

Renewable Energy in New Jersey

Summary

By enacting a strong renewable portfolio standard (RPS), net metering, a solar renewable energy credit (SREC) financing model, and other supportive policies, New Jersey has become a nationally recognized leader for solar power development, with over 27,800 industrial, commercial, academic, and residential installations. Waste and biomass energy systems also provide electricity, power, and fuel to the state, with incentives available to encourage further development of these sectors. In early 2014, Governor Christie announced plans to launch an Energy Resilience Bank to improve and increase the energy resilience of the state's critical facilities by funding distributed generation projects, using Superstorm Sandy funds.¹³

Installed Renewable Energy Capacity, 2013			
Wind Power	9 MW	Marine Power	0.04 MW
Solar Photovoltaic	1,275 MW	Biomass & Waste	254 MW
Solar Thermal Electric	0 MW	Ethanol	0 mGy
Geothermal Power	0 MW	Biodiesel	90 mGy
Hydropower	13 MW	Totals	1,551 MW; 90 mGy

Sources: See User's Guide for details

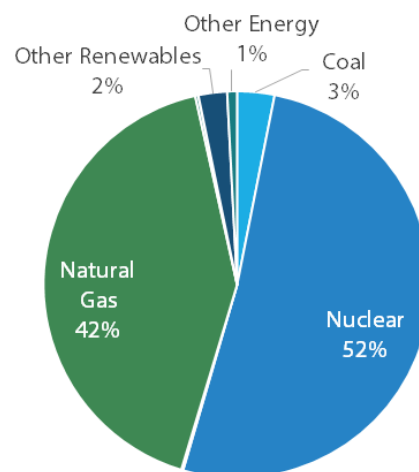
Market Spotlight

- ▶ New Jersey achieved 1.28 GW of operating solar capacity in 2013, installing 236 MW. Solar accounted for a full 100% of the state's new electric generating capacity installed that year.¹⁴ The New York and New Jersey Port Authority unveiled a solar PV installation at Newark Liberty International Airport in April 2014. The 3,200 panel installation will produce 817 MWh of electricity per year and is expected to save the airport \$60,000 on electricity bills annually. The installation is one of four PV installations at various locations owned and operated by the Port Authority.
- ▶ The U.S. Department of Energy (DOE) awarded a \$47 million grant in May 2014 to help finance the development of the 25 MW Fishermen's offshore wind energy project near Atlantic City. Although the project is mired in a legal battle with the New Jersey Board of Public Utilities, the DOE expects the project to eventually be approved, with commercial operation expected in 2016 or 2017.
- ▶ In January 2014, the State of New Jersey's Business Tax Certificate Transfer Program awarded \$1.75 million to an ocean energy developer to help finance the development of technologies to boost the state's nascent marine energy sector.

Economic Development

Employment	2011	
Green Goods & Services Jobs	81,018	
Investment (Grossed-up)	2011	2012
Asset Finance	\$297m	\$27.9m
Venture Capital & Private Equity	\$45.4m	\$4.8m

Sources: Bureau of Labor Statistics (BLS); Bloomberg New Energy Finance (BNEF). See User's Guide for details.



Electricity Generation, 2013 (EIA)

¹³ <http://www.state.nj.us/bpu/commercial/erb/>

¹⁴ Solar Energy Industries Association (SEIA)

Renewable Energy in New Jersey

State Policy

Renewable Portfolio Standard	<ul style="list-style-type: none"> ▶ 20.38% Class I and II resources by 2020-2021 and 4.1% solar electric by 2027-2028 <ul style="list-style-type: none"> ○ Offshore wind must account for 1,100 MW of main target ▶ Investor-owned utilities (IOUs), retail electric suppliers (98.3% of state's electric load) ▶ Class I resources include solar, wind, ocean, geothermal, landfill gas, anaerobic digestion, fuel cells using renewable fuels, new hydropower under 3 MW, and certain sustainable biomass ▶ Class II resources include hydropower facilities 3-30 MW and waste-to-energy ▶ Requirements may be met by Class I renewable energy credits (RECs), Class II RECs, solar RECs (SRECs), and offshore wind RECs (ORECs) ▶ Utilities must make an alternative compliance payment (ACP) or solar ACP for the amount of RECs not submitted
Net Metering	<ul style="list-style-type: none"> ▶ IOUs, electric suppliers ▶ System capacity and aggregate limits not specified ▶ Net excess generation credited to customer's next bill at retail rate; excess purchased by utility at end of 12 months at avoided-cost rate ▶ Customer owns RECs
Interconnection Standards	<ul style="list-style-type: none"> ▶ IOUs (Class I renewable energy resources) ▶ External disconnect switch not required; additional liability insurance not required for systems meeting certain technical standards
Grants and Loans	<p>Sustainable Biopower Incentives:</p> <ul style="list-style-type: none"> ▶ Sustainable biopower systems that produce electricity from organic material ▶ Competitive solicitation program for businesses; paid based on annual output of energy generated by facility <p>Solar Water Heaters:</p> <ul style="list-style-type: none"> ▶ \$1,200 for new, qualifying solar water heating systems on single-family homes <p>Geothermal Heat Pumps:</p> <ul style="list-style-type: none"> ▶ \$500 for new, qualifying geothermal heat pumps on residences ▶ Extra incentive for victims of Hurricane Sandy <p>Edison Innovation Clean Energy Manufacturing Fund (CEMF):</p> <ul style="list-style-type: none"> ▶ For project assessment and design, and project construction and operation, associated with the construction or expansion of a Class I renewable energy manufacturing line ▶ Assessment and Design Grant: Up to \$300,000 or 10% of total project funds ▶ Construction and Operation Loan: Up to \$3m as a 10-year, 2% interest loan <p>Edison Innovation Green Growth Fund:</p> <ul style="list-style-type: none"> ▶ For technology companies with Class I products or certain emerging technologies ▶ Must meet certain employment thresholds ▶ 2% interest rate; five-year loan term; up to \$2m ▶ 50% loan conversion to a performance grant may occur after five years
Tax Incentives	<p>Wind Manufacturing Tax Credit:</p> <ul style="list-style-type: none"> ▶ For 100% of a qualified capital investment (at least \$50m) in a qualifying wind energy facility that employs at least 300 new full-time employees <p>Solar Energy Sales Tax Exemption:</p> <ul style="list-style-type: none"> ▶ Full exemption from state sales tax for all solar energy equipment
More Info	<p>Property Tax Exemption for Renewable Energy Systems: For local property taxes</p> <ul style="list-style-type: none"> ▶ DSIRE Database: www.dsireusa.org/incentives/index.cfm?state=NJ ▶ Economic Development Authority: www.njeda.com/web/Aspx_pg/Templates/Pic_Text.aspx?Doc_Id=1080 ▶ Clean Energy Program: www.njcleanenergy.com ▶ Energy Master Plan: www.nj.gov/emp