

North America

Power and Utilities | Energy Efficiency

New ISO-NE Return on Equity Rate Could Impact Future Transmission Decisions

Continued Transmission Investments Key to Electric Grid Reliability

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Policy Brief

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Key Takeaways:

- The FERC – retroactively and proactively – lowered the Return on Equity (ROE) rate for New England Transmission Owners
- A Petition by Massachusetts Attorney General led to an eventual FERC decision to change the ROE calculation methodology for public utilities
- Decision may affect utilities' willingness to invest in new transmission projects which has implications in terms of reliability, integration of renewable energy, and generation diversity

Entities Mentioned:

- Federal Energy Regulatory Commission
- ISO New England
- Massachusetts Attorney General
- National Grid
- New England Transmission Owners
- North American Electricity Reliability Corporation
- Northeast Utilities

Related Research

[Northeast Programs Aim to Ensure Winter Electricity Reliability amidst Pipeline Constraints](#)

[FERC Order 764 and the Integration of Renewable Generation](#)

FERC Establishes New ROE Calculation Methodology

Public utilities earn a set return on equity (ROE) from ratepayers for the costs of constructing electricity transmission infrastructure. The Federal Energy Regulatory Commission (FERC) determines acceptable ROE ranges for public utilities based on a discounted cash flow (DCF) methodology. While previously this methodology only accounted for short-term growth projections, FERC updated the methodology in June 2014 to also consider long-term growth projections linked to GDP to calculate utilities' estimated cost of equity. This methodology change was spurred by a September 2011 joint complaint filing from several New England stakeholders.

FERC updated its DCF calculation methodology in June 2014

In 2006, the FERC approved the ISO New England (ISO-NE) open access transmission tariff (OATT), which included an 11.14 percent base ROE rate for the New England Transmission Owners (NETO) in the six-state region. In 2011, Massachusetts Attorney General (AG) Martha Coakley filed a complaint with the FERC claiming that the 11.14 rate was too high. AG Coakley claimed the ROE was set in more favorable economic times, and that the rate should be lowered to 9.2 percent to better align with lower U.S. Treasury bond yields and associated utility capital costs.

After an August 2013 court decision in favor of a lower ROE rate, on October 16, 2014 the FERC also agreed and ruled NETO's base return on equity (ROE) unjust and unreasonable (Opinion No. 531), and lowered the NETO ROE base rate to 10.57 percent (Docket No. EL11-66-001). The ROE calculation utilized the new two-step DCF methodology with a long-term GDP growth rate estimate of 4.39 percent. Including incentives, NETO's ROE cannot exceed 11.74 percent – the top of FERC's ROE "zone of reasonableness" of 7.03 percent to 11.74 percent. The NETO must also provide customer refunds, plus interest, for the period October 1, 2011 to December 31, 2012 based on a 10.6 percent ROE rate.

New England Transmission Owners' base ROE was lowered to 10.57 percent on October 16, 2014

New ROE Rate Not a Significant Burden in Near-Term

Based on the AG's initial estimates, the reduced NETO ROE rate of 10.57 percent will lower overall ratepayer costs by approximately \$45-50 million per year. In addition, ratepayers will be refunded more than \$30 million in aggregate refunds – based on initial estimates from National Grid and Northeast Utilities' 2013 financial statements.

The new ISO-NE ROE will lower ratepayer costs \$45-50 million per year

The rate reductions and refunds are not currently considerable financial burdens to NETO companies, as the group earned net income well in excess of \$1 billion in 2013. However, they may be more meaningful going forward as there is significant transmission infrastructure construction forecast for northern New England to connect under-construction and proposed wind energy assets. Accordingly, Central Maine and Power Company will likely see

the most transmission additions in the near-term, continuing their leading trend of transmission mile additions (Figure 1).

Figure 1 – Total Transmission Circuit Miles of ISO-NE Pool Transmission Facilities (Top 8 Companies)

Entity	2011 Total	2014 Total	Difference
National Grid USA	2356.7	2303.4	-53.3
The Connecticut Light and Power Company	1599.2	1558.2	-41.0
Central Maine Power Company	1142.8	1303.7	160.9
Public Service Company of New Hampshire	869.2	870.2	1.0
NSTAR	778.2	797.0	18.8
VT Transco	630.8	631.0	0.1
Western Massachusetts Electric Company	387.7	416.7	29.0
Emera Maine	182.0	179.5	-2.6

