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U.S. Department of Energy Transmission Needs Study: Guide for New England

Why is it Important for New England to Work with Regional Partners on Transmission Now?

Across New England, governors and legislatures have set appropriately aggressive goals for rapid decarbonization over the coming decade. In aggregate, meeting these goals will require between 10,000 and 35,000MW of new transmission capacity – the equivalent of doubling the capacity of all existing power sources in New England. Bringing grid-scale renewable power to New England homes and businesses will require a coordinated effort within the region and expanded partnerships across its borders.

In a recent report from Americans for a Clean Energy Grid, New England was given a D+ for its transmission planning efforts. Troublingly, New England received an 'F' in availability of transmission capacity for new resources – meaning that innovative new storage and generation projects will find it difficult to build in the region in the near future.

We need to move quickly and decisively to ensure our grid is prepared for the scale of the energy transition. To aid in that effort, the federal Bipartisan Infrastructure Law mandated a Transmission Needs Study laying out the steps necessary for each region to meet the moment. The study's recommendations, if implemented expeditiously, will help smooth the energy transition and protect consumers from high prices and grid unreliability.

Below are two key findings from the U.S. Department of Energy (DOE) National Transmission Needs Study highlighting why New England must prioritize inter-regional transmission:

- **FINDING #1: New England's grid is at risk of outages and blackouts without investment in the transmission system.**
  New England's reliance on natural gas for winter heating and electricity makes the region particularly vulnerable to supply disruptions or price hikes. Transmission investment will allow new renewable generation projects to more easily connect to the grid and keep the lights on for New Englanders. In particular, a regional offshore transmission network can improve reliability and reduce curtailments when outages occur.

- **FINDING #2: Interregional transmission will save money and lives during extreme weather events.**
  Extreme weather events, exacerbated by climate change, pose a major threat to New England's grid stability and economy. The Transmission Needs Study estimated, for example, that during 2018's 'Bomb Cyclone' each additional GW of transmission capacity would have saved between $30 and $40 million dollars in lost economic productivity. Transmission capacity increases grid resiliency by allowing operators to send power to areas where it is most needed during times of heightened grid stress.

Further Benefits of Investing in Transmission

Accelerating the Renewable Energy Transition and Enabling a Carbon-Neutral Power Sector

Both onshore and offshore renewable projects face significant constraints and expenses associated with limited transmission capacity. Generation projects in rural Maine and New Hampshire are particularly affected by insufficient connection with the broader New England grid. Offshore wind projects may require as much as $1 billion in onshore transmission upgrades to bring this affordable energy resource into homes and businesses.

Cutting Costs for New England Ratepayers

As New England pushes towards a clean energy future and fossil fuel plants become less competitive, new transmission investment will be necessary. The question is whether states will embrace the change or drag their feet – increasing costs and missing carbon reduction

goals in the process. The 2021 Bipartisan Infrastructure Act contains roughly $2.5 billion for transmission facilitation. New England states should continue to engage with the federal government to defray costs that would otherwise hit ordinary families.

Recommendations: Steps New England States Can Take to Meet the Moment

- Organize around a joint statement from New England governors committing to a sustained, collaborative effort to determine a regional transmission strategy, including an aggressive timeline for the strategy's submission to appropriate regulatory bodies. The statement should call for tripling the region's transmission capacity for clean energy, halving the development timeline for transmission projects, and committing to necessary staffing of state energy offices and commissions to meet these goals.
- Engage directly with regional partners – particularly New York and PJM states (grid operator for the mid-Atlantic states) – on interregional transmission planning and cost-sharing to reach an agreement satisfactory for all parties.
- Determine procurement strategies to maximize competition, economic development, and job creation. A collaborative, multi-state approach can reduce costs and ensure that projects get built. Harnessing competition means driving costs down and allowing for creativity in meeting the region's transmission needs.
- Collaborate in leveraging ISO-NE's notable 2050 Transmission Planning Effort to roll up all transmission-related data into a comprehensive set of transmission strategies that meet the region's needs over the short, medium, and long term. The compilation states create should include an evaluation of a broad range of solutions, including grid-enhancing technologies (GETs), advanced reconductoring, and energy storage.
- Finalize a cost allocation approach, adopting a consistent methodology for how to categorize benefits gained from transmission projects and how they can be translated to a cost-sharing approach.