Schools</u>	The SCORE Program is designed to help K-12 public schools identify energy efficiency opportunities in existing and newly planned facilities and to provide monetary incentives to help implement the projects.
	<u>AEP (SWEPCO) - Residential Energy Efficiency Programs</u>	The SWEPCO Residential Standard Offer Program provides incentives to Project Sponsor contractors for installing energy efficiency measures at the homes of residential customers.

Type	Incentives	Description
Utility-Specific	AEP (SWEPCO) - SMART Source Solar PV Program	Southwestern Electric Power Company (SWEPCO) offers rebates to customers that install photovoltaic (PV) systems on homes.
	AEP Texas Central Company - SMART Source Solar PV Rebate Program	American Electric Power Texas Central Company (AEP-TCC) offers rebates to customers that install photovoltaic (PV) systems on homes or other buildings.
	Austin Energy - Value of Solar Residential Rate	Austin Energy, the municipal utility of Austin Texas, offers the Value of Solar Rate for residential solar photovoltaic (PV) systems.
	Austin Energy - Commercial PV Incentive Program	Austin Energy, a municipal utility, offers a production incentive to its commercial and multi-family residential customers for electricity generated by qualifying photovoltaic (PV) systems of up to 20 kilowatts (kW) AC.
	Austin Energy - Residential Energy Efficiency Loan Program	Austin Energy offers three types of loans to residential customers to finance energy efficient improvements in eligible homes.
	Austin Energy - Residential Solar Loan Program	Austin Energy offers two types of loans for residential customers to finance solar water heater and solar PV systems in eligible homes.

Type	Incentives	Description
Utility-Specific	Austin Energy - Small Business Energy Efficiency Rebate Program	Austin Energy offers a special incentive for its small-to-midsize and non-profit business customers to increase the energy efficiency of facilities through the Small Business Rebate Program.
	Austin Energy - Residential Energy Efficiency Rebate Program	Austin Energy offers incentives to its residential customers to encourage the use of energy efficient equipment and measures.
	Austin Energy - Multi-Family Energy Efficiency Rebate Program	The Austin Energy Multi-Family Program provides cash incentives to owners, developers, and property managers of apartments and other multi-family properties for making energy efficiency improvements.
	Austin Energy - Free Home Energy Improvements Program	Austin Energy provides a variety of weatherization measures at no cost to its low-income and disabled residents through its Free Home Energy Improvements Program.
	Austin Energy - Commercial New Construction Efficiency Rebates	Austin Energy offers incentives for the construction and major renovation of commercial buildings within its service territory.
	Austin Energy - Commercial Energy Management Rebate Program	Austin Energy offers incentives for commercial customers to increase the energy efficiency of facilities through the Commercial Rebate Program.
	Austin Energy - Residential Solar PV Rebate Program	Austin Energy's Solar Rebate Program offers a \$2.00 per watt incentive to eligible residential who install photovoltaic (PV) systems on their homes.

Type	Incentives	Description
Utility-Specific	Austin Energy - Solar Water Heating Rebate	Austin Energy offers its residential, commercial, and municipal customers up front rebates or a low-interest loan for the purchase and installation of solar hot water heaters.
	Bandera Electric Cooperative - Residential Heat Pump Rebate Program	The Bandera Electric Cooperative offers a \$200 rebate for the installation of 15 SEER or higher heat pumps in existing homes.
	Brownsville Public Utilities Board - Green Living Residential Rebate Program	Brownsville Public Utilities Board offers residential customers rebates for installation of energy efficient measures.
	Bryan Texas Utilities - Commercial Energy Efficiency Program	Bryan Texas Utilities (BTU) offers a Lighting Program for commercial customers to help offset the cost of retrofitting facilities.
	City of San Marcos - Energy Efficient Home Rebate Program	The City of San Marcos offers an Energy Efficient Home Rebate Program for the installation of HVAC equipment, insulation types/levels, duct leakage, windows and doors.
	City of San Marcos - Distributed Generation Rebate Program	The City of San Marcos offers a Distributed Generation Rebate Program for the installation of grid-tied renewable energy systems.
	CenterPoint Energy - Commercial and Industrial Energy Efficiency Programs	CenterPoint Energy's Commercial & Industrial Standard Offer Program pays incentives to service providers who install energy efficiency measures in commercial or industrial facilities that are located within its service territories.

Type	Incentives	Description
Utility-Specific	<u>CenterPoint Energy - Residential and Small Commercial Efficiency Program</u>	CenterPoint Energy's (CNP) Residential and Small Commercial Standard Offer Program (SOP) provides incentives to encourage contractors to install energy efficiency measures in homes and small businesses in CNP's designated service area.
	<u>CenterPoint Energy - SCORE and CitySmart Program</u>	The SCORE Program is a market transformation program offered to K-12 school districts and higher education customers in the CenterPoint Energy, Inc. electric distribution service territory.
	<u>College Station Utilities - Residential Energy Back II Rebate Program</u>	College Station Utilities offers an incentive for residential customers to install energy efficient HVAC equipment through the Energy Back II Program.
	<u>CoServ - Solar Energy Rebate</u>	CoServ Electric Cooperative provides a variety of "Think Green Rebates" to its members, including a solar energy rebate.
	<u>CoServ Electric Cooperative - Commercial Energy Efficient Lighting Rebate Program</u>	CoServ Electric Cooperative provides rebates for commercial and industrial customers who upgrade to high efficiency lighting for the workplace.
	<u>CoServ Electric Cooperative - Residential Energy Efficiency Rebate Program</u>	CoServ Electric Cooperative's "Think Green Rebate Program" provides a range of incentives encouraging its residential customers to upgrade to high efficiency equipment in their homes.

Type	Incentives	Description
Utility-Specific	CPS Energy - New Residential Construction Incentives	CPS Energy offers incentives for new residential construction that is at least 15% more efficient than required by the City of San Antonio Building Code (based on IECC 2009).
	CPS Energy - New Commercial Construction Incentives	CPS Energy offers incentives for new commercial construction that is at least 15% more efficient than required by the City of San Antonio Building Code (based on IECC 2009).
	CPS Energy - Commercial Energy Efficiency Rebates	CPS Energy, San Antonio's municipal electric utility, offers energy efficiency rebates for commercial electric customers.
	CPS Energy - Solar Hot Water Rebate Program	As part of a larger program designed to reduce electricity demand within its service territory, CPS Energy offers rebates for solar water heaters to its customers.
	CPS Energy - Solar PV Rebate Program	CPS Energy, San Antonio's municipal utility, offers rebates to customers who install solar photovoltaic (PV) systems on their homes, schools, or businesses.
	CPS Energy (Electric) - Residential Energy Efficiency Rebate Program	CPS Energy offers a variety of rebates for energy efficiency related improvements to residential homes, including appliances, HVAC equipment, insulation, and equipment recycling.

Type	Incentives	Description
Utility-Specific	<u>Denton Municipal Electric - Standard Offer Rebate Program</u>	Within the GreenSense program, Denton Municipal Electric's Standard Offer Program provides rebates to large commercial and industrial customers for lighting retrofits, HVAC upgrades and motor replacements.
	<u>Denton Municipal Electric - GreenSense Energy Efficiency Rebate Program</u>	Denton Municipal Electric pays residential and small commercial customers to reduce energy demand and consumption in order to reduce the utility bills of DME customers, reduce peak load, reduce emissions, and promote energy conservation.
	<u>Denton Municipal Electric - GreenSense Solar Rebate Program</u>	Denton Municipal Electric offers rebates to its electric customers for the installation of solar PV and solar water heating systems.
	<u>El Paso Electric Company - Small Business and Large Commercial Programs</u>	El Paso Electric (EPE) offers several incentive programs targeting small business owners, as well as larger commercial and industrial EPE customers.
	<u>El Paso Electric Company - Residential Solutions Program</u>	The El Paso Electric Residential Solutions Program offers El Paso Electric customers and participating contractors cash and non-cash incentives for implementing energy efficiency improvements in the Texas portion of the El Paso Electric Service territory.
	<u>El Paso Electric Company - Solar PV Pilot Program</u>	El Paso Electric (EPE) offers rebates to its Texas customers that install photovoltaic (PV) systems on homes or other buildings.

Type	Incentives	Description
Utility-Specific	El Paso Electric Company - SCORE Program for Counties, Municipalities, and Schools	El Paso Electric offers a targeted incentive program for public institutions, local governments and higher education.
	Entergy Texas - Energy Star Homes Program for Builders	Entergy Texas offers an incentive to builders in its service territory for the construction of Energy Star certified homes.
	Entergy Texas - Residential and Small Commercial Standard Offer Program	The Hard to Reach, A/C Heat Pump, and Residential Standard Offer Programs provides incentives for the retrofit or new construction installation of a wide range of energy efficiency measures.
	Entergy Texas - SCORE, CitySmart, and Commercial Solutions Programs	The Commercial Solutions Program is designed to help participants identify energy efficiency opportunities in existing and newly planned facilities and to provide monetary incentives to implement the projects.
	Farmers Electric Cooperative - Residential/Agricultural Energy Efficiency Rebate Program	Farmers Electric Cooperative offers incentives for its residential and agricultural members to increase the energy efficiency of eligible homes and facilities.
	Garland Power & Light - Energy Efficiency Rebate Programs	Garland Power and Light (GP&L) offers incentives to its residential, small commercial and commercial customers to increase the energy efficiency of homes and facilities.

Type	Incentives	Description
Utility-Specific	Guadalupe Valley Electric Cooperative - Conservation Plan 7 Loan Program	Guadalupe Valley Electric Cooperative offers an incentive for members to increase the energy efficiency of existing homes and facilities through the Conservation Plan 7 Loan Program.
	Guadalupe Valley Electric Cooperative - Residential Energy Efficiency Rebate Programs	Guadalupe Valley Electric Cooperative (GVC) offers a variety of incentives to help residential customers save energy.
	Magic Valley Electric Cooperative - ENERGY STAR Builders Program	Magic Valley Electric Cooperative's (MVEC) ENERGY STAR Builders Program offers a variety of incentives to builders of energy efficient homes within MVEC service territory.
	Magic Valley Electric Cooperative - Residential Energy Efficiency Rebate Program	Magic Valley Electric Cooperative's Value Incentive Program (VIP) offers consumers incentives for the installation of new central heat pump systems, dual-fuel heating systems, central air conditioners, water heaters and heat pump water heaters in single-family homes.
	New Braunfels Utilities - Residential Solar Water Heater Rebate Program	New Braunfels Utilities offers a rebate for residential customers who purchase and install solar water heating systems on eligible homes.
	New Braunfels Utilities - Energy Efficiency and Water Conservation Rebate Programs	New Braunfels Utilities offer a variety of programs encouraging its customers to make their homes more energy efficient.

Type	Incentives	Description
Utility-Specific	Oncor Electric Delivery - Government and Education Facilities Program	The Government Facilities Program provides viable energy efficiency and demand reduction solutions for city and county owned and operated facilities.
	Oncor Electric Delivery - Commercial and Industrial Rebate Program	Oncor provides incentives to service providers who install approved energy efficiency measures in commercial, industrial, and government sites.
	Oncor Electric Delivery - Solar Photovoltaic Standard Offer Program	Oncor Electric Delivery offers rebates to its customers that install photovoltaic (PV) systems on homes or other buildings.
	Pedernales Electric Cooperative - Commercial Lighting Rebate Program	For existing and new commercial construction, Pedernales Electric Cooperative provides incentives for kilowatts saved through efficient lighting.
	Pedernales Electric Cooperative - HVAC Rebate Program	Pedernales Electric Cooperative offers equipment rebates to its members who install energy efficient HVAC equipment.
	Sharyland Utilities - Commercial Standard Offer Program	Sharyland Utilities offers its Commercial Standard Offer Program to encourage business customers of all sizes to pursue energy efficiency measures in their facilities.
	Sharyland Utilities - Residential Standard Offer Program	Sharyland Utilities offers the Residential and "Hard-to-Reach" Standard Offer Programs, which encourage residential customers to pursue energy saving measures and equipment upgrades in their homes.

Type	Incentives	Description
Utility-Specific	Texas Gas Service - Residential Solar Water Heating Rebate Program	Texas Gas Service offers a flat rebate of \$750 for its residential customers within the Austin and Sunset Valley city limits for the installation and purchase of a new solar water heater with natural gas backup.
	Texas Gas Service - Commercial Energy Efficiency Rebate Program	Texas Gas Service (TGS) offers a range of financial incentives to commercial customers who purchase and install energy efficient commercial equipment.
	Texas Gas Service - Residential Energy Efficiency Rebate Program	Texas Gas Service offers an incentive for its residential customers within the Austin and Sunset Valley city limits to install new central furnaces, hydronic water heaters, high efficiency gas water heaters (tank and tankless), duct repair/sealing and attic insulation.
	Texas-New Mexico Power Company - Residential Energy Efficiency Programs	Texas-New Mexico Power's (TNMP) Residential Standard Offer Program promotes energy efficiency among residential electricity customers in its Texas service area.
	Texas-New Mexico Power Company - SCORE, CitySmart, and Commercial Solutions Programs	Texas-New Mexico Power's Commercial Solutions Program provides incentives for the retrofit installation of a wide range of measures that reduce customer energy costs, reduce peak demand, and/or save energy in non-residential facilities.

Type	Incentives	Description
Utility-Specific	Tri-County Electric Cooperative - Energy Efficient Water Heater Rebate Program	Tri-County Electric Cooperative offers a \$75 rebate on the purchase of energy efficient electric water heaters.
	TXU - Commercial Energy Efficiency Program	TXU offers a variety of rebates to business customers who sign up for or renew a 12-month contract with TXU.
	United Cooperative Services - Residential Energy Efficiency Rebate Program	United Cooperative Services offers a one-time rebate program for new home construction and retrofit upgrades.
	Xcel Energy - Commercial and Industrial Standard Offer Program	Xcel Energy Large Commercial and Industrial Standard Offer Program (SOP) pays incentives to businesses for retrofit and new construction projects that save energy in peak summer demand periods and are located within Xcel's service territory.
	Xcel Energy - Residential and Hard-to-Reach Standard Offer Program	The Residential and Hard-to-Reach Standard Offer Programs provide incentives to "Project Sponsors" to install energy efficiency measures in Xcel's service area.
Local	City of Dallas - Green Building Expedited Plan Review	The Dallas Green Building Program establishes expedited permitting for green buildings.
	City of Friendswood - Commercial Green Building Tax Abatement	The City of Friendswood offers a tax abatement for LEED certified commercial buildings located within the city.

