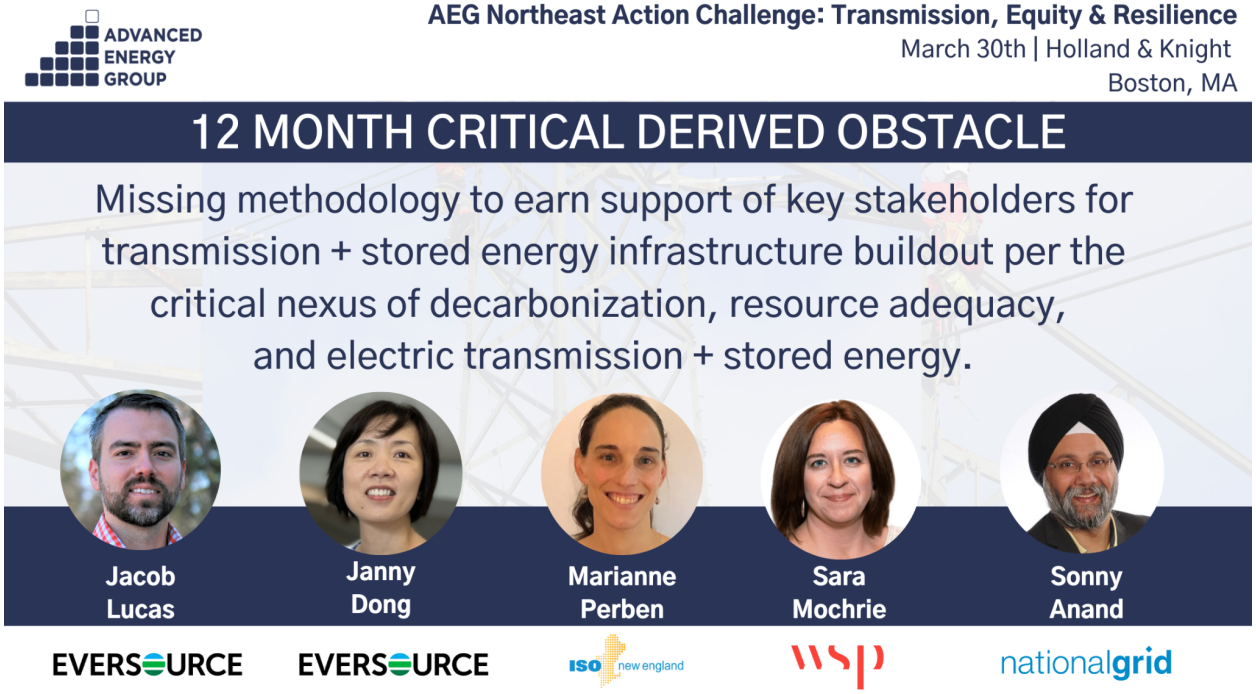
April 20, 2023

Prepared comments per the U.S. Department of Energy (DOE) for the National Transmission Needs Study

On March 30, 2023, Advanced Energy Group convened over 36 public and private stakeholders to discuss key challenges, needs and priorities for the Northeast states to deliver the transmission capacity necessary to ensure a successful clean energy transition. The following summary submitted as comments to the U.S. Department of Energy (DOE) for the National Transmission Needs Study reflects the key points of alignment from this workshop among participating leaders. Several of these leaders have added their signature in support of this summary on page 4.

Regarding Transmission, Equity and Energy Security in the Northeast, a critical obstacle to collectively address in the next 12 months is **the absence of a common methodology to earn the support of key stakeholders** for transmission + storage infrastructure buildout per the critical nexus of decarbonization, resource adequacy, and electric transmission + stored energy.



Alignment and support among a broad range of public and private stakeholders is essential to achieve the needed scale of transmission build out; however, there is no ideal model or methodology to deliver this level of stakeholder activation. As Janny Dong, Manager, Transmission System Planning, Eversource and Jacob Lucas, Director, Transmission System

Planning, Eversource pointed out, “there is a critical need to educate regional stakeholders on the critical nexus of decarbonization, resource adequacy and electric transmission buildout.”

This education needs to be provided in a manner that best supports the needs and concerns of front line communities. How will increased transmission infrastructure provide immediate relief and benefits —in terms of equity metrics such as wealth creation, energy cost burden and public health? By keeping these needs and priorities at the forefront of stakeholder discussions, trust and support can be earned.

Natalie Hildt Treat, Senior Policy Manager for the Northeast Clean Energy Council, said that to earn that trust and to *activate* community organizations and citizens to become proponents of transmission projects, we need to begin by *listening*. “It’s not simply a matter of the powers-that-be ‘educating’ frontline communities, but working to understand what matters to them, and what could win them over,” said Treat.

“Do they care about home energy costs, electric reliability, cleaner air, jobs? Probably, but we need to ask them. Furthermore, we need to find a way to compensate and support grassroots community groups or even individuals for their time and effort to participate in stakeholder processes, or to serve as trusted liaisons—particularly with environmental justice populations,” said Treat.

Regarding transmission capacity, an essential consideration also agreed upon by those in attendance is the need to incorporate stored energy (including but not limited to battery storage) into aspects of planning, design and deployment. As Marianne Perben, Director, Planning Services, ISO New England stated, it is critical to, “maintain and enhance the region’s access to stored energy."

A new stakeholder engagement methodology should be developed first in high priority areas that reflects a convergence of stakeholder needs and serves as a model to strategically repeat throughout the region. In the Northeast region, Southeastern Massachusetts (SEMA) is an area of importance regarding renewable generation penetration and transmission adequacy affecting many people. Please see below an illustration of this need.

