

2050 Decarbonization Roadmap

Regional Clean Electricity Needs

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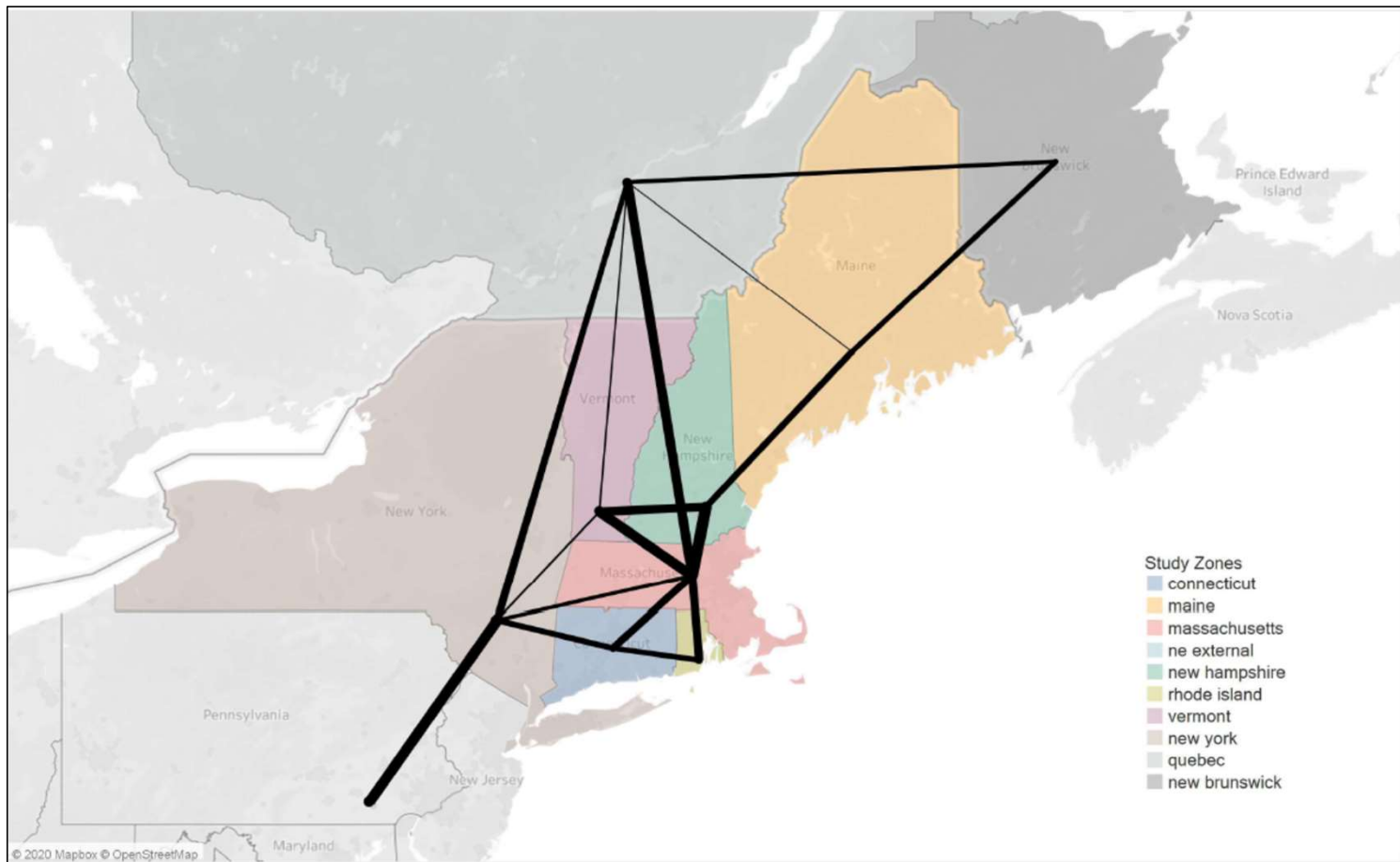
New England Energy Vision - Wholesale Markets Technical Forum