Type	Incentives	Description
Local	City of Houston - Property Tax Abatement for Green Buildings	In September 2009, Houston enacted Ordinance No. 2009-858, the City of Houston Tax Abatement Program, which establishes a partial tax abatement for commercial buildings that meet LEED standards.
	City of Plano - Smart Energy Loan Program	The City of Plano offers the Smart Energy Loan (SEL) Program to provide energy efficiency loans to homeowners.
	City of Sunset Valley - PV Rebate Program	The City of Sunset Valley offers rebates to local homeowners who install photovoltaic (PV) systems on their properties.
	City of Sunset Valley - Solar Water Heating Rebate Program	The City of Sunset Valley offers rebates to local homeowners who install solar water heating systems on their properties.
	Harris County - Green Building Tax Abatement for New Commercial Construction	In 2008, the Harris County Commissioners Court adopted guidelines for partial tax abatements for new construction of commercial LEED certified buildings.

UTAH

*The Beehive State*⁴⁹⁹

State Facts

Capital: Salt Lake City

Area: 84,897 sq mi

Population: 2,763,885

State Bird: California
Seagull

State Flower: Sego
Lily⁵⁰⁰

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 202, March 18, 2008

Standard

20% renewable by 2025

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Water Heat,
Solar Space Heat,
Solar Thermal

Electric, Photovoltaics, Landfill Gas, Wind, Biomass,
Hydroelectric, Geothermal Electric, Municipal Solid Waste,
CHP/Cogeneration, Hydrogen, Coal Mine Methane,
Compressed Air Energy Storage, Anaerobic Digestion, Small
Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal⁵⁰¹

UTAH at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Utah.⁵⁰²

Status

No Activity Identified⁵⁰³

Net Metering Standards

Capacity Limit

Per System: 2000 kW for non-residential; 25
kW for residential

Entire State: 20% of 2007 peak demand for
Rocky Mountain Power, and
0.1% of utility's 2007 peak demand for co-ops

Mandatory/Voluntary

Mandatory

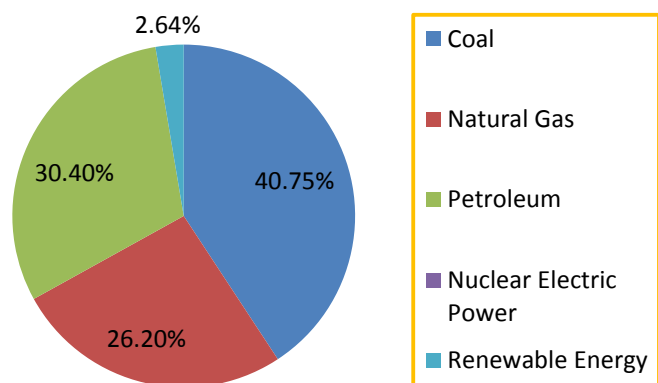
Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill
Gas, Wind, Biomass, Hydroelectric, Geothermal
Electric, Fuel Cells, Hydrogen, Waste Gas and
Waste Heat Capture or Recovery, Anaerobic
Digestion, Small Hydroelectric, Fuel Cells using
Renewable Fuels⁵⁰⁵

Utah Energy Fact

In Utah, 4.7 percent of net electricity
generation came from renewable resources in
2011. <http://www.eia.gov/beta/state/?sid=UT>

Utah Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Utah Unified Certification Program
certifies MBEs for the U.S. Department of
Transportation Disadvantaged Business
Enterprise Program in the state of Utah.⁵⁰⁴

Clean Energy Potential in Utah

Background

Solar power in Utah has the capacity to provide almost a third of all electricity used in the United States. Utah is one of the seven US states with the best potential for solar power, along with California, Nevada, Arizona, New Mexico, Colorado, and Texas. In 2013, Utah broke ground on a new wind energy project that will have the capacity for 80MW.⁵⁰⁶



Solar: Utah has urban utility-scale PV potential of 30,492 GWh (72.2% of total net generation), rural utility-scale PV potential of 5,184,878 GWh (over 100% of total net generation), rooftop PV potential is 7,514 GWh (17.7% of total net generation) and concentrated solar power potential is 5,067,547 GWh (over 100% of total net generation).

Wind: Onshore wind power potential is 31,552 GWh (74.6% of total net generation).

Geothermal: Utah has hydrothermal power potential of 12,982 GWh (30.7% of total net generation) and enhanced geothermal systems potential is 939,381 GWh (over 100% of total net generation).⁵⁰⁷

Incentives in Utah

Type	Incentives	Description
Statewide	Alternative Energy Development Incentive (Corporate)	The Alternative Energy Development Incentive (AEDI) is a post-performance non-refundable tax credit for 75% of new state tax revenues (including state, corporate, sales and withholding taxes) over the life of the project, or 20 years, whichever is less.
	Alternative Energy Development Incentive (Personal)	The Alternative Energy Development Incentive (AEDI) is a post-performance non-refundable tax credit for 75% of new state tax revenues (including state, corporate, sales and withholding taxes) over the life of the project, or 20 years, whichever is less.
	Alternative Energy Manufacturing Tax Credit	The Alternative Energy Development Incentive (AEDI) is a post-performance non-refundable tax credit for up to 100% of new state tax revenues (including state, corporate, sales and withholding taxes) over the life of a manufacturing project, or 20 years, whichever is less.
	Renewable Energy Sales Tax Exemption	Utah exempts the purchase or lease of equipment used to generate electricity from renewable resources from the state sales tax.
	Renewable Energy Systems Tax Credit (Corporate)	Utah's individual income tax credit for renewable energy systems includes provisions for both residential and commercial applications.

Type	Incentives	Description
Statewide	Renewable Energy Systems Tax Credit (Personal)	Utah's income tax credit for renewable energy systems includes provisions for both residential and commercial applications.
	Revolving Loan Fund for Energy Efficiency Projects in School Districts and Political Subdivisions	HB 351, signed in 2007, created a \$5 million revolving loan fund to provide zero-interest loans for energy efficiency projects in K-12 schools and school districts in Utah.
	State Facility Energy Efficiency Fund	HB 198 of 2008 established a revolving loan program to fund efficiency improvements in state facilities.
Utility-Specific	Questar Gas - Residential Energy Efficiency Rebate Programs	Questar Gas provides rebates for energy efficient appliances and heating equipment, and certain weatherization measures through the ThermWise program.
	Questar Gas - Home Builder Gas Appliance Rebate Program	Questar Gas provides incentives for homebuilders to construct energy efficient homes.
	Questar Gas - Commercial Energy Efficiency Rebate Program	Questar Gas provides rebates to its business customers for installing energy efficient food service equipment, laundry equipment, HVAC and water heating equipment, and certain weatherization measures.
	Questar Gas - Residential Solar Assisted Water Heating Rebate Program	Questar gas provides incentives for residential customers to purchase and install solar water heating systems on their homes.

Type	Incentives	Description
Utility-Specific	Rocky Mountain Power - WattSmart Residential Efficiency Program	Rocky Mountain Power provides incentives for residential customers to increase the energy efficiency of homes through the Home Energy Savings Program.
	Rocky Mountain Power - Self-Direction Credit Program	Rocky Mountain Power offers a Self-Direction Credit Program to its industrial and large commercial customers with annual electric usage of more than 5 million kWh or a peak load of 1,000 kW or more.
	Rocky Mountain Power - New Homes Program	The Rocky Mountain Power ENERGY STAR New Homes Program offers cash incentives to contractors who build energy efficient homes.
	Rocky Mountain Power - FinAnswer Express	Rocky Mountain Power's FinAnswer Express Program includes incentives and technical assistance for lighting, HVAC and other equipment upgrades that increase energy efficiency and exceed code requirements in commercial and industrial facilities.
	Rocky Mountain Power - Energy FinAnswer	Rocky Mountain Power's Energy FinAnswer Program provides cash incentives to help its commercial and industrial customers improve the efficiency of existing facilities and build new facilities that are significantly more efficient than code.

Type	Incentives	Description
Utility-Specific	Rocky Mountain Power - Solar Incentive Program	Eligible systems must be net metered, and the statewide maximum system size for net metered systems is 25 kilowatts (kW) for residential and 2 MW for non-residential.
	Washington City Power - PV Rebate Program	Washington City offers a rebate of \$1,000 per kilowatt-DC (kW-DC) to customers who install photovoltaic (PV) systems or wind-energy systems.



Renewable Portfolio Standards

Policy Name and Date

Senate Bill 209 Energy Efficiency and Affordability Act, March 20, 2008

Standard

Goal: 20% by 2017

Minimum obligation: (1) any increase in retail electric sales between 2005-2012 that is also at least 5% of 2005 sales; OR (2) 10% of retail electric sales in 2005

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Fuel Cells using Renewable Fuels⁵¹⁰

VERMONT at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Efficiency Vermont, 2000

Standard

320,000 MWh electricity savings (1.9% annual reduction) within a 3-year goal from 2012-2014

Mandatory/Voluntary

Voluntary⁵¹¹

State Facts

Capital: Montpelier

Area: 9,617 sq mi

Population: 625,741

State Bird: Hermit Thrush

State Flower: Red

Clover⁵⁰⁹

Vermont Energy Fact

In 2010, Vermont had the Nation's lowest carbon dioxide emissions from electricity generation.

<http://www.eia.gov/state/?sid=VT>

Net Metering Standards

Capacity Limit

Per System: 2200 kW for military systems; 20 kW for micro-CHP; 500 kW for all other systems

Entire State: 4% of utility's 1996 peak demand or peak demand during most recent calendar year (whichever is greater).

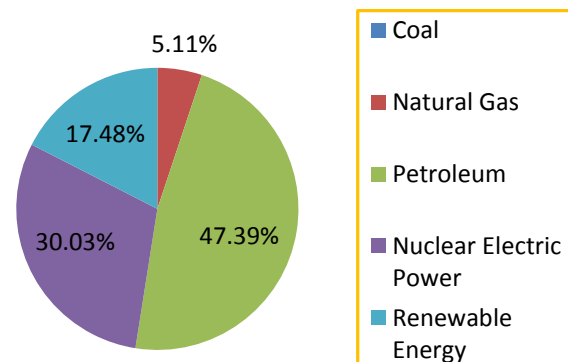
Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, CHP/Cogeneration, Anaerobic Digestion, Small Hydroelectric, Fuel Cells using Renewable Fuels⁵¹²

Vermont Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Disadvantaged Business Enterprise Program at the Vermont Agency of Transportation certifies MBEs for transportation contracts.⁵¹³

Clean Energy Potential in Vermont

Background

The state of Vermont is committed to tapping into the state's renewable energy resources.

Renewable Energy Vermont, created in 2001, a non-partisan renewable energy trade association that works to reduce the state's dependence on fossil fuels and expand the availability of renewable sources of energy throughout the state. The abundance of renewable energy resources within the state, the efforts of Renewable Energy Vermont and others continue to help the state operate on an even greater percentage of renewable energy resources.⁵¹⁴



Solar: Vermont has urban utility-scale PV potential of 1,632 GWh (24.6% of total net generation), rural utility-scale PV potential of 54,728 GWh (over 100% of total net generation), and rooftop PV potential is 1,115 GWh (16.8% of total net generation).

Wind: Onshore wind power potential is 7,796 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 35,617 GWh (over 100% of total net generation).⁵¹⁵

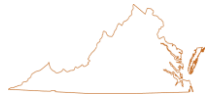
Incentives in Vermont

Type	Incentives	Description
Statewide	Agricultural Lighting and Equipment Rebate Program	In Vermont, agricultural operations are eligible for prescriptive and customized incentives on equipment proven to help make farms more efficient.
	Business Energy Conservation Loan Program	The Vermont Business Energy Conservation Loan Program is a joint-effort between Efficiency Vermont and the Vermont Economic Development Authority.
	Commercial Lighting and LED Lighting Incentives	Incentives for energy efficient commercial lighting equipment as well as commercial LED lighting equipment are available to businesses under the Efficiency Vermont Lighting and LED Lighting Incentive Programs.
	Commercial New Construction	Efficiency Vermont offers support to encourage energy efficient design for new construction.
	Compressed Air Systems	Efficiency Vermont offers rebates to encourage the installation of efficient compressors.
	Energy Star Homes (New Construction)	For individuals building a new home, Efficiency Vermont offers free technical assistance and targeted rebates to help ensure that the home is as energy efficient as possible.
	Home Performance with Energy Star (Existing Residential)	Efficiency Vermont works with homeowners on comprehensive energy efficiency projects and offers several incentives.

Type	Incentives	Description
Statewide	HVAC Equipment Rebate Program	Efficiency Vermont offers rebates for commercial installations of high efficiency HVAC equipment and controls.
	Investment Tax Credit	Vermont offers an investment tax credit for installations of renewable energy equipment on business properties.
	Local Option - Property Tax Exemption	Vermont allows municipalities the option of offering an exemption from the municipal real and personal property taxes for certain renewable energy systems (Note: state property taxes would still apply).
	Multifamily Apartment Rebate Program	Efficiency Vermont offers rebates for the installation of energy efficient equipment in existing multi-family apartments in Vermont for rental property owners.
	Renewable Energy Systems Sales Tax Exemption	The exemption now generally applies to systems up to 250 kilowatts (kW) in capacity that generate electricity using eligible "renewable energy" resources (as defined under 30 V.S.A. § 8002), to micro-combined heat and power (CHP) systems up to 20 kW, and to solar water heating systems.
	Residential Energy Efficiency Rebate Programs	Efficiency Vermont provides financial incentives for its residential customers to install energy efficient equipment in their homes.

