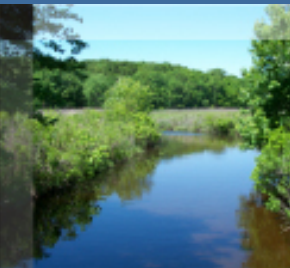
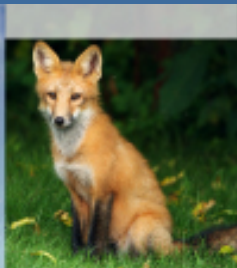




Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Connecticut's Approach to Decarbonization: Clean, Affordable, Reliable

***New England Restructuring Roundtable #167
September 25, 2020***

Katie Dykes, Commissioner



Connecticut Department of Energy and Environmental Protection

Long-Term Policy Mandates

- Economy-Wide: 80% by 2050, 45% by 2030
- Electric Sector: **100% by 2040** (Executive Order No. 3)
- Affordable
- Reliable, Resilient
- Deregulation: (Public Act 98-28): Secure benefits of competition, shareholders bear the risk



100% x 2040 Modeling

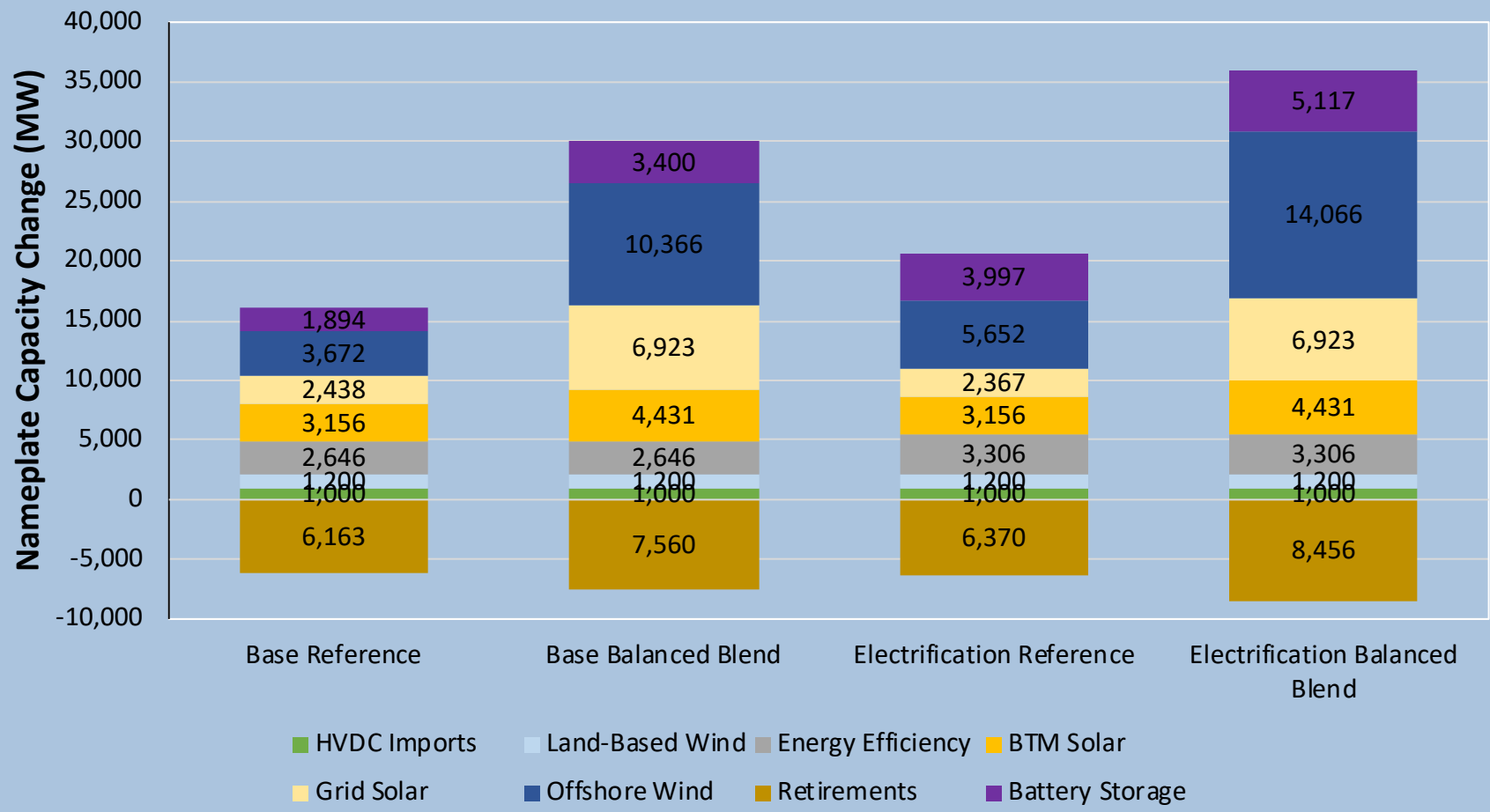
Five Study Scenarios...

- Reference: Business-as-usual (BAU), continuation of existing policies, no 100% 2040 target
- Balanced Blend: Least cost pathway to meet 100% target, Millstone retires in 2029
- BTM Solar Emphasis: Least Cost Pathway + assume increased (50% higher) amount of BTM solar deployed
- Millstone Extension: Least cost pathway + assume Millstone continues beyond 2029
- No Constraints: test the modeled resource portfolio if electricity was unconstrained

...Applied to two Load Cases: BAU and Electrification



Base versus Balanced Blend Results



Note: Energy Efficiency values represent expected summer peak contribution



Key Takeaways

- Offshore wind (OSW) and grid-scale solar resources are key to achieving 100% goal under “balanced blend” scenarios
- Year of Millstone nuclear retirement is consequential
- Transmission constraints cause the loss of between 6.8% and 11.3% of clean energy generated
- Energy storage plays a key role as it smooths out variable energy production from wind and solar



Market Design

- Existing conflicts between wholesale market design and state clean energy mandates cannot continue
- Connecticut ratepayers are bearing unacceptable risk, duplicative costs, and unaffordable rates due to this conflict
- Priority focus on market designs that:
 - Meet decarbonization mandates & maintain resource adequacy at the lowest cost by using market-based mechanisms
 - Ensure appropriate level of state control & involvement
 - Integrate distribution-level resources effectively



Transmission

- Reaching our decarbonization goals will require transmission upgrades for wind resources and to accommodate large amounts of solar power.
- ISO-NE has no transmission planning cycle, like other RTOs.
- Transmission ROEs allowed by FERC are unreasonably high (10.57%-11.74%). *CT DEEP, PURA, OCC, and AG have heavily contested unjust and unreasonable transmission ROEs at FERC for over a decade.*
- Transmission costs in New England have risen from approximately **\$869 million** in 2008 to **\$2.25 billion** ten years later.



Transparency & Accountability

- ISO-NE Board meetings are closed to the public.
- Minutes of ISO-Board meetings are not provided to the public.
- ISO-NE market rule changes are vetted through NEPOOL, and NEPOOL meetings are not open to the public or the press.
- The New England states have no jump ball rights, unlike NEPOOL
- Six sovereign New England states share one vote on the Joint Nominating Committee; while market participants have six votes and each incumbent Board member has a vote.