Connecticut Department of Energy and Environmental Protection

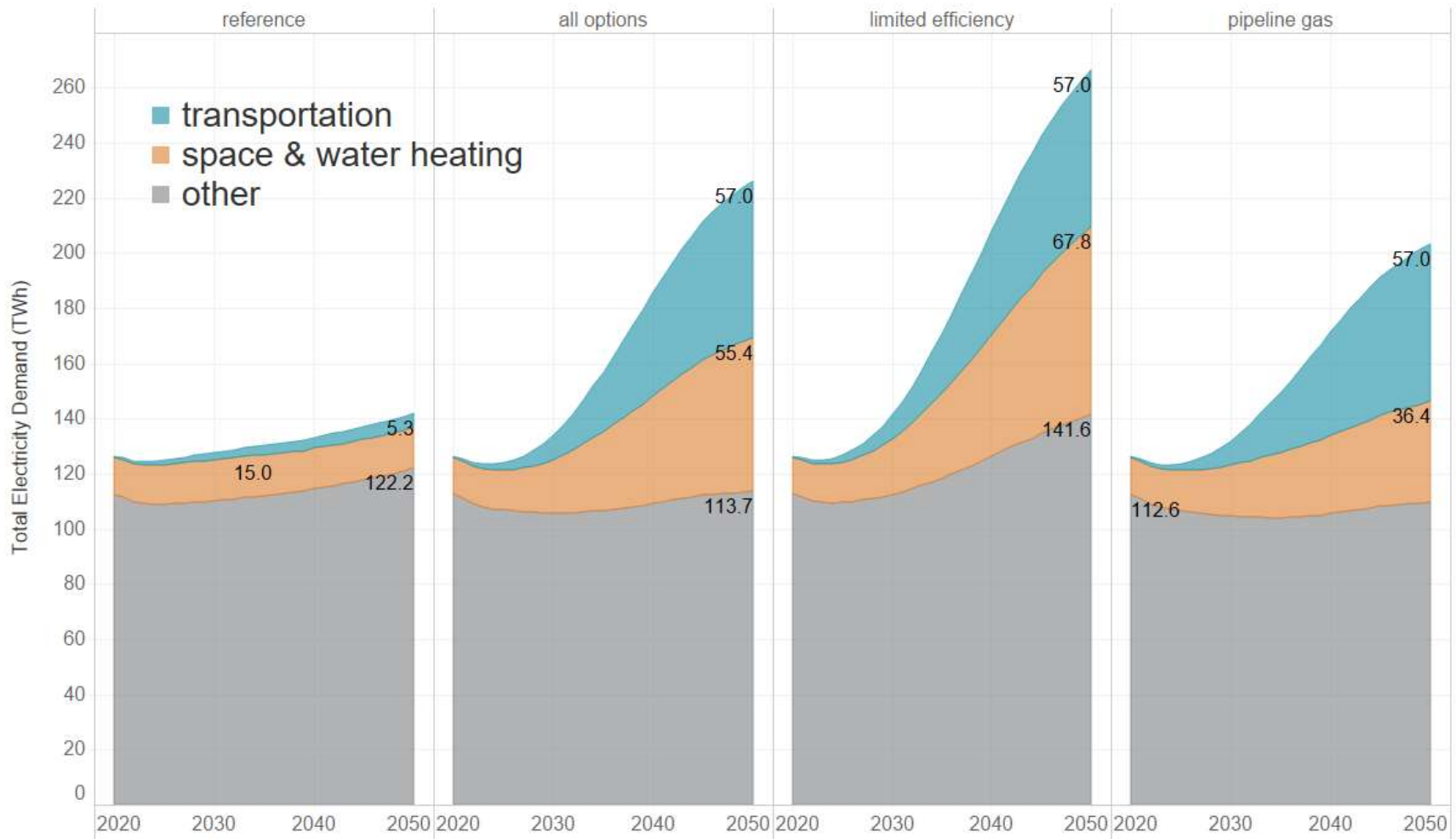
January 13, 2021



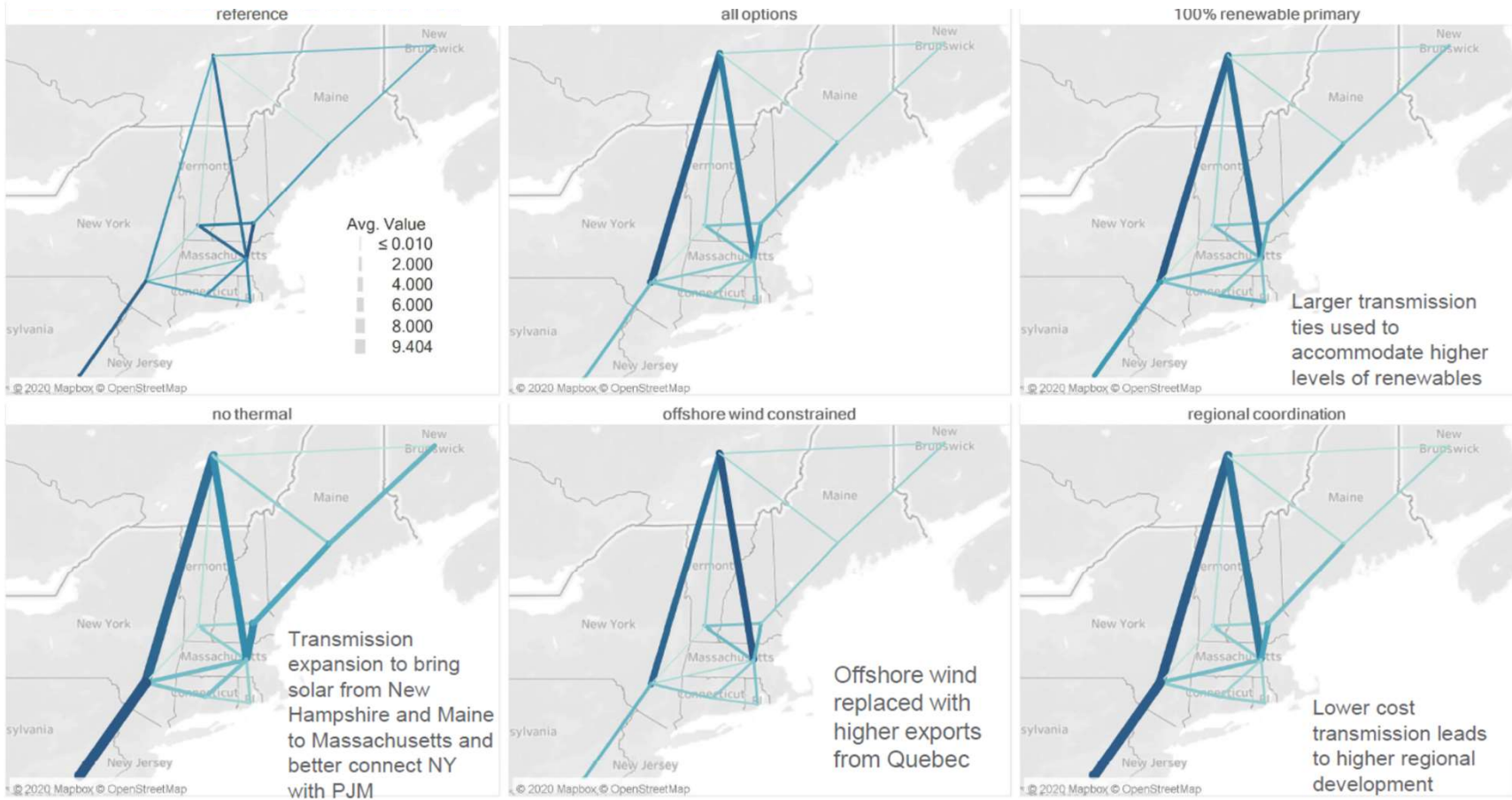
Regional Context and Focus