Type	Incentives	Description
Statewide	Small Commercial Refrigeration Incentive	Efficiency Vermont offers financial incentives to cover the incremental costs of energy efficient refrigeration for commercial, industrial, agricultural and institutional buildings.
	Small-Scale Renewable Energy Incentive Program	Vermont's Small Scale Renewable Energy Incentive Program, initiated in June 2003, provides funding for new solar water heating, solar electric (photovoltaic), wind, and micro-hydro energy system installations.
	Standard Offer for Qualifying SPEED Resources	In May 2009, Vermont enacted legislation requiring all Vermont retail electricity providers to purchase electricity generated by eligible renewable energy facilities through the Sustainably Priced Energy Enterprise Development (SPEED) Program via long-term contracts with fixed standard offer rates.
	Uniform Capacity Tax and Exemption for Solar	During the 2012 legislative session, Vermont passed a 100% property tax exemption for solar photovoltaic (PV) systems up to and including 10 kilowatts (kW).
Utility-Specific	Burlington Electric Department - Commercial Energy Efficiency Rebate Program	Burlington Electric Department (BED) offers a variety of rebate incentives to its commercial customers.
	Burlington Electric Department - Multi-Family Rental Energy Efficiency Rebate Program	Burlington Electric Department offers an innovative rebate program geared towards rental apartment owners.

Type	Incentives	Description
Utility-Specific	Burlington Electric Department - Residential Energy Efficiency Rebate Program	Burlington Electric Department offers a variety of rebate incentives that encourage residential customers to upgrade to energy efficient equipment in their homes.
	Green Mountain Power - Biomass Electricity Production Incentive	Green Mountain Power Corporation (GMP), Vermont's largest electric utility, offers a production incentive to farmers who own systems utilizing anaerobic digestion of agricultural products, byproducts or wastes to generate electricity.
	Green Mountain Power - Solar GMP	Green Mountain Power, an investor-owned electric utility operating in Vermont, offers a credit to customers with net metered photovoltaic (PV) systems.
	Vermont Gas - Commercial Energy Efficiency Program	Vermont Gas (VGS) offers two energy efficiency programs for commercial customers: the WorkPlace New Construction Program and the WorkPlace Equipment Replacement and Retrofit Program.
	Vermont Gas - Residential Energy Efficiency Program	The Equipment Replacement Program offers rebates for residential customers who replace existing heating equipment or water heaters with a more energy efficient one.
	Vermont Gas - Residential Energy Efficiency Loan and Rebate Program	Vermont Gas will rebate one third of the installed cost of the recommended measures for insulation and air sealing for homes and multi-family buildings.



VIRGINIA

The Constitution State⁵¹⁶

State Facts

Capital: Richmond

Area: 40,599 sq mi

Population: 8,001,024

State Bird: Northern
Cardinal

State Flower: Flowering
Dogwood⁵¹⁷

Renewable Portfolio Standards

Policy Name and Date

Senate Bill 1416, April 11, 2007

Standard

15% of the base year (2007)
sales by 2025

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind,
Biomass, Hydroelectric, Geothermal Electric, Energy from Waste,
Anaerobic Digestion, Tidal Energy, Wave Energy⁵¹⁸

Virginia Energy Fact

In 2010, Virginia ranked eighth in the
number of alternate fuel vehicles in use,
most of which were ethanol 85 fueled.
<http://www.eia.gov/beta/state/?sid=VA>

Energy Efficiency Resource Standards

Policy Name and Date

Senate Bill 1416, March 2007

Standard

10% electricity savings by 2022 relative to 2006 base sales (.63%
annual reduction)

Mandatory/Voluntary

Voluntary⁵¹⁹

VIRGINIA at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Net Metering Standards

Capacity Limit

Per System: 500 kW for non-residential; 20 kW for residential
Entire State: 1% of utility's adjusted Virginia peak-load
forecast for the previous year

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass,
Hydroelectric, Geothermal Electric, Municipal Solid Waste,
Small Hydroelectric, Tidal Energy, Wave Energy⁵²¹

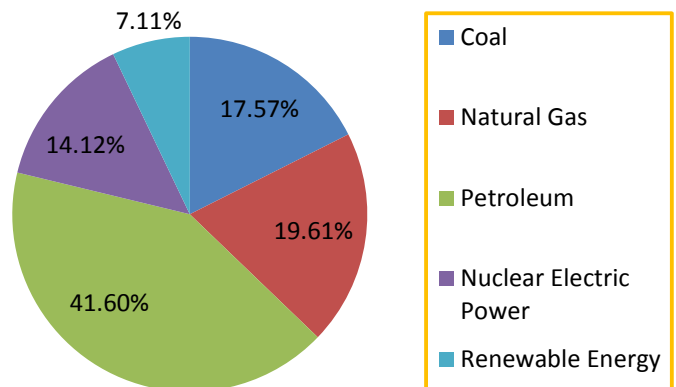
ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Virginia Department of Minority
Business Enterprise certifies MBEs to
enhance procurement opportunities for
businesses participating in state funded
projects.⁵²⁰

Virginia Energy Consumption Estimates 2010



Clean Energy Potential in Virginia

Background

Virginia has one of the nation's fastest growing renewable energy economies. The Virginia Beach coastline offers significant potential for offshore wind energy. There is also significant potential for solar and geothermal energy resources, but both have remained largely untapped.⁵²²



Solar: Virginia has urban utility-scale PV potential of 27,451 GWh (37.6% of total net generation), rural utility-scale PV potential of 1,882,467 GWh (over 100% of total net generation), and rooftop PV potential is 22,267 GWh (30.5% of total net generation).

Wind: Onshore wind power potential is 4,589 GWh (6.28% of total net generation) and offshore wind power potential is 361,054 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 290,737 GWh (over 100% of total net generation).⁵²³

Incentives in Virginia

Type	Incentives	Description
Statewide	Clean Energy Manufacturing Incentive Grant Program	The Clean Energy Manufacturing Grant Program offers funding to a manufacturer of renewable energy products used for energy conservation, storage, or grid efficiency purposes.
	Green Jobs Tax Credit	In April 2010, Virginia enacted the green jobs tax credit. For every green job created with a yearly salary of \$50,000 or more, the company will earn a \$500 income tax credit for five years.
	Income Tax Deduction for Energy-Efficient Products	The Income Tax Deduction is available for dishwashers, clothes washers, air conditioners, ceiling fans, compact fluorescent light bulbs, dehumidifiers, programmable thermostats or refrigerators that meet or exceed federal Energy Star standards.
	Local Option - Property Tax Exemption for Solar	Virginia allows any county, city or town to exempt or partially exempt solar energy equipment or recycling equipment from local property taxes.
	Local Option - Property Tax Assessment for Energy Efficient Buildings	In March 2008, Virginia enacted legislation that allows local jurisdictions to assess the property tax of energy efficient buildings at a reduced rate.
	Project and Equipment Financing	The Virginia Resources Authority (VRA) was created in 1984 and provides financial assistance to local governments in Virginia for a variety of projects, including energy and energy conservation projects.

Type	Incentives	Description
Statewide	Sales Tax Exemption for Energy-Efficient Products (Sales Tax Holiday)	Virginia allows a four-day sales tax exemption on Energy Star products of \$2,500 or less per product, purchased for non-commercial home or personal use.
	Solar Manufacturing Incentive Grant (SMIG) Program	Created in 1995 and administered jointly by the Virginia Department of Mines, Minerals and Energy, and the Virginia Economic Development Partnership, the Solar Manufacturing Incentive Grant (SMIG) Program offers up to \$4.5 million per year to encourage the production of photovoltaic panels in Virginia.
Utility-Specific	Charlottesville Gas - Residential Energy Efficiency Rebate Program	Charlottesville Gas offers rebates to residential customers purchasing and installing specified energy efficient equipment.
	City of Danville Utilities - Business Energy Efficiency Rebates	The City of Danville provides a variety of energy efficiency rebates for eligible commercial and industrial customers.
	City of Danville Utilities - Residential Energy Efficiency Rebate Program	The City of Danville Utilities offers a variety of rebates to all electric residential customers served by the department.
	Columbia Gas of Virginia - Business Efficiency Rebate Program	Columbia Gas of Virginia offers rebates to commercial customers for the purchase and installation of energy efficient equipment.
	Columbia Gas of Virginia - Home Savings Rebate Program	Columbia Gas of Virginia offers rebates to residential customers for the purchase and installation of energy efficient appliances and equipment.

Type	Incentives	Description
Utility-Specific	Dominion Virginia Power - Commercial Energy Efficiency Programs	Dominion Virginia Power provides a number of rebates to customers for the installation of energy efficient equipment and measures.
	Dominion Virginia Power - Residential Energy Efficiency Rebate Program	Dominion Virginia Power provides a number of rebates to customers for the installation of energy efficient equipment and measures.
	TVA - Mid-Sized Renewable Standard Offer Program	The Tennessee Valley Authority (TVA) now compliments the small generation Green Power Providers Program by providing incentives for mid-sized renewable energy generators between 50 kW and 20 MW to enter into long-term price contracts.
	TVA - Green Power Providers	Tennessee Valley Authority (TVA) and participating power distributors of TVA power offer a performance-based incentive program to homeowners and businesses for the installation of renewable generation systems from the following qualifying resources: PV, wind, hydropower, and biomass.
	TVA - Energy Right Solutions for Business	The Tennessee Valley Authority (TVA) offers the energy right Solutions Program for commercial and industrial facilities.
	TVA Partner Utilities - Energy Right Heat Pump Program	The Tennessee Valley Authority (TVA) energy right Heat Pump Plan provides financing to promote the installation of high efficiency heat pumps in homes and small businesses.

Type	Incentives	Description
Utility-Specific	TVA Partner Utilities - Energy Right New Homes Program	The Tennessee Valley Authority (TVA) energy right New Homes Plan provides incentives for all electric, energy efficient new homes by offering graduated rebates for new homes.
	TVA Partner Utilities - Energy Right Water Heater Program	The TVA energy right Water Heater Plan promotes the installation of high efficiency water heaters in homes and small businesses.
	TVA Partner Utilities - In-Home Energy Evaluation Program	The Tennessee Valley Authority (TVA) energy right In-Home Energy Evaluation Pilot Program encourages the installation of energy efficiency improvements in existing single-family dwellings.
	Washington Gas - Residential Energy Efficiency Rebate Program	Washington Gas provides a number of rebates to residential customers who utilize energy efficient equipment and measures in the home.
Local	Arlington County - Green Building Incentive Program	In October 1999, the County Board of Arlington adopted a Pilot Green Building Incentive Program using the standards established by the U. S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System.
	Local Energy Alliance Program - Home Performance with ENERGY STAR	The LEAP program offers a range of incentive options to residents in Northern Virginia, and the city of Charlottesville, Albemarle, Louisa, Greene, Fluvanna, Culpeper, Orange, Nelson and Madison. LEAP utilizes an online Home Energy Profile to enroll utility customers in LEAP's Home Performance with ENERGY STAR Program.

WASHINGTON

The Evergreen State⁵²⁴



Renewable Portfolio Standards

Policy Name and Date

Ballot Initiative 937, November 7, 2006

Standard

15% renewable by 2020

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Biodiesel⁵²⁶

State Facts

Capital: Olympia

Area: 68,095 sq mi

Population: 6,724,540

State Bird: Willow

Goldfinch

State Flower: Coast

Rhododendron⁵²⁵

WASHINGTON at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Initiative 937, 2006

Standard

Varies by utility

Mandatory/Voluntary

Mandatory⁵²⁷

Washington Energy Fact

Washington ranked sixth in the Nation in net generation of electricity from wind energy in 2011.

<http://www.eia.gov/beta/state/?sid=WA>

Net Metering Standards

Capacity Limit

Per System: 100 kW

Entire State: 0.25% of utility's 1996 peak demand (increases to 0.5% on 1/1/2014)

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Hydroelectric, Fuel Cells, CHP/Cogeneration, Small Hydroelectric, Fuel Cells using Renewable Fuels⁵²⁸

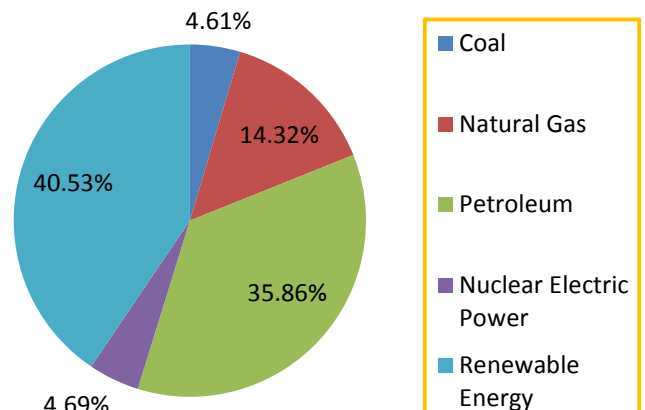
ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Washington State Office of Minority and Women's Business Enterprises certifies MBEs.⁵²⁹

Washington Energy Consumption Estimates 2010



Clean Energy Potential in Washington

Background

Washington currently ranks 10th among the 50 states and the District of Columbia in clean energy jobs, in part due to the state's supportive incentives for manufacturers and utilities producing renewable energy. The state still has potential to further expand its renewable energy portfolio due to its abundant solar, wind and geothermal resources.⁵³⁰



Solar: Washington has urban utility-scale PV potential of 33,690 GWh (32.5% of total net generation), rural utility-scale PV potential of 1,738,151 GWh (over 100% of total net generation), and rooftop PV potential is 13,599 GWh (13.14% of total net generation).