Source: EnerKnol analysis of ISO-NE data

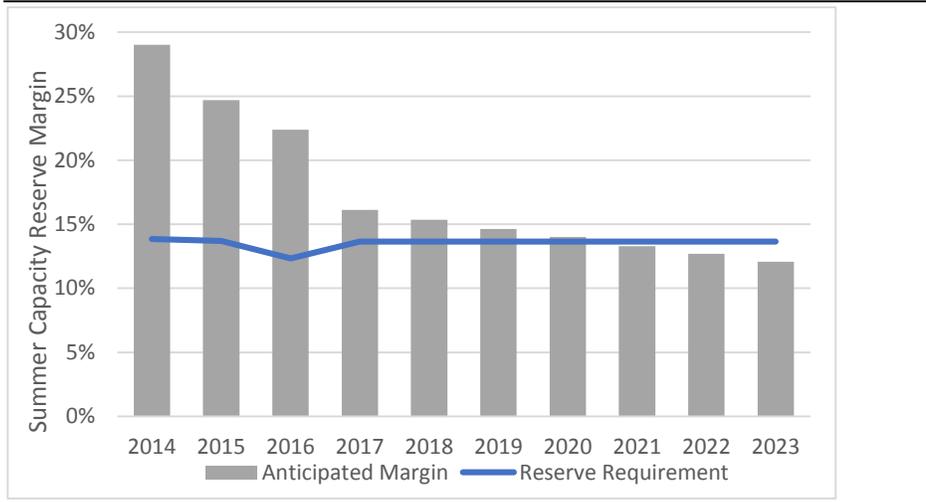
The newly established base ROE rate of 10.57 percent could impact future transmission construction decisions. This potential impact is due to the inherently long, capital-intensive process of planning, siting, and constructing of new transmission infrastructure.

Reduced ROE adds to Transmission Construction Challenges

New England is projected to face generation capacity reserve challenges over the next decade, and the reduced NETO ROE could exacerbate this by making new transmission construction less financially attractive. The North American Electricity Reliability Corporation (NERC) 2013 Long-Term Reliability Assessment report highlights that by 2020, more than 25 percent (8.3 GW) of the ISO-NE generation fleet will be over 40 years old. Many of these resources are coal- or oil-fired generators located near load centers to meet peak demand, and 6 GW of NERC-determined at-risk capacity will have to be retained, repowered, or replaced to satisfy the region’s future capacity reserve requirements (Figure 2). In light of recent extreme weather conditions, it is also imperative that existing transmission infrastructure be maintained and upgraded to ensure system reliability. In addition, New England state-mandated renewable portfolio standards will require new renewable generation resource construction, with the majority located far from major load centers.

Investments in new and existing transmission infrastructure is critical to grid reliability

Figure 2 – Projected New England Capacity Reserve Margins and Requirements

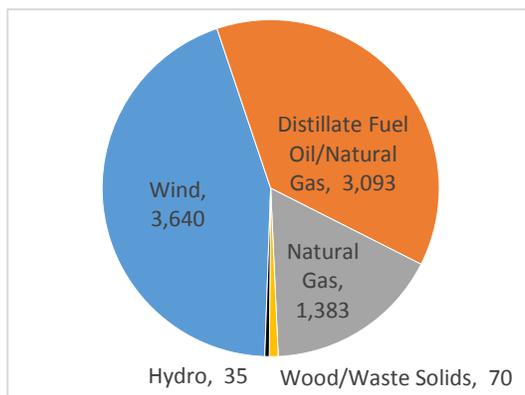


Source: EnerKnol analysis of NERC data

The ISO-NE generation mix is shifting away from aging resources to new natural gas-fired and renewable sources, and new transmission infrastructure must be constructed to coincide. The ISO-NE interconnection queue shows approximately 44 percent (3,460 MW) of total interconnection requests are from wind energy. In addition, 70 percent (2,572 MW) of the wind energy interconnection requests are located in Northeast Maine (Figure 3). New transmission lines will need to be constructed to transport this proposed energy, as the majority of load is located in southeastern New England. These projects carry additional risk due to wind energy’s intermittent generation and reliance on supportive federal tax policies.

44 percent of total ISO-NE interconnection requests are wind energy

Figure 3 – ISO-NE Interconnection Queue and Wind Energy Interconnection Locations (MW)



Wind Energy Interconnection Locational Breakdown

Region	Megawatts
Northeast Maine	2572
West and Central Maine/Saco Valley NH	508
N, E, and Central NH / Eastern VT	63
SE Mass / Newport, RI	462 (Cape Wind)
Western Massachusetts	35
Total	3640

Source: EnerKnol analysis of ISO-NE data

A consistent, attractive regulated ROE rate is needed to support transmission project development because – in addition to being capital-intensive – transmission construction is extremely risky due to long lead times, siting litigation challenges, and dependence on financial viability of interconnected

generation capacity. If an attractive ROE is not provided for large-scale transmission projects, NETO companies will seek out more attractive returns through smaller-scale, often less-risky projects, or potentially explore projects outside the New England region. With tightening capacity reserve margins and a shifting generation mix, continuing investments in new and existing transmission infrastructure is critical for the New England region.

Disclosures Section

RESEARCH RISKS

Regulatory and Legislative agendas are subject to change.

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