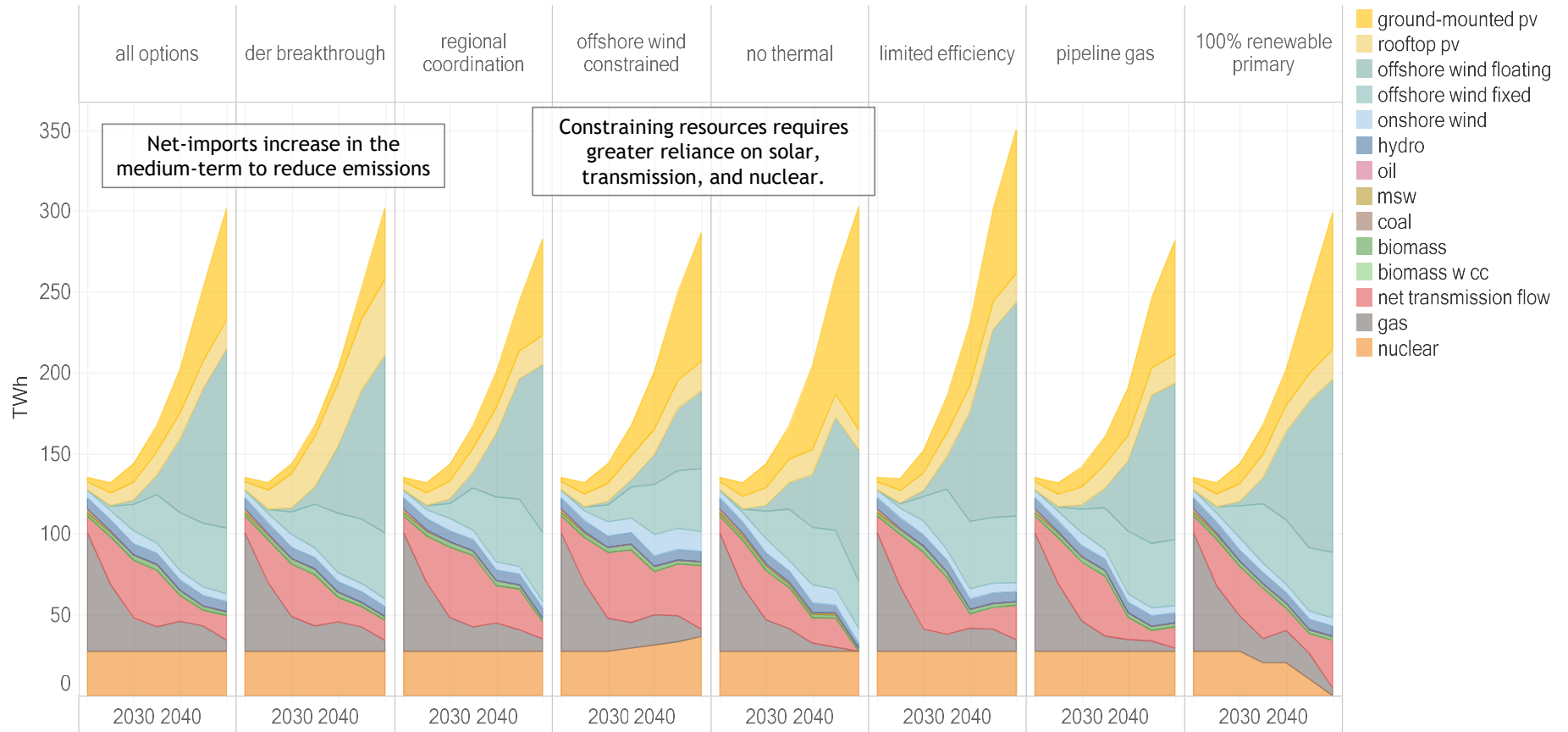
New England Electricity Demand Growth



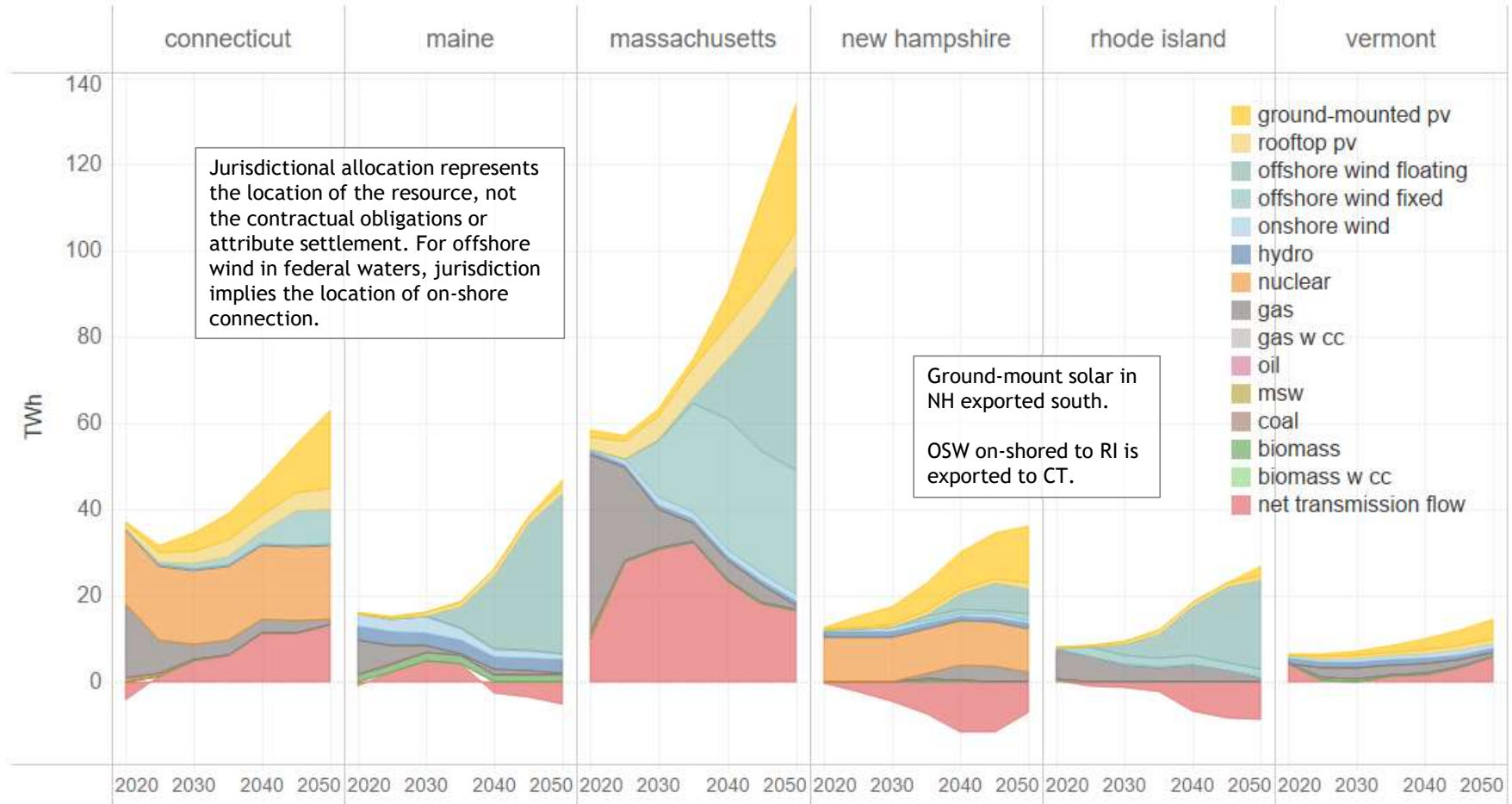
Regional Transmission



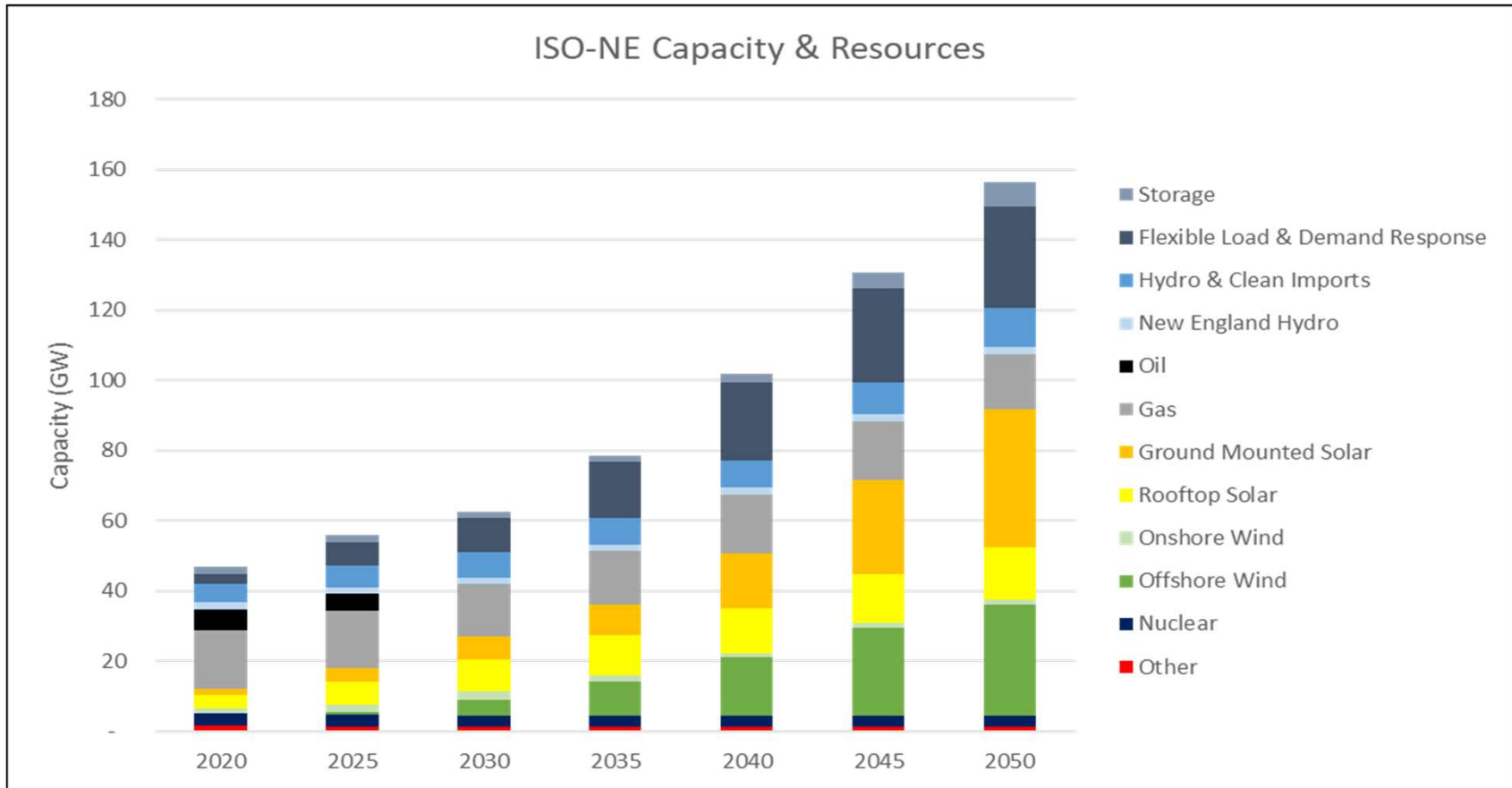
