



Department
of Public Service

Grid Modernization in NY

Advanced Energy Group
Stakeholder Challenge

July 28, 2021

NY's Nation-Leading Climate Policy

Climate Leadership & Community Protection Act (CLCPA)

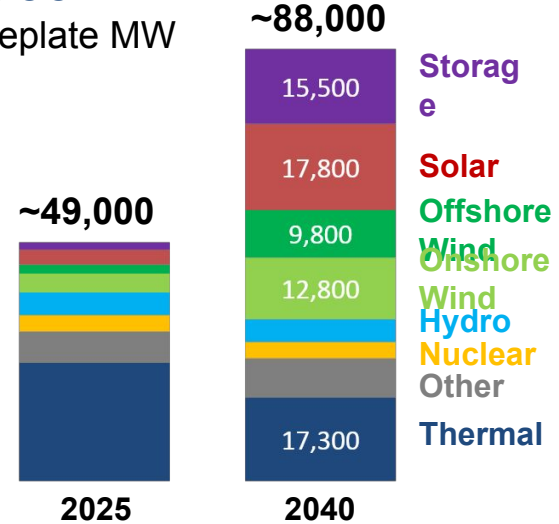
Net Zero GHG emissions by 2050
40% reduction in GHG emissions by 2030

100% zero-carbon electricity by 2040
70% renewable electricity by 2030

9,000 MW of offshore wind by 2035
3,000 MW of energy storage by 2030
6,000 MW of distributed solar by 2025
185 TBtus on-site energy efficiency by 2025

NYS Installed Capacity Outlook

Nameplate MW

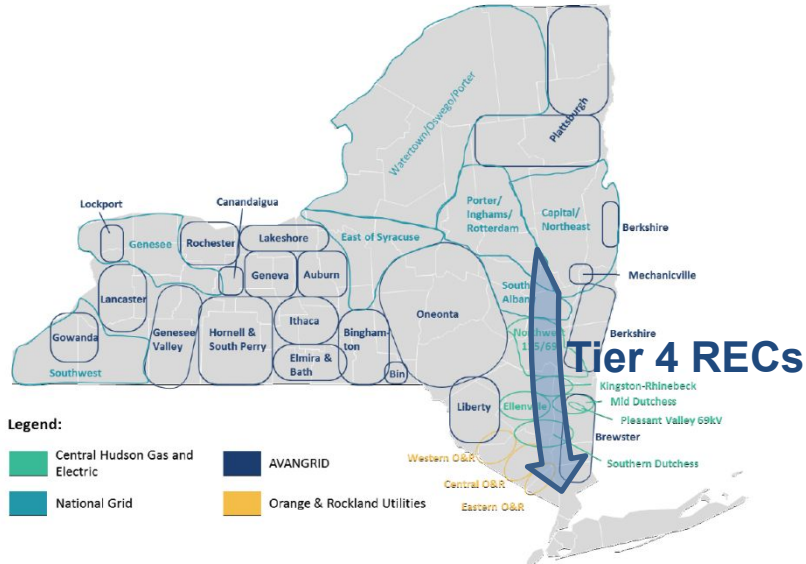


Source: "Zero-Emissions Electric Grid in New York by 2040," prepared by Siemens

Disadvantaged Communities to receive 40% of benefits

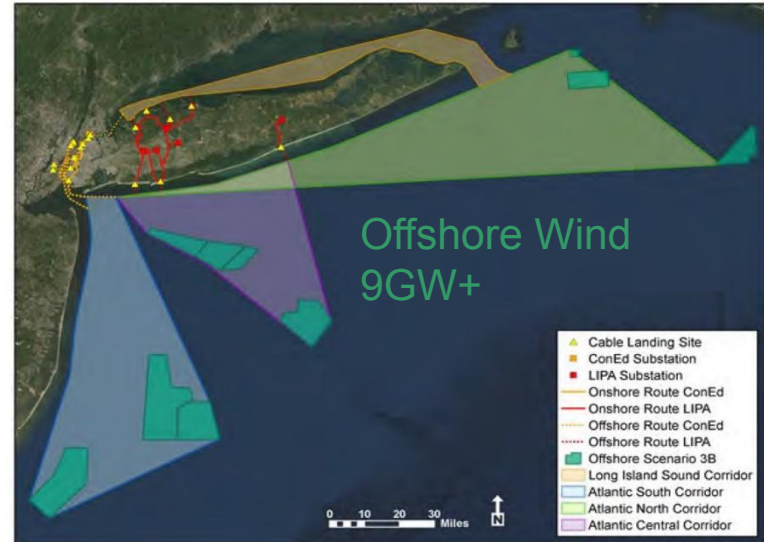
Renewable + T&D grid planning process underway

