

Charting a New Path for Rhode Island's Electricity Generation and Use



Rhode Island's energy future is at a crossroads

One path leads to increased dependency on fossil fuels—threatening our economy and fueling global warming. The other leads to a new, smarter energy future for Rhode Island. Investing in clean energy alternatives—like solar and wind power—can create and protect jobs in Rhode Island, save families and businesses money, and make America more energy independent. Clean energy is also the most effective solution to the threat of global warming. We can start making progress right away using proven technology, and then draw on American innovation to take us the rest of the way with new technologies.

How does Rhode Island generate electricity today?

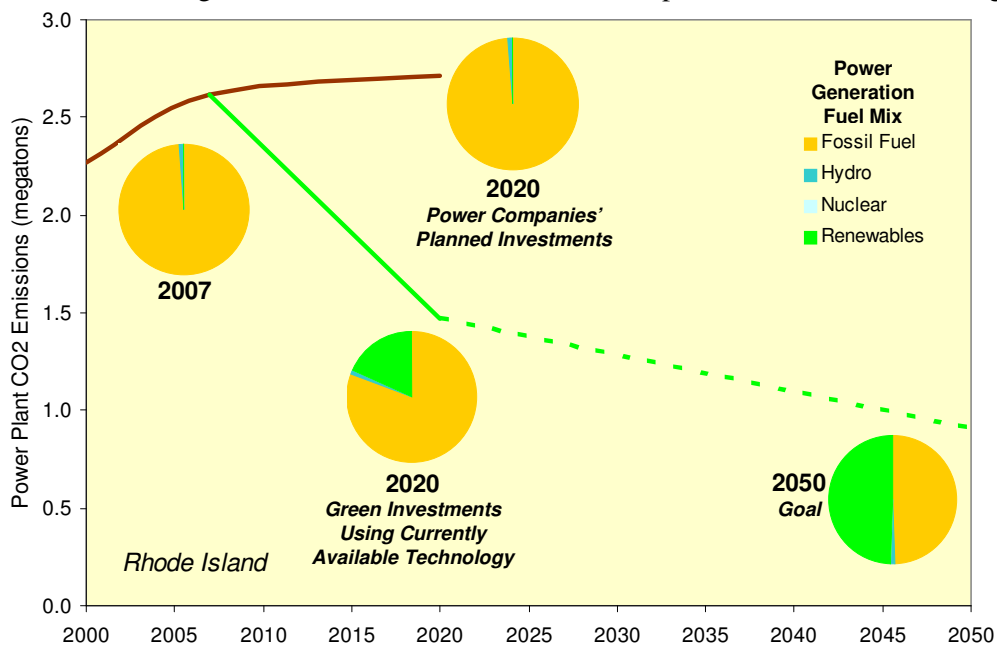
In 2007, electric power generated in Rhode Island primarily came from and gas (69.4 percent). Most utilities intend to continue relying heavily on fossil fuels in the coming decade. Rhode Island power companies plan to increase the energy generation from gas by 4.6 percent. Less than 0.1 percent of electricity generated in Rhode Island is expected to come from renewable sources like wind, solar, geothermal, and biomass under current plans.

Rhode Island has a choice to invest in a cleaner energy future

Rhode Island can achieve a new energy future by making better investments as utilities replace increasingly aged infrastructure and expand capacity. An important first step is for Rhode Island to generate at least 20 percent of electricity from renewable sources by 2020, a goal readily achievable with today's technology. Continuing to convert 15 percent of the state's energy portfolio to renewable energy sources each decade could yield an energy profile of at least 65 percent renewables by 2050.

Rhode Island can also benefit from improved energy efficiency. Technologies are available that could reduce demand nationally by 20 to 30 percent over the next decade. Innovations in energy efficiency should allow us to keep demand constant after 2020, even as the population grows.

Today, Rhode Island is ranked 6th in the nation for energy efficiency, largely because the state's utilities are already spending \$14 million annually to improve energy efficiency.