New England Generation Across Scenarios



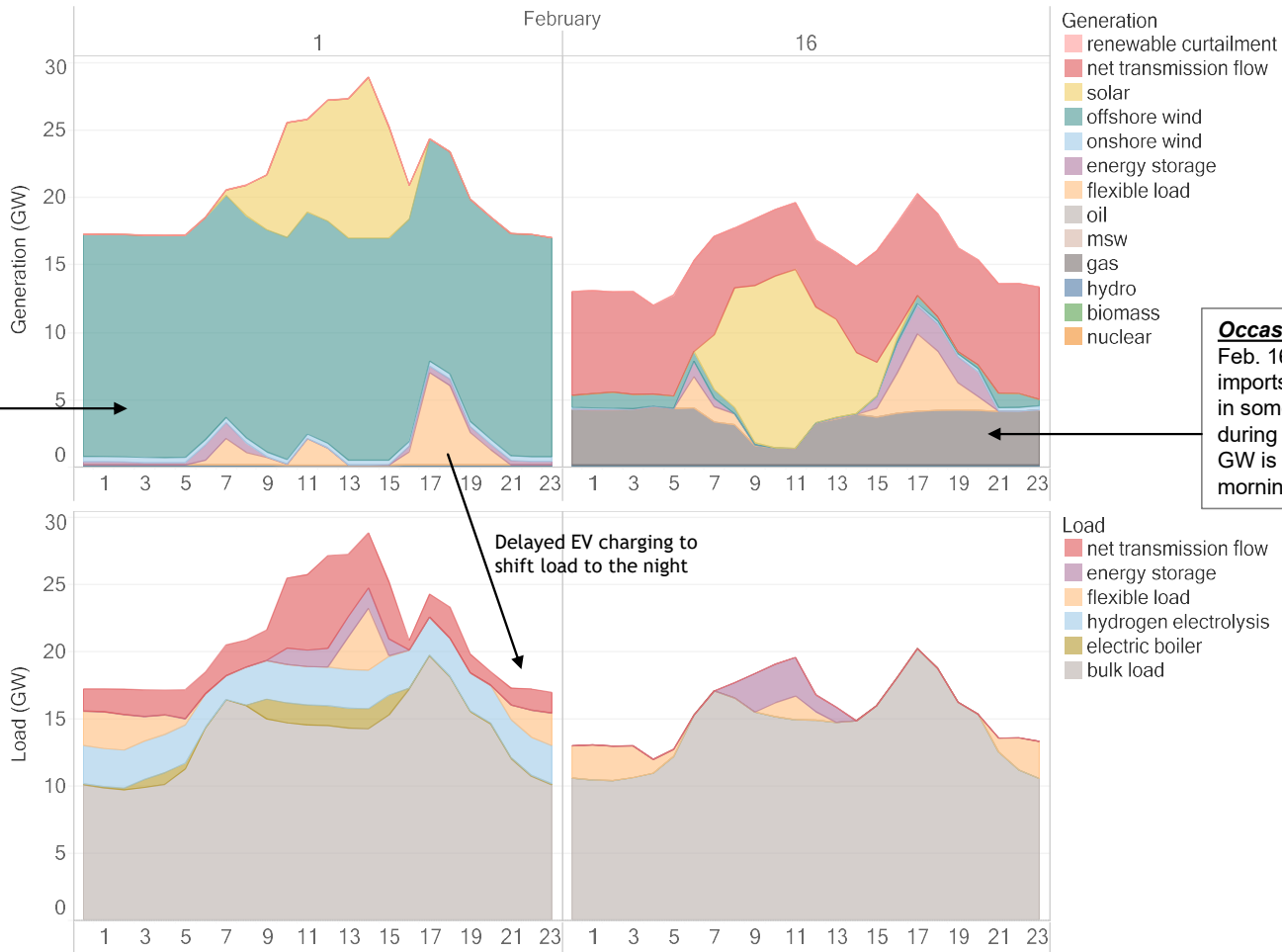
Generation by State (All Options Scenario)



New England Resource Expansion



Contrasting Daily Operations in 2050



Most Days look like Feb. 1st: rich in wind. On days like this, MA: exports power to neighbors, runs H₂ electrolysis and electric boilers (in CHP and industry). No gas capacity is needed at any point during the day.

Occasionally Days look like Feb. 16th: almost no wind. MA imports up to half its electricity in some hours. Gas is needed during every hour and over 9 GW is needed during the morning.

Delayed EV charging to shift load to the night

www.mass.gov/2050Roadmap

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