Wind: Onshore wind power potential is 47,250 GWh (45.66% of total net generation) and offshore wind power potential is 488,025 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 563,024 GWh (over 100% of total net generation).⁵³¹

Incentives in Washington

Type	Incentives	Description
Statewide	Evergreen Sustainable Development Standard for Affordable Housing	The Washington State Department of Commerce created the Evergreen Sustainable Development Standard, a set of green building criteria that is required for any affordable housing project applying for state funds through the Washington State Housing Trust Fund (HTF) beginning in July 2008.
	Renewable Energy Cost Recovery Incentive Payment Program	In May 2005, Washington enacted Senate Bill 5101, establishing production incentives for individuals, businesses, and local governments that generate electricity from solar power, wind power or anaerobic digesters.
	Renewable Energy Sales and Use Tax Exemption	In Washington State, there is a 75% exemption from tax for the sales of equipment used to generate electricity using fuel cells, wind, sun, biomass energy, tidal or wave energy, geothermal, anaerobic digestion or landfill gas.
	Tax Abatement for Solar Manufacturers	Tax Abatement For Solar Manufacturers reduces business and occupation (B&O) tax rate for Washington manufacturers of solar-electric (photovoltaic) modules, stirling converters, or silicon components of those systems.
Utility-Specific	Avista Utilities (Electric) - Commercial Energy Efficiency Incentives Program	Avista Utilities offers numerous incentives to commercial and industrial customers to increase the energy efficiency of customer facilities or equipment.

Type	Incentives	Description
Utility-Specific	<u>Avista Utilities (Electric) - Residential Energy Efficiency Rebate Programs</u>	Avista Utilities Home Improvement and New Home Construction Programs offer a variety of incentives encouraging residential customers to save energy in their homes.
	<u>Avista Utilities (Gas) - Residential Energy Efficiency Rebate Programs</u>	Avista Utilities Home Improvement, New Home Construction, and Energy Star Appliance Rebate Programs offer a variety of incentives for residential customers to save energy in homes.
	<u>Benton PUD - Commercial and Agricultural Energy Efficiency Rebate Programs</u>	Benton PUD offers a variety of incentives to non-residential customers for energy efficiency improvements.
	<u>Benton PUD - Energy Efficient Home Builders Rebate Program</u>	Benton PUD offers rebates to builders of homes that meet Energy Star Northwest Home standards.
	<u>Benton PUD - Energy Efficient Manufactured Homes Rebate Program</u>	Benton PUD offers a \$750 rebate to purchasers of Energy Star manufactured homes.
	<u>Benton PUD - Residential Energy Efficiency Rebate Programs</u>	Benton PUD offers residential customers a variety of rebates when they purchase qualifying energy efficient appliances and when they make certain weatherization improvements.

Type	Incentives	Description
Utility-Specific	<u>Cascade Natural Gas - Commercial Efficiency Rebate Program</u>	Cascade Natural Gas Corporation's conservation program provides cash incentives for the installation of energy efficiency technologies.
	<u>Cascade Natural Gas - Conservation Incentives for Existing Homes</u>	Cascade Natural Gas offers a variety of incentives to residential customers for making energy efficiency improvements to existing homes.
	<u>Cascade Natural Gas - Conservation Incentives for New Homes</u>	Cascade Natural Gas offers a variety of incentives to residential customers for including energy efficiency measures in new homes in Washington and Oregon.
	<u>Chelan County PUD - Sustainable Natural Alternative Power Producers Program</u>	The Sustainable Natural Alternative Power (SNAP) Program encourages customers to install alternative power generators such as solar panels and wind turbines and connect them to the District's electrical distribution system by offering an incentive payment based on the system's production.
	<u>Chelan County PUD - Residential Weatherization Rebate Program</u>	Chelan County PUD offers cash rebates to residential customers who make energy efficient weatherization improvements to eligible homes.
	<u>Clallam County PUD - Residential and Small Business Efficiency Loan Program</u>	In conjunction with First Federal Savings and Loan, Clallam County PUD offers residential and small commercial customers a low-interest loan program for energy efficient improvements.

Type	Incentives	Description
Utility-Specific	<u>Clallam County PUD - Residential and Small Business Solar Loan Program</u>	In conjunction with First Federal Savings and Loan, Clallam County PUD offers residential and small commercial customers a low-interest loan program for the purchase of solar photovoltaic systems.
	<u>Clallam County PUD - Residential Efficiency Rebate Program</u>	Clallam County PUD offers a variety of rebates for residential customers for energy efficiency improvements.
	<u>Clark Public Utilities - Residential Heat Pump Loan Program</u>	Clark Public Utilities offers loans of up to \$20,000 for air-source heat pumps and \$30,000 for geothermal heat pumps.
	<u>Clark Public Utilities - Solar Energy Equipment Loan</u>	Clark Public Utilities offers financing available to its customers for the purchase and installation of residential solar equipment.
	<u>Clark Public Utilities - Residential Weatherization Loan Program</u>	Loans of up to \$15,000 at a 5.25% interest rate are available through Clark Public Utilities' Weatherization Loan Program.
	<u>Clark Public Utilities - Solar Water Heater Rebate</u>	Clark Public Utilities offers a rebate of \$500 to customers who install a solar water heating system.
	<u>Clark Public Utilities - Commercial Energy Efficiency Rebate Programs</u>	Clark Public Utilities (CPU) offers a variety of energy efficiency rebates and services to help commercial and industrial customers save energy in existing and new facilities.
	<u>Clark Public Utilities - Residential Energy Efficiency Rebate Program</u>	Clark Public Utilities offers several energy incentives for residential customers to increase the energy efficiency of their homes.

Type	Incentives	Description
Utility-Specific	Columbia Rural Electric Association - Irrigation Energy Efficiency Rebate Program	Columbia REA, through the Bonneville Power Administration, offers an irrigation energy efficiency program for its agricultural customers.
	Columbia Rural Electric Association - Residential Energy Efficiency Rebate Program	Columbia Rural Electric Association offers its residential customers a variety of rebates for the purchase of energy efficient equipment and measures.
	Cowlitz County PUD - Commercial Energy Efficiency Rebate Programs	Cowlitz County PUD offers the Commercial Energy Efficiency Program (CEEP) for non-residential customers to improve the efficiency of facilities.
	Cowlitz County PUD - H2 AdvantagePlus Residential Heat Pump Program	Cowlitz County PUD will provide rebates to customer homeowners who have a PUD-qualified heat pump dealer upgrade their heating system with the installation of a premium efficiency heat pump system, in accordance with the PUD's installation standards, and who upgrade their ductwork to meet the PTCS duct sealing requirements.
	Cowlitz County PUD - Residential Energy Efficient Appliance Rebate Program	Cowlitz County PUD offers the EnergySHARE Plus appliance rebate program to its residential customers.
	Cowlitz County PUD - Residential Weatherization Plus Program	Cowlitz County PUD offers an incentive to residential customers who weatherize their homes.
	Franklin County PUD - Energy Efficiency Rebate Program	Franklin County PUD's Residential Rebate Program offers a variety of rebates for energy efficiency improvements for homes located in the Franklin PUD service area.

Type	Incentives	Description
Utility-Specific	Grant County PUD - Residential Loan Program	Grant County PUD assists residential customers who wish to increase the efficiency of their homes by providing financing for a variety of improvements.
	Grant County PUD - EnergyStar New Home Certification Program	Grant County PUD offers incentives to qualifying customers through the Energy Star Home Certification Program.
	Grant County PUD - Residential Energy Efficiency Rebate Program	Grant County PUD provides incentives to residential customers for improving the energy efficiency of eligible homes.
	Grays Harbor PUD - Residential Energy Efficiency Loan Program	Grays Harbor PUD works with local lending institutions to provide low-interest loans to customers for energy efficiency projects.
	Grays Harbor PUD - Solar Water Heater Loan	Since October 2001, Grays Harbor PUD offers a low-interest loan program (currently 4.0%) for the installation of solar water heaters.
	Grays Harbor PUD - Solar Water Heater Rebate	Since October 2001, Grays Harbor PUD offers a rebate program for the installation of solar water heaters.
	Grays Harbor PUD - Non-Residential Energy Efficiency Rebate Program	Grays Harbor PUD's Non-Residential Rebate Program offers financial incentives to its commercial, agricultural, industrial, and institutional customers for the installation of energy efficient equipment in their facilities.
	Grays Harbor PUD - Residential Energy Efficiency Rebate Program	Grays Harbor PUD provides incentives for residential customers to increase the energy efficiency of homes that choose to participate in the Residential Energy Efficiency Program.

Type	Incentives	Description
Utility-Specific	<u>Inland Power & Light Company - Agricultural Energy Efficiency Rebate Programs</u>	Inland Power offers a variety of incentives for agricultural/irrigation customers to save energy on participating farms.
	<u>Inland Power & Light Company - Residential Energy Efficiency Rebate Programs</u>	Inland Power & Light offers a variety of rebates to homeowners through the Conservation Services Program.
	<u>Lakeview Light and Power - Commercial Lighting Rebate Program</u>	Lakeview Light and Power offers a commercial lighting rebate program.
	<u>Lakeview Light and Power - Energy Smart Grocer Rebate Program</u>	Lakeview Light and Power, in association with the Bonneville Power Administration, offers the Energy Smart Program where grocery stores, convenient stores, and similar vendors can save energy through energy efficiency upgrades and retrofits.
	<u>Lewis County PUD - Commercial and Industrial Energy Efficiency Rebate Program</u>	Lewis County PUD offers rebates for commercial and industrial lighting, as well as industrial process upgrades, on a case-by-case basis.
	<u>NW Natural (Gas) - Business Energy Efficiency Rebate Program</u>	Energy Trust of Oregon administers energy efficiency rebate programs for both residential and commercial customers of NW Natural in Washington.
	<u>NW Natural (Gas) - New Homes Stand Alone Incentive Program</u>	Builders with new construction projects in NW Natural's Washington gas service territory are eligible to receive cash incentives from Energy Trust of Oregon for gas-heated homes that receive Energy Star certification.
	<u>NW Natural (Gas) - Residential Energy Efficiency Rebate Program</u>	Energy Trust of Oregon administers energy efficiency rebate programs for both residential and commercial customers of NW Natural in Washington.

Type	Incentives	Description
Utility-Specific	Okanogan County PUD - Sustainable Natural Alternative Power Program	Created in October 2004, Okanogan County PUD's Sustainable Natural Alternative Power Program (SNAP) encourages members to install renewable energy systems by offering an incentive payment based on the system's production on a dollar per kilowatt-hour (\$/kWh) basis.
	Okanogan County PUD - Conservation Loan Program	Okanogan PUD provides financial assistance for its qualified customers to improve the energy efficiency of homes and facilities.
	Okanogan County PUD - Residential Energy Efficiency Rebate Program	Public Utility District No. 1 of Okanogan County provides rebates to residential customers for purchasing energy efficient appliances.
	Orcas Power & Light - MORE Green Power Program	Orcas Power and Light (OPALCO), an electric cooperative serving Washington's San Juan Islands, provides a performance-based incentive for residential and commercial members who generate energy from photovoltaics, wind, micro-hydroelectric and other small-scale renewable energy sources.
	Orcas Power & Light - Residential Energy Efficiency Rebate Program	Orcas Power and Light Cooperative offers incentives for residential customers to pursue energy efficiency upgrades in eligible homes.
	Pacific Power - Energy FinAnswer	Pacific Power's Energy FinAnswer Program provides cash incentives to help its commercial and industrial customers improve their heating, cooling, refrigeration, compressed air, lighting, pumping or industrial processes.

Type	Incentives	Description
Utility-Specific	Pacific Power - FinAnswer Express	Pacific Power's FinAnswer Express Program includes incentives and technical assistance for lighting, HVAC and other equipment upgrades that increase energy efficiency and exceed code requirements in commercial and industrial facilities.
	Pacific Power - Home Energy Savings Program For Builders	Pacific Power provides an incentive for homebuilders in Washington to build energy efficient houses through the Energy Star New Homes Program.
	Pacific Power - Residential Energy Efficiency Rebate Programs	Pacific Power offers incentives for residential customers to improve the energy efficiency of homes through the Home Energy Savings Program.
	Pend Oreille PUD - Manufactured Home Rebate Program	Pend Oreille PUD offers cash incentives up to \$800 to residential customers who purchase a qualifying energy efficient manufactured home.
	Pend Oreille PUD - Residential Energy Efficiency Rebate Program	Pend Oreille PUD offers cash incentives to residential customers for a number of energy efficient upgrades.
	Peninsula Light Company - Commercial Efficient Lighting Rebate Program	Peninsula Light Company (PLC) offers a rebate program for commercial customers who wish to upgrade to energy efficient lighting.
	Peninsula Light Company - Residential Energy Efficiency Rebate Program	Peninsula Light Company offers a rebate program for residential customers who want to install energy efficient products in homes.

Type	Incentives	Description
Utility-Specific	Port Angeles Public Works & Utilities - Solar Energy Loan Program	The City of Port Angeles Public Works & Utilities offers a low-interest loan to its residential and commercial customers for certain renewable energy projects.
	Port Angeles Public Works & Utilities - Commercial and Industrial Energy Efficiency Rebate Program	Port Angeles Public Works and Utilities provides incentives for business customers to increase the energy efficiency of eligible facilities.
	Port Angeles Public Works & Utilities - Residential Energy Efficiency Rebate Program	Port Angeles Public Works and Utilities offers a rebate program to encourage residential customers to increase the energy efficiency of their homes.
	Puget Sound Energy - Commercial Energy Efficient Equipment Rebate Programs	Puget Sound Energy's (PSE) Energy Efficient Equipment Rebate Programs offers rebates to non-residential customers for a variety of energy efficient technologies
	Puget Sound Energy - Resource Conservation Manager Program	Puget Sound Energy's (PSE) Resource Conservation Manager Program (RCM) provides funding and support to customers who hire a Resource Conservation Manager (RCM).
	Puget Sound Energy - Energy Efficiency Custom Retrofit Grant Program	PSE can provide a custom retrofit grant for any energy efficiency project that meets specified cost-effectiveness criteria and other PSE program requirements.
	Puget Sound Energy - Commercial New Construction Energy Efficiency Grant Program	PSE provides a flexible incentive program to help fund energy efficiency measures in new construction.

