STATE OF RHODE ISLAND
DIVISION OF PUBLIC UTILITIES & CARRIERS
89 Jefferson Boulevard, Warwick, Rhode Island 02888

REGULATORY TOPIC OVERVIEW

WINTER RELIABILITY

JANUARY 2024

Rhode Island and the region continue to plan for multiple energy adequacy scenarios that include consideration of possible electricity shortages during winter seasons.[1] The risk is heightened by the effects of extreme-cold temperatures over an extended period, which is expected to result in heavy demand for power across the New England region and thereby deplete natural gas supplies available through pipelines and liquefied natural gas (LNG) facilities. Currently, natural gas-fired power plants produce more than 50% of the electricity consumed by residents and businesses in Rhode Island and across the five other New England states. Gas pipelines that serve New England operate at maximum capacity during the winter months. During extreme cold weather, increased demand for natural gas to heat homes and businesses often limits the availability of gas for power plants. These facilities depend on imports of LNG or alternatively resort to burning oil, if the specific power plant maintains dual fuel capability.[2]

While national, regional and international economic conditions associated with the Ukraine crisis have moderated as compared to the higher prices for natural gas observed last winter particularly with respect to LNG, the New England region continues to be exposed to risk of gas shortages during extreme cold weather events or unforeseen system contingencies, which not only drives higher winter electric bills, but also poses a continued reliability risk for the region's electric grid.

Rhode Island, along with other New England states are working to expand and diversify Rhode Island's energy portfolio by investing in clean energy resources such as wind and solar, which will reduce dependency on natural gas over the long term. However, many of these projects will not be completed for a number of years.[3]

For this winter season, natural gas supplies are expected to be adequate for customers who heat with gas; however, those customers would still be affected by the potential need to reduce electric demand in the event ISO New England, the region's electric grid operator, issues an urgent appeal for conservation during a sustained period of extremely cold weather. In the worst possible scenario, ISO New England could issue a directive to local utilities across the region to shed a specified percentage of electric load on

[1] ISO-New England, the Federal Energy Regulatory Commission, and the North American Electric Reliability Corporation have each warned that an extended cold weather event in New England could result in an energy shortfall. See https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_WRA_2022.pdf.
[2] Recently, New England experienced an unexpected capacity shortage on December 23, 2022, when the region experienced colder than normal weather at the same time when a number of generation resources were unavailable. During a two-week period that encompassed the holidays, dual-fuel generators burned an estimated 31.5 million gallons of oil.
[3] Following Rhode Island Energy's (RIE) execution of a 20-year purchase power contract, Revolution Wind received federal approval to construct an offshore wind project located off the coast of Rhode Island, which will supply RIE customers with 400 MW of capacity. The project is now under construction. Separately, Rhode Island Energy released a competitive solicitation for additional offshore wind and will accept bids for up to 1,200 MW. Bidder submissions are expected to be received in the first quarter of 2024.

a geographical basis in locations where the risk posed by a disruption in electric service is deemed to be lower, such as areas without hospitals, public safety or critical facilities. Load shedding would be achieved by rotating controlled power outages across the electric distribution system for brief periods until power supplies are adequate to meet electric demand.

The Division of Public Utilities and Carriers continues to plan and work cooperatively with ISO New England, state emergency management officials and regulated utilities in Rhode Island to remain prepared for the possibility of weather-induced reliability challenges this winter season, including the following:

- Close coordination with ISO New England to monitor grid reliability status with respect to the 21-day weather forecast, particularly extreme cold temperatures.

- Engagement with all electric and gas utilities to stay prepared for the possibility that an energy shortage may require the need to reduce electric demand via load shedding (i.e., rotating outages on a feeder-by-feeder basis) and ensuring feeder map prioritization is integrated into RI Emergency Management Agency (RIEMA) systems.

- Participation in a November 16th Gas & Electric Table-Top exercise with RI utilities in conjunction with RI Emergency and Providence Emergency Management officials, the Governor's office and others to ensure the highest degree of coordination regarding the need for communications and public messaging for urgent calls for conservation, and a strategic approach to load shedding to ensure support for critical care facilities, emergency facilities and designated warming centers to maintain continuity of electric service.

- Convening winter gas operations meetings with Rhode Island Energy to review the following planned efforts:
  - Coordinated timing to electric service restorations to avoid potential pressure drops that could jeopardize reliability on the gas system (i.e., avoid triggering a 2019 Aquidneck Island pressure collapse and extended outage).[4]
  - Ongoing monitoring of RIE's inspection, testing and maintenance of LNG facilities. Current inventory levels are full — (Providence @ 99%; Exeter @ 97%; Portsmouth @ 95%)
  - Review demand response protocols for non-firm customers.[5]
  - Engage with Northeast Gas Association to monitor Interstate Pipeline systems regarding incidents or significant supply losses that could affect RIE's gas system reliability.

- Continuing with follow-up briefings with ISO New England regarding system status information for resource and fuel adequacy.

For more information, please contact Tom Kogut, Chief Information Officer, at (401) 780-2105.

[4] See Division Investigation Report into the Aquidneck Island Gas Service Interruption of January 21, 2019, https://ripuc.ri.gov/eventsactions/Aquidneck_Island_Report.html.

[5] Non-firm customers agree to interruption of gas service at the election of the utility. Firm service is the highest quality service offered to customers and anticipates no planned interruption.