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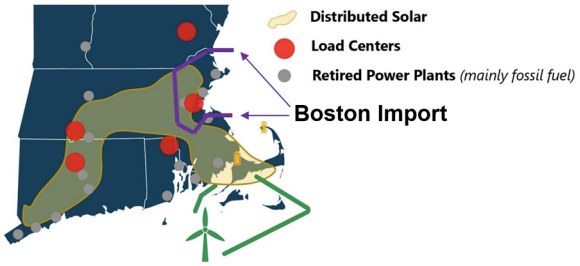
Challenges of Supplying Higher Demand and Enabling Renewable Energy

Electrified Boston Relies on Transmission Import

- Greater Boston 2031 peak load 6 GW (summer)
  - 19 GW by 2050 (100% gas to electric conversion and EVs)!
    - 8 GW of Heating Electrification load growth
    - 7 GW of Transportation Electrification load growth
- Current Boston Import transfer limit is 5.3 GW.

Clean Resources in SEMA Need Transmission to Reach Load Center

- SEMA 2031 summer peak load: 3 GW
- Projected offshore wind in SEMA: 5 GW
- Projected solar in Eversource SEMA territory: 4 GW
- Offshore wind & solar in excess of load: > 6 GW
- ISO-NE's New Generation Curtailment Pilot study of SEMA indicates in 2025:
  - Over 4,000 hours of offshore wind curtailment under the most limiting condition due to transmission constraints
  - Close to 5,000 GWh offshore wind curtailment under maintenance and transmission line out conditions.



EVERSOURCE

Another important challenge to address is the very small number of projects that successfully result from the interconnection process as illustrated in the diagram below presented by Sara Mochrie, Senior Vice President, Market Director Earth & Environment - Energy for WSP USA. Considerable time is required for resources to support review of interconnections, with many projects that eventually withdraw applications and fail to proceed to execution. To best allocate resources to support needed stakeholder engagement and successful navigation of the interconnection process, some participants agreed that we should align on a set of metrics that would prioritize certain transmission projects as "National Interest Projects" prior to starting the interconnection process.

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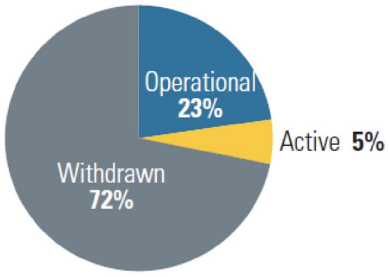
Key Obstacle:

Go beyond National Interest Corridors - Identify National Interest Projects to reduce permitting uncertainty and focus interconnection que traffic

- Withdrawn applications detract resources from most robust projects
- Permitting timelines are drawn out reducing the realization of workforce and community benefits from the generation of cleaner energy sources

Outcome of Interconnection Requests (submitted 2000-2016)



WSP

In summary, as stated by Sonny Anand, Director, Infrastructure Investments for National Grid there is an immediate need for, “a holistic, sustainable model for stakeholder engagement for transmission coordination that becomes a catalyst in making progress towards 2050 clean energy goals." Successful development of this engagement model will benefit 1) from prioritizing specific regions and specific projects prior to the interconnection process, such as the SEMA region, 2) a commitment to ongoing, inclusive, proactive stakeholder dialogue that demonstrates an authentic concern to realize economic opportunities and address potential adverse impacts among affected communities, especially among those most vulnerable. Making sure the right-of-ways for new transmission are identified, communicated, and do not further impact these communities negatively must be a key consideration in determining how we meet our decarbonization goals. Similarly, the economic benefit of the jobs created by projects, the enabling benefits of reliability and resiliency, and the clean energy benefits need to be shared with these communities. Opportunities such as disadvantaged business set asides and training/apprenticeship programs can be developed and co-created with communities in mind.

Earning the support of affected communities and stakeholders to successfully develop and construct the transmission and stored energy infrastructure we need requires a new approach to engagement that fosters understanding, trust and excitement for a better future.

Building out transmission capacity is essential to providing customers access to renewable energy and achieving our transportation and building electrification goals. The climate challenge means we must go big and move swiftly with the clean energy transition. Authentic community engagement, creating shared plans that support both system and community needs, must be purposeful from the start and at all phases of project siting and development for us to succeed with this work.

Signatures of Support:

The undersigned participated in this stakeholder workshop and are in agreement with these comments to the Department of Energy National Transmission Needs Study.

HG Chissell Founder/CEO Advanced Energy Group April 6, 2023	Natalie Hildt Treat Senior Policy Manager Northeast Clean Energy Council April 11, 2023
Gary Leatherman Managing Director Baker Tilly US, LLP April 12, 2023	Kathryn Cox-Arslan Director, Transmission Policy New Leaf Energy, Inc April 12, 2023
Barry L. Reaves Vice President for Diversity, Equity, Inclusion Justice (DEI/J) & Workforce Development NECEC April 20, 2023	Jeremy McDiarmid Managing Director & General Counsel Advanced Energy United April 17, 2023
Sara Mochrie Market Director – Earth & Environment – Energy WSP April 20, 2023	Richard Brody VP North America Sales and Business Development CTC Global April 20, 2023
Sonny Anand Director - Infrastructure Investments National Grid April 20, 2023	Jacob Lucas Director, Transmission System Planning Eversource Energy April 20, 2023
	Zach Humphrey Regional Director | Power & Utility Consulting 1898 & Co. | Part of Burns & McDonnell April 20, 2023