Type	Incentives	Description
Utility-Specific	Puget Sound Energy - Multi-Family Efficiency Programs	Puget Sound Energy (PSE) offers two different programs for multi-family energy efficiency rebates: the Multi-family Retrofit Program and the Multi-family New Construction Program.
	Puget Sound Energy - Portable Classroom Energy Efficient Controls Rebate Program	Puget Sound Energy's (PSE) Portable Classroom Controls Rebate Program offers rebates to school customers who upgrade portable classroom controls from seven-day programmable thermostats to 365-day programmable thermostats.
	Puget Sound Energy - Residential Energy Efficiency Rebate Programs	Puget Sound Energy's (PSE) Residential Energy Efficiency Rebate Programs offer a variety of incentives for customers who purchase energy efficient appliances and equipment.
	Richland Energy Services - Residential Energy Conservation & Solar Loan Program	The City of Richland provides low-interest loans to encourage its residential customers to pursue equipment upgrades and home improvement measures that will increase the energy efficiency of their homes.
	Richland Energy Services - Energy Efficient Commercial Lighting Program	The City of Richland (COR) provides rebates to encourage commercial utility customers to increase the energy efficiency of facilities by replacing existing lighting systems with more efficient equipment.
	Richland Energy Services - Residential Energy Efficiency Rebate Program	Richland Energy Services (RES) provides a number of rebates encouraging energy efficiency for its residential customers.

Type	Incentives	Description
Utility-Specific	Seattle City Light - Built Smart Program for Builders and Architects	Seattle City Light provides incentives for builders, developers, and architects who construct energy efficient multi-family buildings.
	Seattle City Light - Commercial Energy Efficiency Rebate Programs	Seattle City Light offers a variety of rebates to commercial and industrial customers through the Energy Smart Services Program.
	Seattle City Light - Multi-Family Residential Energy Efficiency Rebate Program	Seattle City Light provides incentives for its multi-family housing customers to increase their energy efficiency.
	Seattle City Light - New Construction Incentive Program	Seattle City Light (SCL) works with design teams of their commercial and industrial customers to create high performance buildings with low long-term operating costs.
	Seattle City Light - Residential Energy Efficiency Rebate Program	Seattle City Light provides rebates to its customers for purchasing and installing energy saving clothes washers, refrigerators, heat pump water heaters, and ductless heat pumps.
	Seattle City Light - Vending Machine Rebate Program	Seattle City Light offers qualifying customers \$80 rebates for the purchase of VendingMiser Energy Efficient Vending Machines.
	Snohomish County PUD No 1 - Solar Express Loan Program	The Solar Express Program provides rebates and loans to support residential and commercial installations of solar photovoltaics (PV) and solar water heating (SWH)
	Snohomish County PUD No 1 - Residential Weatherization & Heating Loan Program	Snohomish County PUD No 1 provides loans to help its residential customers finance energy efficient home improvement projects.

Type	Incentives	Description
Utility-Specific	Snohomish County PUD No 1 - Solar Express Rebate Program	This program provides rebates to support residential and commercial installations of solar photovoltaics (PV) and solar water heating (SWH).
	Snohomish County PUD No 1 - Build with Energy Star Program	The Build with Energy Star Program from Snohomish County PUD No 1 is designed to encourage builders to include energy efficient measures in new homes being built in Snohomish County and on Camano Island.
	Snohomish County PUD No 1 - Commercial and Industrial Energy Efficiency Program	Snohomish County PUD No 1 offers financial incentives to help offset the cost to non-residential customers for the increase in energy efficiency facilities.
	Snohomish County PUD No 1 - Residential Energy Efficiency Rebate Program	Snohomish County PUD No 1 offers financial incentives for residential customers to increase the energy efficiency of homes.
	Tacoma Power - Commercial and Industrial Energy Efficiency Rebate Programs	Tacoma Power offers non-residential customers a variety of rebates and incentives for installing energy efficient technologies in new or existing facilities.
	Tacoma Power - Residential Energy Efficiency Rebate Program	Tacoma Power offers a variety of incentives for residential customers to improve the energy efficiency in participating homes.
	Tacoma Power - Residential Weatherization Rebate Program	Tacoma Power helps residential customers increase the energy efficiency of homes through the utility's residential weatherization program.

Type	Incentives	Description
Utility-Specific	Vera Irrigation District #15 - Energy Efficiency Rebate Program	Vera Irrigation District #15 offers several rebates to electric customers who purchase and install energy efficient measures.
Local	City of Bainbridge Island - (Re)Power Bainbridge Rebate Program	The (Re)Power Bainbridge Program offers residents of Bainbridge Island and Kitsap County incentives for implementing energy efficient measures in their homes.
	City of Seattle - Community Power Works Loan Program	Community Power Works, funded by the U.S. Department of Energy's Better Buildings Program, offers loans and rebates for eligible energy efficiency improvements to homes and businesses.
Non-Profit	BEF - Solar 4R Schools	This competitive grant supports the installation of small-scale photovoltaic systems at K-12 schools interested in increasing the visibility of renewable energy.



WEST VIRGINIA

The Mountain State⁵³²

State Facts

Capital: Charleston
Area: 24,230 sq mi
Population: 1,852,994
State Bird: Northern Cardinal
State Flower: Great Laurel⁵³³

Renewable Portfolio Standards

Policy Name and Date

House Bill 103: The Alternative and Renewable Energy Portfolio Act, June 17, 2009

Standard

25% alternative and renewable energy resources by 2025

Mandatory/Voluntary

Voluntary

Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, Other Non-Renewable Alternative Energy Resources, Anaerobic Digestion, Small Hydroelectric, Biodiesel, Fuel Cells using Renewable Fuels⁵³⁴

West Virginia Energy Fact

West Virginia typically generates more electricity than it consumes; in 2010, 56 percent of its net electricity generation was consumed outside the State.

<http://www.eia.gov/state/print.cfm?sid=WV>

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of West Virginia.⁵³⁵

Status

No Activity Identified⁵³⁶

Net Metering Standards

Capacity Limit

Per System: IOUs with more than 30,000 customers: 2 MW for industrial; 500 kW for commercial; 25 kW for residential. IOUs with fewer than 30,000 customers, municipal utilities and co-ops: 50 kW for commercial and industrial; 25 kW for residential.
 Entire State: 3% of peak demand during the previous year

Mandatory/Voluntary

Mandatory

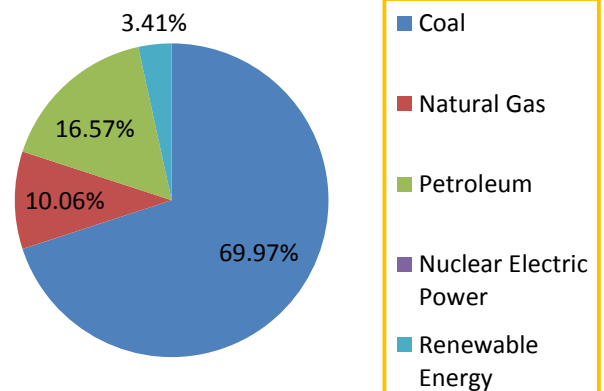
Allowable Sources

Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Small Hydroelectric, Renewable Fuels, Fuel Cells using Renewable Fuels⁵³⁷

WEST VIRGINIA at a Glance:

- ✓ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

West Virginia Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

West Virginia's Department of Transportation certifies MBEs for federally assisted projects.

Clean Energy Potential in West Virginia

Background

While West Virginia is the second largest coal producer in the nation, it has taken steps to tap into its abundance of renewable energy resources. The state sits atop several geothermal hotspots that gives West Virginia the greatest geothermal energy potential within the eastern United States. The number of solar panels and wind farms have grown substantially and have the potential to grow even further.⁵³⁸



Solar: West Virginia has urban utility-scale PV potential of 3,024 GWh (3.74% of total net generation), rural utility-scale PV potential of 52,694 GWh (65.2% of total net generation), and rooftop PV potential is 4,220 GWh (5.22% of total net generation).

Wind: Onshore wind power potential is 4,952 GWh (6.12% of total net generation).

Geothermal: Enhanced geothermal systems potential is 261,376 GWh (over 100% of total net generation).⁵³⁹

Incentives in West Virginia

Type	Incentives	Description
Statewide	Residential Solar Energy Tax Credit	West Virginia passed legislation in June 2009 authorizing its solar energy tax credit for residential installations.
	Special Assessment for Wind Energy Systems	For the purposes of property tax assessment, utility-owned wind projects are considered to have a value equal to their salvage value, with certain limitations.
	Tax Exemption for Wind Energy Generation	West Virginia increased the taxable value of wind turbine generating capacity.
Utility-Specific	AEP Appalachian Power - Commercial and Industrial Rebate Programs	AEP/Appalachian Power offer commercial and industrial electric customers in West Virginia rebates on energy efficient lighting and HVAC equipment.
	AEP Appalachian Power - Residential Energy Efficiency Rebate Program	Appalachian Power, Wheeling Power Company, and AEP offer residential electric customers in West Virginia rebates on energy efficient weatherization and HVAC equipment.
	FirstEnergy (Mon Power & Potomac Edison) - Business Lighting Incentive Program	FirstEnergy's West Virginia's utilities (Mon Power and Potomac Edison) offer the Business Lighting Incentive Program in accordance with the December 30, 2011, order issued by the Public Service Commission (PSC).

WISCONSIN

The Badger State⁵⁴⁰



Renewable Portfolio Standards

Policy Name and Date

Senate Bill 459: The Energy Efficiency and Renewables Act, March 17, 2006

Standard

10% renewable by 2015

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, Municipal Solid Waste, Solar Light Pipes; Biomass Thermal; Densified Fuel Pellets; Pyrolysis; Synthetic Gas; Biogas, Anaerobic Digestion, Small Hydroelectric, Tidal Energy, Wave Energy, Fuel Cells using Renewable Fuels⁵⁴²

Wisconsin Renewable Fact

In 2011, 8.4 percent of Wisconsin's net electricity generation came from renewable energy resources, split among conventional hydroelectric power, biomass, and wind.
<http://www.eia.gov/beta/state/?sid=WI>

State Fact

Capital: Madison

Area: 65,496 sq mi

Population: 5,686,986

State Bird: American Robin

State Flower: Wood Violet⁵⁴¹

WISCONSIN at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Energy Efficiency Resource Standards

Policy Name and Date

Act 141, March 2006

Standard

2011-2014: Net annual electric energy savings of 1,816,320,000 kWh (.66% annual reduction within the three year period)

Mandatory/Voluntary

Mandatory⁵⁴³

Net Metering Standards

Capacity Limit

Per System: 20 kW (some utilities allow net metering for systems up to 100 kW)
Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Thermal Electric, Photovoltaics, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, CHP/Cogeneration, Small Hydroelectric, Other Distributed Generation Technologies⁵⁴⁶

ECONOMIC OPPORTUNITIES

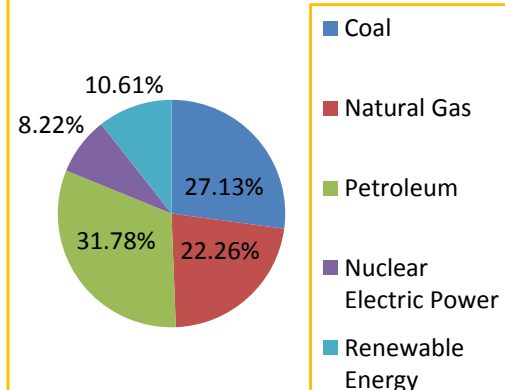
Local Hire Provision: YES

The Milwaukee Office of Environmental Sustainability and Wisconsin Energy Conservation Corporation partnered to launch Milwaukee Energy Efficiency (*Me²*). The program offers energy efficiency upgrades along with help from Energy Advocates. The Community Workforce Agreement associated with *Me²* requires 40% of work hours to be performed by Milwaukee's unemployed or underemployed population.⁵⁴⁴

MBE Provision/Certification: YES

Wisconsin's Minority Business Enterprise laws establish a five percent MBE procurement goal for state agencies and UW campuses and a five percent price preference for certified minority business enterprise firms pursuing state contracts.⁵⁴⁵

Wisconsin Energy Consumption Estimates 2010



Clean Energy Potential in Wisconsin

Background

Wisconsin provides an attractive location for solar and wind manufacturing facilities due to its proximity to clean energy supply chains and favorable incentives for manufacturers. Wisconsin also has favorable conditions for the production of geothermal power.



Solar: Wisconsin has urban utility-scale PV potential of 54,939 GWh (85.4% of total net generation), rural utility-scale PV potential of 5,042,259 GWh (over 100% of total net generation), and rooftop PV potential is 13,939 GWh (21.6% of total net generation).

Wind: Onshore wind power potential is 255,266 GWh (over 100% of total net generation) and offshore wind power potential is 317,755 GWh (over 100% of total net generation).

Geothermal: Enhanced geothermal systems potential is 647,173 GWh (over 100% of total net generation).⁵⁴⁷

Incentives in Wisconsin

Type	Incentives	Description
Statewide	Business Incentive Program	Focus on Energy offers financial incentives to eligible business customers who install many types of qualifying energy efficient equipment in existing buildings.
	Chain Stores and Franchises Program	Focus on Energy offers financial incentives to businesses with five or more facilities or franchise locations within Wisconsin to install many types of qualifying energy efficient equipment in their buildings.
	Design Assistance Program	The Focus on Energy Design Assistance Program provides design professionals, builders and developers of new buildings with whole building energy analysis tools.
	Energy Bundle Bonus (WPS Customers Only)	Focus on Energy and Wisconsin Public Service (WPS) has teamed up to offer bonuses for facilities installing energy efficiency.
	Home Performance with Energy Star	Through the Home Performance with Energy Star Program, Focus on Energy offers instant rewards for installing select recommended efficiency measures following a home energy audit.
	Home Performance with Energy Star (WPS Customers Only)	Through the Home Performance with Energy Star Program, Focus on Energy offers in-home energy audits and cash incentives for installing select recommended efficiency measures.

