Rhode Island

2010 State Profile

The New England electric grid is an 8,000-mile high-voltage transmission system that connects electric utilities, publicly-owned electric companies, power generators, suppliers, alternative resources, and end users in the six-state wholesale electricity marketplace. This is a brief profile of the electric grid and wholesale markets serving Rhode Island based on information from New England's regional system planning process and wholesale market reports.

Introduction

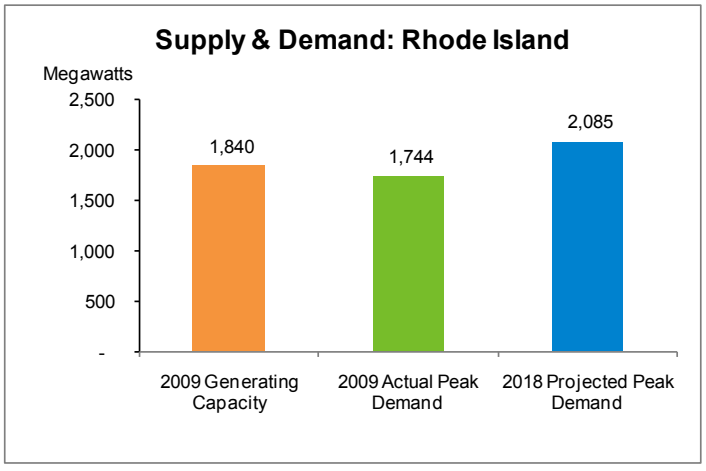
Rhode Island represents approximately 7% of the population in New England and 6% of the region's total electricity consumption.

Generators in the state generally produce more electricity than the state consumes each year and the surplus is sold into the region's wholesale electricity market. Transmission, generation, and demand resources are being added to the system to ensure that the reliability of the system is maintained. Rhode Island is promoting off-shore wind power to increase the amount of electricity produced from renewable energy sources in the state.

Demand resources (DR) are customer efforts to reduce electricity consumption through conservation and energy efficiency (EE). DR is treated as a resource in New England's wholesale electricity markets. ●●●

Growth in Demand

In the *2009 Regional System Plan*, ISO New England (ISO) forecasts the state's overall electricity demand to grow at a rate of 0.7% annually over the next decade, slightly below the 0.9% rate projected for New England. The ISO forecasts the state's peak (summer) demand to grow 1.3% annually over the next decade, slightly above the 1.2% rate projected for the region.



Updating the forecast: The ISO issues a new 10-year forecast each year based on the latest economic data. The 2009 forecast shows that New England's demand for electricity fell in 2008 compared with 2007, and future demand growth is expected to slow as a result of current economic conditions.

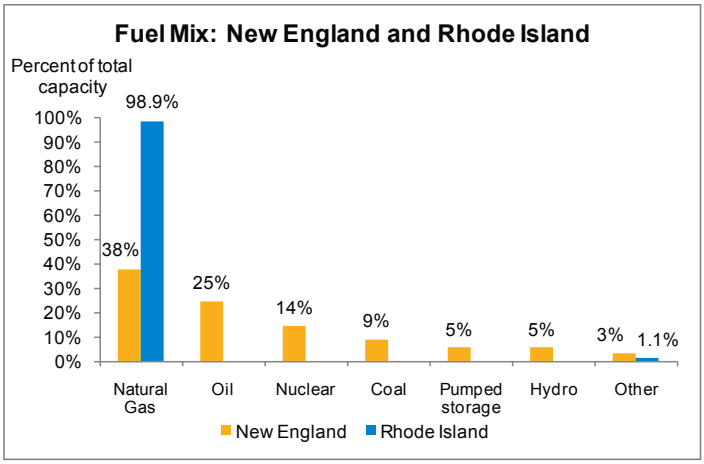
Rhode Island has been proactive in developing programs and initiatives to promote EE and reduce the growth in electricity use, including peak demand. ●●●

Generating Resources

The total capacity of generating plants located in Rhode Island is approximately 1,800 megawatts (MW). This is 6% of the total capacity in New England. Generator availability has increased systemwide in New England since the start of competitive markets, from 81% in 1999 to 86% in 2008. At any given time, however, individual generators may not operate due to planned or unexpected outages, environmental restrictions, or other reasons. Some resources do not operate because their offers to sell electricity in the wholesale market are above the market-clearing price. In Rhode Island, generators are owned and operated primarily by private generation companies. ●●●