About the chart: 2000, 2007 and 2020 Power Companies' Planned Investments from CARMA 1.0 (www.CARMA.org). The 2020 Green Investments projection assumes that, using currently available technology, Rhode Island makes (1) improvements in efficiency to reduce overall demand by 25 percent and (2) shifts away from fossil fuels so that 20 percent of power generation is from renewable energy sources. The 2050 Goal assumes (1) hydro and nuclear are unchanged, (2) continued efficiency improvements keep total demand flat, and (3) renewable energy replaces at least 65 percent of power generation formerly done through fossil fuel burning. Note that the projection of future CO₂ emissions from fossil fuels assumes no investment in carbon capture and storage.

For more information, visit www.nwf.org/globalwarming.

Making a Difference in Rhode Island

Rhode Island could soon be pulling 15 percent of its energy right out of the sky. Seven companies are currently bidding for the contract to build Rhode Island's first offshore wind farm. Offshore wind has great potential as a renewable resource, but as of now there are no full-scale offshore wind farms in the U.S. If it succeeds, the Rhode Island offshore wind project could lead to others along the east coast. Even fishermen, one of the groups traditionally opposing offshore wind, support this idea. Some have even joined together and formed Fishermen's Energy of Rhode Island, which not only supports offshore wind, but also plans to build, maintain, and run its own offshore wind facilities. Fisherman's Energy is one of the companies that has submitted a proposal for the first offshore contract.



Sources:

<http://www.capecodtoday.com/blogs/index.php/2008/05/31/7-bid-to-build-rhode-islands-offshore-wi?blog=109>
http://findarticles.com/p/articles/mi_m4PRN/is_2008_June_4/ai_n25486510

Making a dent in global warming pollution

Simply by shifting to renewable energy sources and improving energy efficiency over the next decade or so, Rhode Island can reduce its future carbon dioxide (CO₂) emissions from electricity generation by 46 percent compared to the business-as-usual path that utilities are following now.

Given that 18 percent of Rhode Island's CO₂ emissions come from electricity generation, diversifying and updating our power sources is critical for cutting the state's total global warming pollution.

Increasing Rhode Island's energy and economic security

Investing in renewable energy sources will reduce Rhode Island's dependence on fossil fuels and at the same time create new green collar jobs. A new energy future in Rhode Island could include:

Expanded solar power. Rhode Island has enough solar resources to produce 4,000 to 4,500 Whr per square

meter using photovoltaic systems and 3,500 to 4,000 Whr per square meter using concentrating solar power systems. This means that devoting just 1 square mile in Rhode Island to solar power can provide enough electricity for about 1,000 households each year.

Expanded wind power. Rhode Island is currently ranked 35th for wind power, with 1 MW of existing electricity generation capacity. The American Wind Energy Association ranks Rhode Island 41st in terms of its future wind potential, with 109 MW of potential capacity.

Biomass power. Rhode Island has 0.1 million dry tons of biomass available each year that could be used to generate about 20 MW of electricity.

How does Rhode Island use electricity?

Rhode Island's energy is used to power:

- homes (39 percent),
- businesses (46 percent), and
- industry (15 percent).

Per capita residential electricity use is 2,833 kilowatt hours per year, 37 percent less than the national average.

References and Additional Reading:

American Council for an Energy-Efficiency Economy, www.aceee.org.

American Wind Energy Association, www.awea.org.

Bioenergy Feedstock Information Network, bioenergy.ornl.gov

CARMA (Carbon Monitoring for Action), www.CARMA.org.

Database of State Incentives for Renewables and Efficiency, www.dsireusa.org.

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Geothermal Energy Association, www.geo-energy.org.

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Political Economy Research Institute, www.peri.umass.edu.

Renewable Energy Policy Project, www.repp.org.

For more information, visit www.nwf.org/globalwarming.