Type	Incentives	Description
Statewide	Large Energy Users Program	Focus on Energy offers financial incentives to eligible business customers who install many types of qualifying energy efficient equipment in existing buildings.
	Multifamily Energy Savings Program (Existing Buildings)	Focus on Energy offers incentives to owners of existing apartment and condominium buildings who make energy efficiency improvements.
	New Homes Program	Focus on Energy's New Homes Program certifies homes that are built more efficient than the current Wisconsin Building Code.
	Renewable Energy Grant Programs	Wisconsin Focus on Energy offers a competitive grant to support the deployment of large renewable energy projects.
	Renewable Energy Incentives	Focus on Energy offers rebates for residential renewable energy systems including geothermal heat pumps, solar electric (PV), and solar hot water heaters. Rebates are available on a first-come, first-served basis while funds are available.
	Renewable Energy Sales Tax Exemptions	Wisconsin has two sales tax exemptions that apply to renewable energy.
	Residential Enhanced Rewards Program	Focus on Energy offers incentives for income-qualifying customers for the purchase of high efficiency heating equipment.

Type	Incentives	Description
Statewide	Residential Rewards Program	The Focus on Energy Program offers a Residential Rewards Program to eligible residents for purchasing and installing furnaces, boilers, heat pumps, air sealing, attic insulation, and water heaters.
	Retro-Commissioning Program	Focus on Energy offers financial incentives to eligible business customers to retro-commission buildings to optimize performance.
	Small Business Program	Focus on Energy offers a free energy assessment and free or discounted energy savings items to small businesses with a peak monthly electric demand of less than 100 kilowatts.
	Solar and Wind Energy Equipment Exemption	In Wisconsin, any value added by a solar energy system or a wind energy system is exempt from general property taxes.
	Woody Biomass Harvesting and Processing Tax Credit (Corporate)	In May 2010, Wisconsin enacted legislation allowing taxpayers to claim a tax credit from income or franchise taxes of 10% of the cost of equipment primarily used to harvest or process woody biomass for use as a fuel or as a component of fuel.
	Woody Biomass Harvesting and Processing Tax Credit (Personal)	In May 2010, Wisconsin enacted legislation allowing taxpayers to claim a tax credit from income or franchise taxes of 10% of the cost of equipment primarily used to harvest or process woody biomass for use as a fuel or as a component of fuel.

Type	Incentives	Description
Utility-Specific	<u>Alliant Energy (Wisconsin Power and Light) - Shared Savings Program</u>	Alliant Energy (Wisconsin Power & Light) offers the Shared Savings financing program for the installation of energy efficient farm improvements.
	<u>Barron Electric Cooperative - Residential Energy Resource Conservation Loan Program</u>	A 5-year weatherization and energy-efficient heating and cooling equipment loan for up to \$5,000 at 3% interest is available for Barron Electric Cooperative (BEC) members who complete some or all of the recommendations from a Home Performance Assessment.
	<u>Barron Electric Cooperative - Commercial, Industrial, and Agricultural Energy Efficiency Rebate Program</u>	Barron Electric Cooperative (BEC) offers the Customized Energy Incentive Program for their commercial, industrial, and agricultural members to save energy by replacing old equipment with more energy efficient models.
	<u>Barron Electric Cooperative - Energy Star Appliance and Energy Efficient Lighting Rebate Program</u>	Barron Electric Cooperative (BEC) offers rebates to any member receiving electrical service for the purchase of Energy Star appliances and energy efficient lighting.
	<u>Cedarburg Light & Water Utility - Commercial Shared Savings Loan Program</u>	Cedarburg Light and Water Utility (CLWU) provides loans for commercial, industrial and agricultural customers to increase the energy efficiency of eligible facilities.
	<u>Cedarburg Light & Water Utility - Commercial Energy Efficiency Rebate Program</u>	Cedarburg Light and Water Utility provides rebates for commercial, industrial and agricultural customers to increase the energy efficiency of eligible facilities.

Type	Incentives	Description
Utility-Specific	<u>Cedarburg Light & Water Utility - Residential Energy Efficiency Rebate Program</u>	Cedarburg Light & Water (CL&W) offers rebates to residential customers for a variety of energy efficient equipment and upgrades.
	<u>Eau Claire Energy Cooperative - Non-Residential Energy Efficiency Rebate Programs</u>	Eau Claire Energy Cooperative offers rebates to commercial and agricultural customers for the purchase of energy efficient appliances, central air conditioners, air source and geothermal heat pumps, water heaters, and agricultural equipment.
	<u>Eau Claire Energy Cooperative - Residential Energy Efficiency Rebate Program</u>	Eau Claire Energy Cooperative offers rebates to residential customers for the purchase of energy efficient appliances, central and room air conditioners, air source and geothermal heat pumps, dehumidifiers, water heaters, and home performance evaluations.
	<u>Madison Gas & Electric - Commercial Energy Efficiency Loan Program</u>	Madison Gas and Electric (MGE) offers business customers a loan for energy efficiency projects.
	<u>Madison Gas & Electric - Clean Power Partner Solar Buyback Program</u>	Customer-generators enrolled in the Madison Gas & Electric (MGE) green power purchase program (Green Power Tomorrow), are eligible to receive a special rate for the power produced from solar photovoltaic (PV) systems.
	<u>Marshfield Utilities - Heat Pump Rebate Program</u>	Marshfield Utilities offers cash-back rewards for ground source heat pumps, as well as Focus on Energy program incentives.

Type	Incentives	Description
Utility-Specific	River Falls Municipal Utilities - Distributed Solar Tariff	River Falls Municipal Utilities (RFMU), a member of WPPI Energy, offers a special energy purchase rate to its customers that generate electricity using solar photovoltaic (PV) systems.
	River Falls Municipal Utilities - Business Energy Efficiency Rebate Program	River Falls Municipal Utility (RFMU) offers a variety of rebates to business customers for implementing energy efficient equipment upgrades.
	River Falls Municipal Utilities - Non-Profit Energy Efficiency Rebate Program	River Falls Municipal Utility (RFMU) provides matching rebates to non-profit customers who participate and receive rebates through the Wisconsin Focus On Energy Program.
	River Falls Municipal Utilities - Residential Energy Efficiency Rebate Program	River Falls Municipal Utility (RFMU), in conjunction with the Wisconsin Focus on Energy Program, offers a variety of rebates to residential electric customers for upgrading to energy efficient equipment.
	Riverland Energy Cooperative - Commercial and Industrial Energy Efficiency Rebate Program	Riverland Energy Cooperative offers a number of rebates for the purchase and installation of efficient lighting fixtures, air conditioners, heat pumps, water heaters, central electric thermal storage units, and agricultural equipment.
	Riverland Energy Cooperative - Residential Energy Efficiency Rebate Program	Riverland Energy Cooperative offers a variety of rebates and incentives for residential customers to save money on energy efficient appliance and equipment purchases and installation.

Type	Incentives	Description
Utility-Specific	We Energies - Livestock and Dairy Farm Electrical Re-wiring Program	Any We Energies dairy farm customer can apply for assistance with a re-wiring project.
	Xcel Energy - Farm Rewiring Loan Program	Xcel Energy operates the farm rewiring loan program to help its agricultural customers install safer and more energy efficient electrical wiring.
	Xcel Energy - Farm Rewiring Grants	Xcel Energy provides an incentive to help its agricultural customers install safer and more energy efficient electrical wiring.
	Xcel Energy (Electric) - Residential Conservation Programs	Xcel Energy offers its Wisconsin residential customers rebates for high efficiency appliances and systems.
	Xcel Energy (Gas) - Residential Conservation Programs	Xcel Energy offers its Wisconsin residential natural gas customers rebates for high efficiency heating equipment.
Local	City of Madison - Green Madison Business Revolving Loan Program	Green Madison is a revolving loan program for business energy efficiency improvements.
	City of Madison - Green Madison Residential Revolving Loan Program	Green Madison is a revolving loan program for residential energy efficiency improvements.
	City of Madison - Green Madison Business Incentives	Green Madison offers businesses in the City of Madison incentives for installing recommended energy efficiency improvements.

Type	Incentives	Description
Local	City of Madison - Green Madison Residential Incentives	Green Madison offers homeowners in the City of Madison incentives for installing recommended energy efficiency improvements.
	City of Milwaukee - Business Energy Efficiency (Me2) Rebates	Milwaukee Energy Efficiency (Me2) offers rebates for businesses that make energy efficiency improvements to their properties.
	City of Milwaukee - Residential Energy Efficiency (Me2) Rebates	Milwaukee Energy Efficiency (Me2) offers rebates for residents that make energy efficiency improvements to their homes.
	City of Milwaukee - Milwaukee Shines Solar Financing	Beginning July 28, 2011, the City of Milwaukee will be offering low-interest loans for solar energy under its Milwaukee Shines Solar Financing program.
	City of Milwaukee - Energy Efficiency (Me2) Revolving Loan Program	Milwaukee Energy Efficiency is a revolving loan program for residential energy efficiency improvements.
	City of Milwaukee - Energy Efficiency (Me2) Business Financing	Milwaukee Energy Efficiency (Me2) offers four different financing options for businesses to implement energy efficiency projects into their buildings.

WYOMING

The Equality State⁵⁴⁸

State Facts

Capital: Cheyenne

Area: 97,812 sq mi

Population: 563,626

State Bird: Western
Meadowlark

State Flower: Indian
Paintbrush⁵⁴⁹

Renewable Portfolio Standards

Standard

No Renewable Portfolio Standards have been defined for the state of Wyoming.⁵⁵⁰

Status

No Activity Identified⁵⁵¹

Energy Efficiency Resource Standards

Standard

No Energy Efficiency Resource Standards have been defined for the state of Wyoming.⁵⁵²

Status

No Activity Identified⁵⁵³

Net Metering Standards

Capacity Limit

Per System: 25 kW

Entire State: No limit specified

Mandatory/Voluntary

Mandatory

Allowable Sources

Photovoltaics, Wind, Biomass,
Hydroelectric, Small Hydroelectric⁵⁵⁴

WYOMING at a Glance:

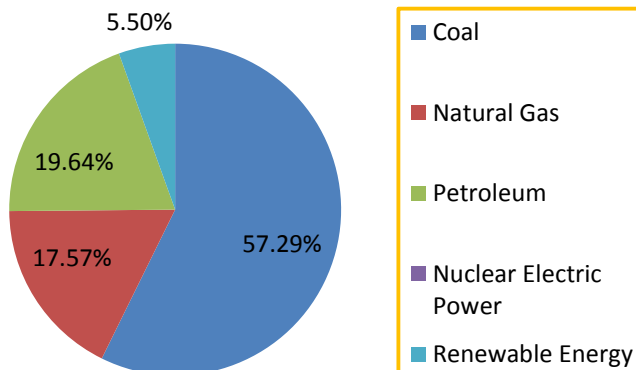
- ✗ Renewable Portfolio Standards
- ✗ Energy Efficiency Resource Standards
- ✓ Net Metering Standards

Wyoming Energy Fact

In 2011, 13 percent of net electricity generation in the State came from renewable energy resources, primarily wind.

<http://www.eia.gov/state/print.cfm?sid=WY>

Wyoming Energy Consumption Estimates 2010



ECONOMIC OPPORTUNITIES

Local Hire Provision: NO

MBE Provision/Certification: YES

The Wyoming Department of Transportation certifies MBEs for highway and airport construction.⁵⁵⁵

Clean Energy Potential in Wyoming

Background

Wyoming has significant potential from all clean energy sources--wind, solar and geothermal. The state exports its wind power to other states including Colorado, Utah and Oregon.



Solar: Wyoming has urban utility-scale PV potential of 7,232 GWh (15% of total net generation), rural utility-scale PV potential of 5,727,224 GWh (over 100% of total net generation), rooftop PV potential is 1,551 GWh (3.2% of total net generation) and concentrated solar power potential is 5,406,407 GWh (over 100% of total net generation).

Wind: The onshore wind power potential is 1,653,857 GWh (over 100% of total net generation).

Geothermal: In Wyoming, hydrothermal power potential is 1,373 GWh (2.85% of total net generation) and enhanced geothermal systems potential is 1,070,079 GWh (over 100% of total net generation).⁵⁵⁶

Incentives in Wyoming

Type	Incentives	Description
Statewide	Energy Savers Loan	The Wyoming Community Development Authority (WCDA) offers low-interest loans to income qualified homeowners for energy efficient home retrofits.
	Small Business Non-Profit Energy Audit Program	This matching grant provides 75% of the cost for a level 2 energy audit up to a maximum of \$2,500.
Utility-Specific	Black Hills Power - Commercial Energy Efficiency Programs	Black Hills Power provides rebates for its commercial customers who install energy efficient heat pumps, motors, variable frequency drives, lighting, and water heaters.
	Black Hills Power - Residential Customer Rebate Program	Black Hills Power offers cash rebates to residential customers who purchase and install energy efficient equipment in their homes.
	Carbon Power & Light - Residential and Commercial Energy Efficiency Rebate Program	Carbon Power and Light, in collaboration with Tri-State Generation and Transmission Association, offers financial incentives for members to increase the energy efficiency of homes and facilities.
	Cheyenne Light, Fuel and Power (Electric) - Commercial and Industrial Efficiency Rebate Program	Cheyenne Light, Fuel and Power offers incentives to commercial and industrial electric customers who wish to install energy efficient equipment and measures in eligible facilities.

Type	Incentives	Description
Utility-Specific	<u>Cheyenne Light, Fuel and Power (Electric) - Residential Energy Efficiency Rebate Program</u>	Cheyenne Light, Fuel and Power offers incentives to electric customers who wish to install energy efficient equipment in participating homes. Incentives are available for home energy audits, CFL light bulbs, tank water heaters and refrigerator recycling.
	<u>Cheyenne Light, Fuel and Power (Gas) - Commercial and Industrial Efficiency Rebate Program</u>	Cheyenne Light, Fuel and Power (CLFP) offers incentives to commercial and industrial gas customers who install energy efficient equipment in existing buildings.
	<u>Cheyenne Light, Fuel and Power (Gas) - Residential Energy Efficiency Rebate Program</u>	Cheyenne Light, Fuel and Power offers incentives to gas customers who construct new energy efficient homes or install energy efficient equipment in existing homes.
	<u>Lower Valley Energy - Residential Energy Efficiency Rebate Program</u>	Lower Valley Energy offers numerous rebates for residential customers who wish to increase the energy efficiency of eligible homes.
	<u>Questar Gas - Commercial Energy Efficiency Rebate Program</u>	Questar Gas provides rebates to its business customers for installing energy efficient food service equipment, laundry equipment, HVAC and water heating equipment, and certain weatherization measures.