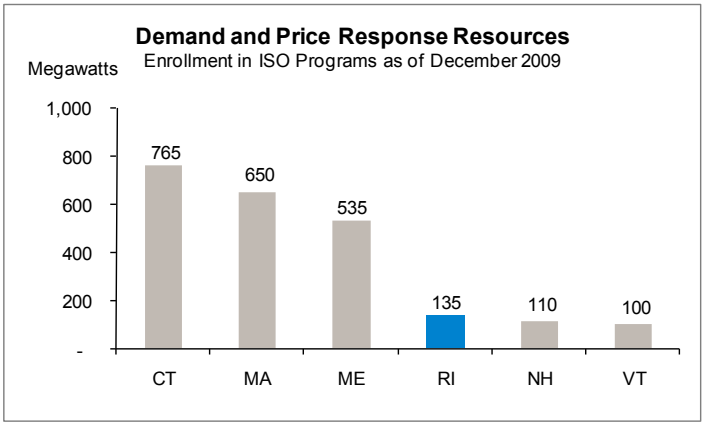
Fuel Mix

Natural gas and oil are the primary fuels for more than 60% of the existing generating capacity in New England. Natural gas is the primary fuel for nearly all generating capacity in Rhode Island. Several generators in the state have dual-fuel capability, which is important given the region's dependence on gas. ●●●



Demand & Price Response

There are approximately 2,300 MW of demand resources in New England that can reduce electricity consumption when there is a shortage of operating reserves on the electric grid or in response to high wholesale prices. There are more than 100 MW of DR in Rhode Island. DR has grown substantially since the start of competitive markets and continues to grow with efforts to integrate it into the wholesale electricity markets. ●●●



Proposals for New Resources

In New England, the Forward Capacity Market (FCM) provides opportunities for existing and new generation (supply), DR, and imports to compete to provide the capacity resources the region needs to meet future reliability requirements.

Resources must qualify, clear (i.e., be selected) in the auction, and then perform when called upon by the ISO to be eligible for capacity payments.

The most recent Forward Capacity Auction (FCA-3), conducted in October 2009, procured resources that need to be available June 1, 2012 to May 31, 2013. In FCA-3, about 20 MW of *new* DR cleared from Rhode Island, representing about 7% of the new DR in New England.

The ISO will conduct the fourth auction (FCA-4) in August 2010, for resources needed in the 2013-2014 timeframe.

In addition to the wholesale markets, states may provide incentives for the development of certain resources that help achieve their policy goals.

Connecting New Generating Resources

In order to connect to the grid, a proposed generator must be studied and approved under the ISO's Generator Interconnection Procedures to ensure the project will not adversely impact the reliability of the electric grid. This is known as the "queue" process.

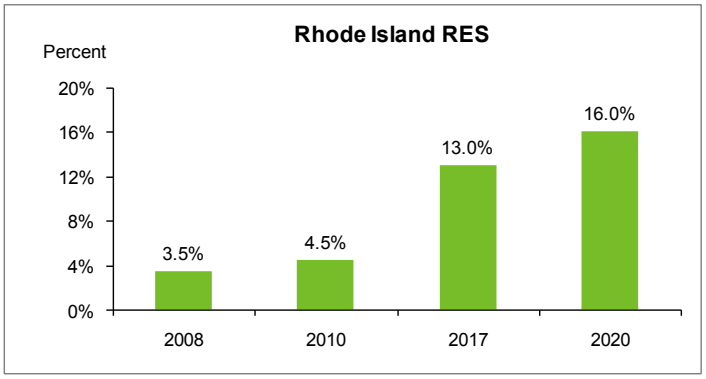
There are more than 1,000 MW of proposals in Rhode Island that have entered the queue, representing 10% of the proposals in New England as of December 2009. Historically, not all of the proposals in the queue have been developed, but it is an indication of the potential for new resources. More than half of the proposals in the queue in Rhode Island are off-shore wind power projects. ●●●

Renewable Resources

Utilities and competitive suppliers must obtain specified percentages of the electricity they provide to customers from renewable sources to meet Rhode Island's state-mandated renewable energy standard (RES).