Local T&D Upstate and HVDC



Source: Joint Utilities of NY, Brattle Group & Pterra Consulting

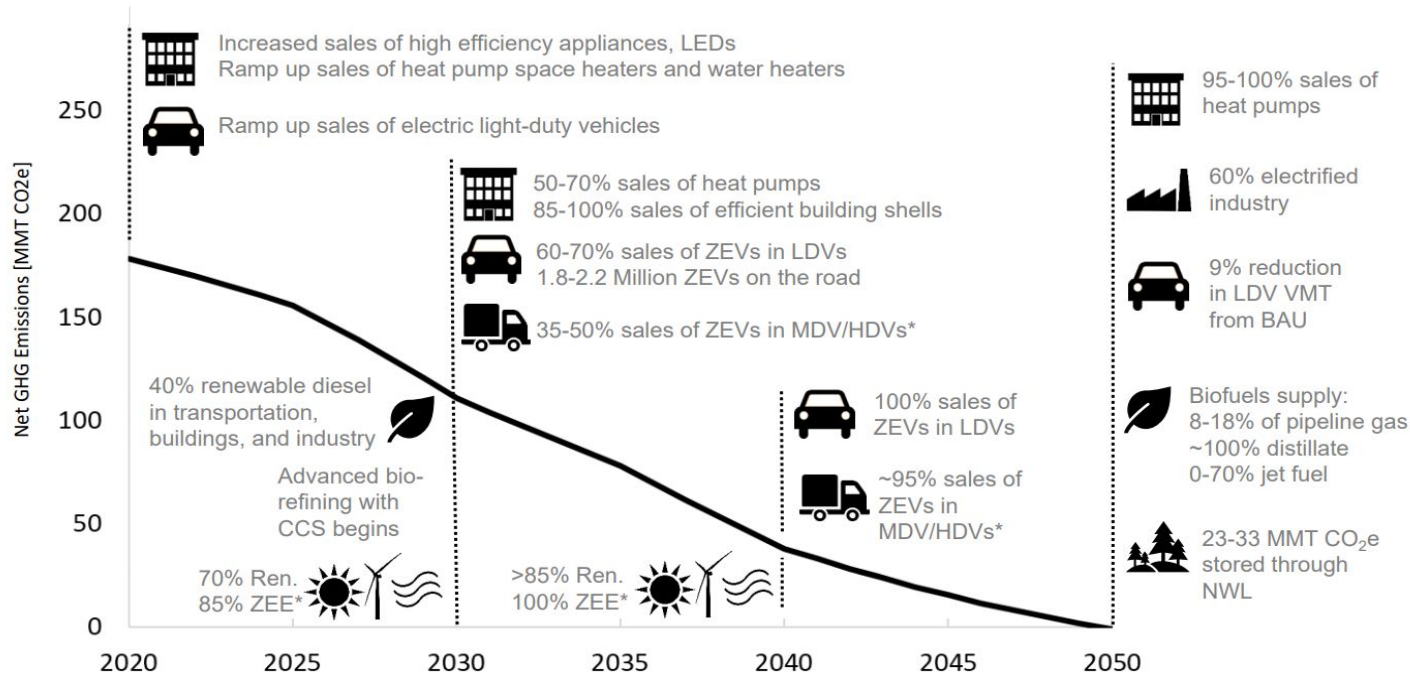
Offshore Wind Integration Downstate



Source: "Offshore Wind Integration Study: Final Report," DNV GL., PowerGEM, and WSP Global

Utilities explore advanced technologies

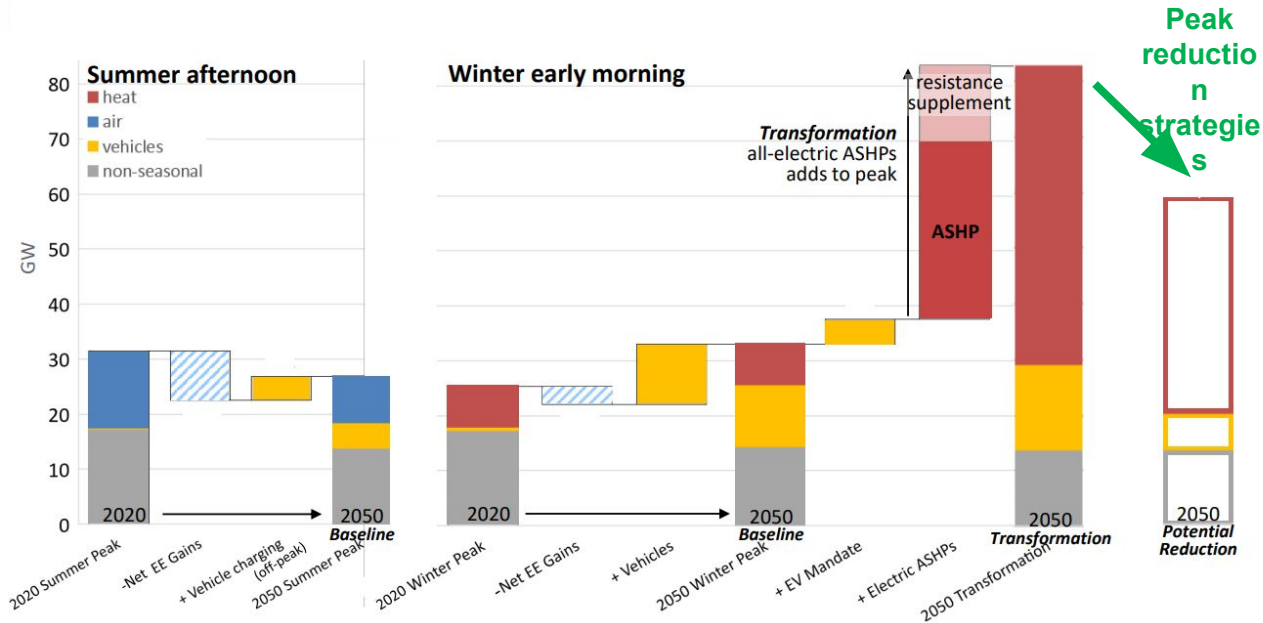
GHG targets require significant electrification



Source: "NYS Decarbonization Pathways Analysis", June 24, 2020, Energy + Environmental Economics

Electrification must be convenient & affordable to achieve >50% sales by 2030

Electrification can drive significant grid impacts



- Electrification may shift NY to a winter peaking system

- Peak reductions strategies include:
 - Whole home load mgmt.
 - Managed EV charging
 - Hybrid & dual-fuel ASHPs
 - Building efficiency
 - Ground Source heat pumps

Source: "Electrification Scenarios for New York's Energy Future", Electric Power Research Institute, February 2020

Engaged consumers & managed usage is critical to controlling costs



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Thank you!