Type	Incentives	Description
Utility-Specific	Questar Gas - Residential Solar Assisted Water Heating Rebate Program	Questar gas provides incentives for residential customers to purchase and install solar water heating systems on their homes.
	Questar Gas - Home Builder Gas Appliance Rebate Program	Questar Gas provides incentives for homebuilders to construct energy efficient homes.
	Questar Gas - Residential Energy Efficiency Rebate Programs	Questar Gas provides rebates for residential customers who make their homes more energy efficient by installing certain energy saving appliances, efficient heating equipment, and certain weatherization measures.
	Rocky Mountain Power - Energy FinAnswer	Rocky Mountain Power's Energy FinAnswer Program provides incentives to help its customers improve the efficiency of existing facilities and build new facilities that are significantly more efficient than code.
	Rocky Mountain Power - FinAnswer Express	Rocky Mountain Power's FinAnswer Express Program provides extensive incentives and for lighting, HVAC, food service, agricultural, and compressed air equipment.
	Rocky Mountain Power - Self-Direction Credit Program	Rocky Mountain Power offers a Self-Direction Credit Program to its industrial and large commercial customers with annual electric usage of more than 5,000,000 kWh or a 1,000 kW peak load.

Type	Incentives	Description
Utility-Specific	Rocky Mountain Power - WattSmart Residential Efficiency Program	Rocky Mountain Power offers the Home Energy Savings Program for their residential Wyoming customers to improve the energy efficiency of their homes.

CONCLUSION

The movement to advance environmental and climate justice demands we take immediate and aggressive action, because environmental impacts have in the past, do in the present, and will increasingly in the future, affect low-income Americans and people of color in particular, in disproportionate numbers. Environmental justice demands we act as good shepherds of our common-pool resources, for both the sakes of our homes, and as a matter of our health. Given the top position of the fossil fuel based energy sector in negatively impacting the environment on which we all depend for health and wellbeing, the most meaningful, long-term approach to environmental and climate justice demands we reduce our reliance on energy and that we construct solar, wind, and geothermal power generation systems as the cleanest possible options for our community, state, and national energy modernization.

As the energy efficiency and clean energy transition advances, we must be careful not to put ‘old wine in new wine skins’ by repeating the patterns of environmental and economic injustice that has brought us to where we are now. We must ensure that new models of reducing our energy usage and building new energy systems based on clean energy are centered in priorities and practices that prioritize community ownership and control, local economic development, workers rights, affordability and access.

Energy Efficiency

A common and misleading refrain is that renewable energy systems cannot be built on a sufficient scale to meet a significant portion of our energy needs. However, as a nation, we waste 87% of all the energy we consume,⁵⁵⁷ most of which is from fossil fuels. As communities, cities, and states build renewables capacity, the institutionalization of the “waste not, want not” mantra will increasingly scale-up the impact of renewable energy.

This report has called for state level energy efficiency resource standards that mandate minimally, an ongoing 2% annual reduction in energy use over each previous year’s retail electric sales.

Through a combination of energy efficiency resource standards and other initiatives like common-sense transportation policies, building codes, and appliance standard, the top 10 states for energy efficiency, according to the American Council for an Energy-Efficient Economy, were: Massachusetts (#1), California (#2), New York (#3), Oregon (#4), Connecticut (#5), Rhode Island (#6), Vermont (#7), Washington (#8), Maryland (#9), and Illinois (#10). States with the most room for improvement in 2013 were: Missouri (#43), Louisiana (#44), Nebraska (#45), West Virginia (#46), Mississippi (#47), Alaska (#48), South Dakota (#49), Wyoming (#50), and North Dakota (#51).⁵⁵⁸

The Alliance to Save Energy has found that America’s households can save \$1,000 each year if we double efficiency, representing \$327 billion in waste⁵⁵⁹ that we could reinvest in other areas of our lives. Wasted energy, especially where polluting and non-renewable energy sources have comprised the lion’s share of power use, has grave justice implications. Starting with energy efficiency resource standards, states can begin improving the resilience and sustainability of its communities.

Renewable Energy

As a nation, total renewables use only accounted for 7-9% of all the electricity and fuels Americans used in 2013.⁵⁶⁰ In the absence of a national renewable energy portfolio standard, this report has called for state standards that mandate, minimally, 25% renewable energy by 2025. The states with the most catalytic renewable portfolio standards containing targets exceeding minimal recommendations were Maine (40% by 2017), Hawaii (40% by 2030), California (33% by 2020), Minnesota (up to 32% by 2020), Colorado (up to 30% by 2020), New York (29% by 2015), and Connecticut (27% by 2020). Nevertheless, all states’

renewables standards contained some sub-optimal allowable sources, which have a history of proven harms.

Multiple states have proven that a transition to clean energy is possible with already implementing clean energy use at large scale.

- As of the end of 2012, 23 states generated at least 1 gigawatthour (GWh) of electricity from solar energy.⁵⁶¹ The 10 states which generated the most solar power were California (1,382 GWh), Arizona (955 GWh), Nevada (473 GWh), New Mexico (334 GWh), New Jersey (304 GWh), Florida (194 GWh), Colorado (165 GWh), North Carolina (139 GWh), Texas (118 GWh), and New York (53 GWh).
- As of the end of 2012, 40 states generated at least 1 GWh of electricity from wind energy.⁵⁶² The 10 states which generated the most wind power were Texas (32,214 GWh), Iowa (14,032 GWh), California (9,754 GWh), Oklahoma (8,158 GWh), Illinois (7,727 GWh), Minnesota (7,615 GWh), Washington (6,600 GWh), Oregon (6,343 GWh), Colorado (5,969 GWh), and North Dakota (5,275 GWh).
- As of the end of 2012, only 6 states generated at least 1 GWh of electricity from geothermal sources.⁵⁶³ They were California (12,519 GWh), Nevada (2,347 GWh), Utah (335 GWh), Hawaii (261 GWh), Idaho (75 GWh), and Oregon (26 GWh). Notably, 93% of the electricity generated with geothermal energy resources came from independent power producers rather than electric utilities.
- As of 2012, the states which had produced the greatest portion of total electricity from solar, wind, and geothermal resources combined were Iowa (25%), South Dakota (24%), North Dakota (15%), Minnesota (15%), Idaho (13%), California (12%), Kansas (12%), Colorado (12%), Oklahoma (11%), and Oregon (11%).⁵⁶⁴

These states are early standouts in what must be an accelerated development path toward powering our communities, states and nation with the cleanest possible sources. All states can and must do more. The sustainability and justice implications are grave for a continuing addiction to dirty power with hidden costs, and so the shift to renewable energy will make our communities, states, and nation safer, healthier, more resilient, and more prosperous.

Net Metering

When a state's ratepayers can be compensated at or above the retail rate for generating and selling excess renewable electricity back to their grids, entire communities benefit. Net metering spurs energy modernization and renewable energy investment at the customer level with distinct health, environmental, and economic benefits.

Florida and Ohio allow all customers classes to participate at or above 2,000 kW with no aggregate limitations on either a statewide or utility-wide basis. Together, these two states have over 5,000 ratepayers who have taken advantage of net metering policies.

Catalytic net metering standards are fundamental to the democratization of our communities', states' and our nation's shift to clean, renewable energy sources, like solar, wind, and geothermal energy. Power decentralization will make our electrical systems more sustainable, efficient, and resilient.

Building an Inclusive Green Energy Economy

Building green and efficient energy systems toward environmental and climate justice must also entail economic justice principles. As the growth of an energy efficient, clean energy economy creates jobs, communities should reap the benefits of development occurring in their own backyards. Well-crafted, disadvantaged business enterprise provisions and local hiring policies are important starting points for

making our energy modernization an inclusive process that builds community effectiveness and resilience. Additionally, it is important that energy efficiency and clean energy resources are affordable and accessible to ratepayers and communities.

Local Hiring Provisions

Progress within local hiring policies is encouraging in a few states, as this is an important mechanism for maximizing the benefits of local renewable energy development for local economies and communities.

- California's local hire program, for instance, directs \$550 million a year toward deploying renewables and energy efficiency technologies at public facilities, like schools by funding both the state's general Job Creation fund and the Clean Energy Job Creation Fund.

Minority Business Enterprise

The extension of effective disadvantaged business enterprise models to states' energy industries in particular with set-asides ensuring a minimal percentage of procurements go to disadvantaged businesses; with regular, catalytic formal training programs; and with notification systems that guarantee that no opportunity gets missed, would have significant, positive impacts on economic justice, and on environment and climate justice in tandem. Currently no state has an MBE provision in place that is specific to energy policies.

Community Asset Development

Principles of justice based energy systems include minimizing harms, sustainability, affordability, and inclusive decision making. Distributed energy and community ownership are key mechanisms to ensure that these principles are central to the new energy economy, as well as collective ratepayer engagement in non-community owned systems.

- Minnesota's public utilities must enter into 20-year power purchasing agreements with community-owned renewable energy projects under the Community-Based Energy Development Tariff. The tariff requires that 51% of electricity revenue go to Minnesota owners or local entities; that no one owner can hold over 15% of a project, except for municipalities; that a project must have community support; and that all owners of properties that are traversed by transmission lines must be allowed to invest.
- At the community-level, University Park Community Solar project in University Park, Maryland, and the Evergreen Cooperative in Cleveland, Ohio are examples of asset development and community ownership models.
- Groundswell engaged the NAACP Headquarters in Maryland in a Community Energy Purchase Agreement which enabled the Association and scores of partners to save money on our electricity bills and procure all of our energy through renewable energy certificates for local and national wind. Electricity aggregation is a model for harnessing the power of collective, cooperative buying to change the energy landscape and save money for ratepayers.

In Sum

At the individual, family/household, community, state, and national levels, just energy policies, inclusive of mechanisms that focus on equity and economic justice, will lay the groundwork for a new energy economy that prioritizes sustainability, affordable energy access, and community and worker safety. Though this report focused on certain policies, similar analysis should be applied as other energy policy proposals are advanced at national, state and local levels.

In order to establish new just energy policy and practice initiatives and expand existing models, an inclusive political landscape is critical. Political disenfranchisement is often part and parcel of

environmental injustice in communities across the United States. Whether it is elected officials, or representatives on zoning boards, public utilities commissions and rural electric co-op boards, ensuring that people in decision making spaces represent the interests of all communities is critical.

Funding is also essential to seeing models of community ownership of energy, to retrofits necessary to realize energy efficiency goals, and to finance research and development, we need to establish robust storage and transmission for clean energy. Foundations and other financing entities must invest with the caveat of ensuring that the justice based principles are applied to any supported projects.

Communities and states nationwide are already demonstrating that this transition is possible and beneficial. Now we need to ensure that community leadership, funding options, and political will, are at the level necessary to advance local, state, and national transformation to a justice based new energy economy.

The NAACP is committed to using this analysis of energy efficiency and renewable energy potential and policies, in tandem with economic development and equity models, as tools for the continued transformation of the energy sector. We will be hosting a series of meetings and events aimed at mobilizing our units, collaborating with our partners, and working with stakeholders in implementing these recommendations, as outlined in the soon-to-be-released Just Energy Policies Action Toolkit.

ENERGY
EFFICIENCY



SOLAR



WIND



GEO THERMAL



APPENDIX

FEDERAL INCENTIVES

Incentives	Description
<u>USDA - High Energy Cost Grant Program</u>	The U.S. Department of Agriculture (USDA) offers an ongoing grant program for the improvement of energy generation, transmission, and distribution facilities in rural communities.
<u>USDA - Repowering Assistance Biorefinery Program</u>	The Repowering Assistance Program provides payments to eligible biorefineries to replace fossil fuels used to produce heat or power to operate the biorefineries with renewable biomass.
<u>USDA - Rural Energy for America Program (REAP) Grants</u>	Similar to its predecessor, the REAP promotes energy efficiency and renewable energy for agricultural producers and rural small businesses through the use of (1) grants and loan guarantees for energy efficiency improvements and renewable energy systems, and (2) grants for energy audits and renewable energy development assistance.
<u>USDA - Biorefinery Assistance Program</u>	USDA Rural Development is offering loan guarantees for the development, construction, and retrofitting of commercial-scale biorefineries.
<u>USDA - Rural Energy for America Program (REAP) Loan Guarantees</u>	Similar to its predecessor, the REAP promotes energy efficiency and renewable energy for agricultural producers and rural small businesses through the use of (1) grants and loan guarantees for energy efficiency improvements and renewable energy systems, and (2) grants for energy audits and renewable energy development assistance.
<u>U.S. Department of Energy - Loan Guarantee Program</u>	Section 1703 of Title XVII of the Federal Energy Policy Act of 2005 (EPAct 2005) authorized the U.S. Department of Energy (DOE) to issue loan guarantees for projects that "avoid, reduce or sequester air pollutants or anthropogenic emissions of greenhouse gases; and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued."