In Rhode Island, resources eligible to meet the RES include certain types of solar, wind, biomass, hydro, landfill gas, and fuel cells.

The RES must be met primarily with new renewable resources, defined as resources developed after 1997. Only 2% of the RES can be met with resources developed prior to that timeframe. The RES increases to 16% in 2020.

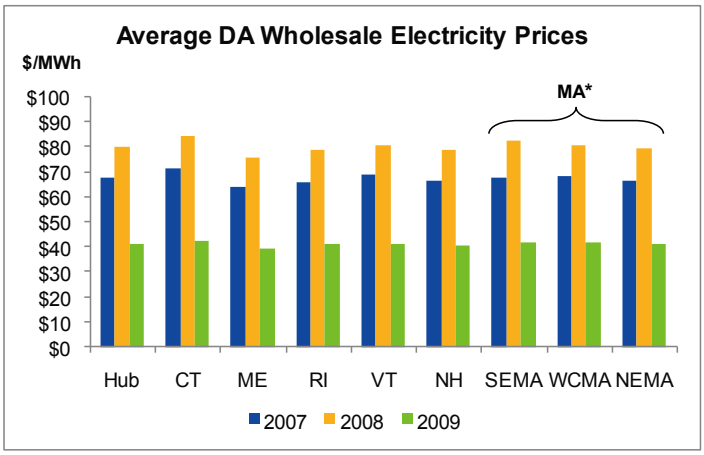


To further promote renewable resources in Rhode Island, Governor Carcieri set a goal of meeting 20% of the state's electricity needs with renewable resources by 2012, including 15% from wind power. In 2008, the governor selected Deepwater Wind to develop a large off-shore wind farm 15 miles from the coast and a small wind farm off Block Island. ●●●

Wholesale Market Prices

Locational pricing is a key feature of New England's wholesale electricity markets. The ISO administers Day-Ahead (DA) and Real-Time (RT) Energy Markets and calculates prices for eight zones in New England. Except for Massachusetts, each state is a separate zone. Price differences occur between zones when physical transmission constraints limit the ISO's ability to dispatch the lowest -priced resources. This requires the ISO to dispatch higher-priced local generation, resulting in congestion. The ISO calculates an average "Hub" price to show the wholesale price without congestion.

Average DA prices in 2009 were about 50% below average annual prices in 2008, primarily due to reductions in fuel cost.. ●●●



* Massachusetts has three zones: Southeastern Mass. (SEMA), Western/ Central Mass. (WCMA), and Northeastern Mass./Boston (NEMA/Boston).

Transmission

Several major transmission projects developed through the ISO's regional system planning process are in, or expected to soon enter the siting process in Rhode Island. National Grid and Northeast Utilities are proposing transmission projects to address reliability concerns in Rhode Island, Massachusetts and Connecticut. The projects are known as the New England East-West Solution (NEEWS). One project, the Rhode Island Reliability Project, has entered the siting process in Rhode Island and National Grid is expected to submit a siting application for an additional NEEWS project in the state. National Grid is proposing other projects to address reliability concerns and growing electricity use in Rhode Island and the bordering area of Southeast Massachusetts. The projects, known as the Greater Rhode Island Transmission Reinforcements (GRI), are expected to be operational by 2011. (GRI also supports the NEEWS projects.) Changes in the forecast of electricity demand or development of market-based responses to system needs can affect the need for transmission projects, and the ISO re-evaluates these needs as part of the planning process. ●●●

About ISO New England

ISO New England is the Independent System Operator responsible for ensuring the reliable operation of the New England electric grid, administration of the region's wholesale electricity markets, and administration of the regional Open Access Transmission Tariff, including regional system planning. The ISO is a not-for-profit corporation governed by an independent Board of Directors. The ISO does not own transmission or generation assets and has no financial interest in any companies participating in the region's wholesale electricity markets. ●●●

Sources and Additional Information

U.S. Census Bureau, *2009 Regional System Plan, 2008 Annual Markets Report*, FCA results, and other public ISO information.

ISO New England: www.iso-ne.com

RI Public Utilities Commission: www.ripuc.org

State Profile updated January 2010, ISO New England Inc.