



# Long-Term Transmission Study

REQUESTED BY MULTI SECTOR GROUP B\*

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# Purpose and Scenarios

## Purpose

- ▶ Power flow model to identify any transmission system limitations to implementing a net zero carbon future.
- ▶ Identify potential new transmission investments that could resolve identified limitations.
- ▶ Identify whether distribution system generation, mobile and stationary storage, or flexible demand could reduce the need for any new transmission infrastructure.

## Base Case Scenario

- ▶ “End-state” net zero-carbon generation scenario (not tied to a particular year), e.g., MA 80-by-50 study 2050 end-state scenario or Eversource/LEI “2040 Aggressive Decarbonization” scenario

## System in Flux Scenario

- ▶ “Mid-point” scenario (not tied to a particular year) providing directional information about the system in flux e.g. MA 80-by-50 study 2040 scenario “Central Case” or Eversource/LEI “2040 Balanced Portfolio” study

# Metrics and Deliverables

## Metrics

- ▶ List of system limitations i.e. interface transfer limit constraints, thermal and/or voltage constraints, stability concerns (system inertia)

## Associated/Ongoing Studies

- ▶ MA 20-by-50 Study; Eversource/LEI "2040 Aggressive Decarbonization" scenario; 2019 NESCOE Offshore Wind Economic Study

## Deliverables

- ▶ Identify any potential constraints in the transmission system to facilitating the net zero emissions resource mix
- ▶ Identify any necessary transmission upgrades and additions
- ▶ Identify non-transmission alternatives to upgrades and additions
- ▶ Identify amount of DER required to minimize required transmission upgrades



# Thank you

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