ADDITIONAL RESOURCES FOR JUST ENERGY POLICIES

DSIRE- Database of State Incentives for Renewable Energy

Renewable Portfolio Standard Summary Map

http://www.dsireusa.org/documents/summarymaps/RPS_map.pdf

Renewable Portfolio Standard Rules, Regulations, and Policies

<http://dsireusa.org/incentives/allsummaries.cfm?SearchType=RPS&&re=1&ee=1>

Energy Efficiency Resource Standards Summary Map

http://www.dsireusa.org/documents/summarymaps/EERS_map.pdf

Net Metering Summary Map

http://www.dsireusa.org/documents/summarymaps/net_metering_map.pdf

Net Metering Rules, Regulations, and Policies

<http://www.dsireusa.org/incentives/allsummaries.cfm?SearchType=Net&&re=1&ee=1>

American Council for an Energy-Efficiency Economy

State Energy Efficiency Policy Database

<http://aceee.org/sector/state-policy>

U.S. Energy Information Administration

U.S. State Profiles and Energy Estimates

<http://www.eia.gov/beta/state/>

Freeing the Grid

Best Practices in State net Metering Policies and Interconnection Procedures

<http://freeingthegrid.org/>

Interstate Renewable Energy Council

Connecting to the Grid

<http://www.irecusa.org/irec-programs/connecting-to-the-grid/>

Environmental Protection Agency

State & Regional Climate Policy Tracking

<http://www.epa.gov/statelocalclimate/state/tracking/index.html>

National Conference of State Legislatures

Minority Business Development—State MBE Certification Programs

<http://www.ncsl.org/issues-research/econ/mbe-certification-programs.aspx>

SAMPLE MODEL LEGISLATION

Minority Business Enterprise Opportunities

In the Maryland Offshore Wind Energy Act of 2012 (HB 441/SB 237)

Background: Members of the Senate Finance and House Economic Matters Committees have successfully advocated for including strong provisions for Minority Business Enterprises (MBEs) in the proposed Offshore Wind Bill. This fact sheet summarizes the exciting business opportunities in the bill. The combination of a \$10 million “Business Development Fund” and applying the state’s MBE Program to offshore wind projects will ensure that Maryland Businesses are trained and ready to take benefit from this venture.

Minority Business Enterprise Participation:

The State’s MBE Program will apply to offshore wind projects under this bill. Given that the offshore wind project is projected to produce almost a billion dollars of business opportunities overall, this could result in very significant opportunities for Maryland’s minority business community.

Minority business participation goals for each phase of a qualified offshore wind project shall be set in line with the State’s MBE Program. According to the Maryland Department of Transportation (MDOT) MBE database, there are over 300 Maryland MBEs in industries with potential to participate in some phase of offshore wind development (siting, manufacturing, construction, installation, operations, and maintenance).

D&T Welding Company, a structural metal fabricator based in Baltimore City, and Dajani, LLC, an engineering consultation firm based in Upper Marlboro, are examples of MBE firms that have the potential to take part in the development supply chain and have each joined the Business Coalition for Maryland Offshore Wind. The offshore wind bill is expected to incentivize 200 MW of offshore wind power, which will represent an investment of approximately \$850 million for development. Applying the state’s MBE Program to these projects would mean significant opportunities for MBEs.

Offshore Wind Business Development Fund

The Bill sets up a \$10 million business development fund. This fund will be used to assist small businesses and minority businesses to ensure that they are ready to participate in the offshore wind supply chain.

The purpose of this fund is to provide financial and business development assistance to emerging businesses, including minority businesses, in the state to prepare them to participate in the offshore wind industry. The funding source includes \$4 million from the Exelon settlement and \$6 million from the winning developer(s). An advisory committee will be established to make recommendations on the most effective administration of the fund. This dedicated fund will further promote Maryland MBEs and small businesses participating in offshore wind development and help Maryland MBEs gear up to enter cutting edge industries and eventually be among the new business leaders in a developing national market in alternative energy.⁵⁶⁵

Safe, Accountable, Flexible, Efficient Transportation Equity Action: A Legacy for Users (SAFETEA-LU) - Disadvantaged Business Enterprise (DBE) Requirements

The U.S. Department of Transportation's DBE (Disadvantaged Business Enterprise) Program provides a vehicle for increasing the participation by MBEs in state and local procurement. DOT DBE regulations require state and local transportation agencies that receive DOT financial assistance, to establish goals for the participation of DBEs. Each DOT-assisted state and local transportation agency is required to establish annual DBE goals, and review the scopes of anticipated large prime contracts throughout the year and establish contract-specific DBE subcontracting goals. Three major DOT operating administrations are involved in the DBE Program. They are the Federal Highway Administration, the Federal Aviation Administration and the Federal Transit Administration.

In addition to establishing goals, state and local recipients also certify the eligibility of DBE firms to participate in DOT-assisted projects. Some groups are presumed to be socially and economically disadvantaged for the purposes of participation in this program. In 1987, Congress added women to the groups presumed to be disadvantaged. The main objectives of the DBE Program are:

- To ensure that small disadvantaged business enterprises (DBEs) can compete fairly for Federally funded transportation-related projects.
- To ensure that only eligible firms participate as DBEs.
- To assist DBE firms in competing outside the DBE Program.

There has been, since 1983, a statutory provision requiring DOT to ensure that at least 10% of the funds authorized for the highway and transit financial assistance programs be expended with DBEs. DOT has established a single DBE goal, encompassing both firms owned by women and minority group members.

To be certified as a DBE, a firm must be a small business owned and controlled by socially and economically disadvantaged individuals. Certifiers make the determinations based upon on-site visits, personal interviews, reviews of licenses, stock ownership, equipment, bonding capacity, work completed, resume of principal owners and financial capacity.⁵⁶⁶

FEDERAL MINORITY BUSINESS ENTERPRISE LEGISLATION

Executive Order 11625--Prescribing additional arrangements for developing and coordinating a national program for minority business enterprise

Source: The provisions of Executive Order 11625 of Oct. 13, 1971, appear at 36 FR 19967, 3 CFR, 1971-1975 Comp., p. 616, unless otherwise noted.

The opportunity for full participation in our free enterprise system by socially and economically disadvantaged persons is essential if we are to obtain social and economic justice for such persons and improve the functioning of our national economy.

The Office of Minority Business Enterprise, established in 1969, greatly facilitated the strengthening and expansion of our minority enterprise program. In order to take full advantage of resources and opportunities in the minority enterprise field, we now must build on this foundation. One important way of improving our efforts is by clarifying the authority of the Secretary of Commerce (a) to implement Federal policy in support of the minority business enterprise program; (b) provide additional technical and management assistance to disadvantaged businesses; (c) to assist in demonstration projects; and (d) to coordinate the participation of all Federal departments and agencies in an increased minority enterprise effort.

NOW, THEREFORE, by virtue of the authority vested in me as President of the United States, it is ordered as follows:

Section 1. *Functions of the Secretary of Commerce.*

- (a) The Secretary of Commerce (hereinafter referred to as "the Secretary") shall--
 - (1) Coordinate as consistent with law the plans, programs, and operations of the Federal Government which affect or may contribute to the establishment, preservation, and strengthening of minority business enterprise.
 - (2) Promote the mobilization of activities and resources of State and local governments, businesses and trade associations, universities, foundations, professional organizations, and volunteer and other groups towards the growth of minority business enterprises, and facilitate the coordination of the efforts of these groups with those of Federal departments and agencies.
 - (3) Establish a center for the development, collection, summarization, and dissemination of information that will be helpful to persons and organizations throughout the Nation in undertaking or promoting the establishment and successful operation of minority business enterprise.
 - (4) Within constraints of law and appropriations therefore, and according to his discretion, provide financial assistance to public and private organizations so that they may render technical and management assistance to minority business enterprises, and defray all or part of the costs of pilot or demonstration projects conducted by public or private agencies or organizations which are designed to overcome the special problems of minority business enterprises or otherwise to further the purposes of this order.
- (b) The Secretary, as he deems necessary or appropriate to enable him to better fulfill the responsibilities vested in him by subsection (a), may--
 - (1) With the participation of other Federal departments and agencies as appropriate, develop comprehensive plans and specific program goals for the minority enterprise program; establish regular performance monitoring and reporting systems to assure that

goals are being achieved; and evaluate the impact of Federal support in achieving the objectives established by this order.

(2) Require a coordinated review of all proposed Federal training and technical assistance activities in direct support of the minority enterprise program to assure consistency with program goals and to avoid duplication.

(3) Convene, for purposes of coordination, meetings of the heads of such departments and agencies, or their designees, whose programs and activities may affect or contribute to the purposes of this order.

(4) Convene business leaders, educators, and other representatives of the private sector who are engaged in assisting the development of minority business enterprise or who could contribute to its development, for the purpose of proposing, evaluating and coordinating governmental and private activities in furtherance of the objectives of this order.

(5) Confer with and advise officials of State and local governments.

(6) Provide the managerial and organizational framework through which joint or collaborative undertakings with Federal departments or agencies or private organizations can be planned and implemented.

(7) Recommend appropriate legislative or executive actions.

Sec. 2. [Revoked]

[Sec. 2 revoked by Executive Order 12007 of Aug. 22, 1977, 42 FR 42839, 3 CFR, 1977 Comp., p. 139]

Sec. 3. *Responsibilities of Other Federal Departments and Agencies.*

(a) The head of each Federal department and agency, or a representative designated by him, when and in the manner so requested by the Secretary shall furnish information, assistance, and reports to, and shall otherwise cooperate with, the Secretary in the performance of his functions hereunder.

(b) The head of each Federal department or agency shall, when so requested by the Secretary, designate his Under Secretary or such other similar official to have primary and continuing responsibility for the participation and cooperation of that department or agency in matters concerning minority business enterprise.

(c) The officials designated under the preceding paragraph, when so requested, shall review and report to the Secretary upon the policies and programs of the minority business enterprise program, and shall keep the Secretary informed of all proposed budgets, plans and programs of his department or agency affecting minority business enterprise.

(d) The head of each Federal department or agency, or a representative designated by him, shall, to the extent provided under regulations issued by the Secretary after consultation with the official designated in paragraph (b) above, report to the Secretary on any activity that falls within the scope of the minority business enterprise program as defined herein and in those regulations.

(e) Each Federal department or agency shall, within constraints of law and appropriations therefore, continue all current efforts to foster and promote minority business enterprises and to support the program herein set forth, and shall cooperate with the Secretary of Commerce in increasing the total Federal effort.

Sec. 4. Reports. The Secretary shall, not later than 120 days after the close of each fiscal year, submit to the President a full report of his activities hereunder during the previous fiscal year. Further, the Secretary shall, from time to time, submit to the President his recommendations for legislation or other action as he deems desirable to promote the purposes of this order. Each Federal department or agency shall report to the Secretary as hereinabove provided on a timely basis so that the Secretary may consider such reports for his report and recommendations to the President. Each Federal department or agency shall develop and implement systematic data collection processes that will provide to the Office of Minority Business Enterprise Information Center current data helpful in evaluating and promoting the efforts herein described.

Sec. 5. Policies and Standards. The Secretary may establish such policies, standards, definitions, criteria, and procedures to govern the implementation, interpretation, and application of this order, and generally perform such functions and take such steps as he may deem to be necessary or appropriate to achieve the purposes and carry out the provisions hereof.

Sec. 6. Definitions. For purposes of this order, the following definitions shall apply:

(a) "Minority business enterprise" means a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to, Negroes, Puerto Ricans, Spanish-speaking Americans, American Indians, Eskimos, and Aleuts.

(b) "State" means the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the territories and possessions of the United States, and the Trust Territory of the Pacific Islands.

Sec. 7. Construction. Nothing in this order shall be construed as subjecting any function vested in, or assigned pursuant to law to, any Federal department or agency or head thereof to the authority of any other agency or office exclusively, or as abrogating or restricting any such function in any manner.

Sec. 8. Prior Executive Order. Executive Order No. 11458 of March 5, 1969, is hereby superseded.⁵⁶⁷

Executive Order 12432--Minority business enterprise development

Source: The provisions of Executive Order 12432 of July 14, 1983, appear at 48 FR 32551, 3 CFR, 1983 Comp., p. 198, unless otherwise noted.

By virtue of the authority vested in me as President by the Constitution and laws of the United States of America, including Section 205(a) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 486(a)), in order to provide guidance and oversight for programs for the development of minority business enterprise pursuant to my statement of December 17, 1982 concerning Minority Business Development; and to implement the commitment of the Federal government to the goal of encouraging greater economic opportunity for minority entrepreneurs, it is hereby ordered as follows:

Section 1. *Minority Business Development Plans.*

(a) Minority business enterprise development plans shall be developed by each Federal agency having substantial procurement or grant making authority. Such agencies shall submit these plans to the Cabinet Council on Commerce and Trade on an annual basis.

(b) These annual plans shall establish minority enterprise development objectives for the participating agencies and methods for encouraging both prime contractors and grantees to utilize minority business enterprises. The plans shall, to the extent possible, build upon the programs administered by the Minority Business Development Agency and the Small Business Administration, including the goals established pursuant to Public Law 95-507.

(c) The Secretary of Commerce and the Administrator of the Small Business Administration, in consultation with the Cabinet Council on Commerce and Trade, shall establish uniform guidelines for all Federal agencies to be utilized in establishing the minority business programs set forth in Section 2 of this Order.

(d) The participating agencies shall furnish an annual report regarding the implementation of their programs in such form as the Cabinet Council on Commerce and Trade may request, and at such time as the Secretary of Commerce shall designate.

(e) The Secretary of Commerce shall provide an annual report to the President, through the Cabinet Council on Commerce and Trade, on activities under this Order and agency implementation of minority business development programs.

Sec. 2. *Minority Business Development Responsibilities of Federal Agencies.*

(a) To the extent permitted by law and consistent with its primary mission, each Federal agency which is required to develop a minority business development plan under Section 1 of this Order shall, to accomplish the objectives set forth in its plan, establish programs concerning provision of direct assistance, procurement assistance, and management and technical assistance to minority business enterprises.

(b) Each Federal agency shall, to the extent permitted by law and consistent with its primary mission, establish minority business development programs, consistent with Section 211 of Public Law 95-507, to develop and implement incentive techniques to encourage greater minority business subcontracting by Federal prime contractors.

(c) Each Federal agency shall encourage recipients of Federal grants and cooperative agreements to achieve a reasonable minority business participation in contracts let as a result of its grants and agreements. In cases where State and local governments are the recipients, such encouragement shall be consistent with principles of federalism.

(d) Each Federal agency shall provide the Cabinet Council on Commerce and Trade such information as it shall request from time to time concerning the agency's progress in implementing these programs.⁵⁶⁸

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