

Regional update

vermont electric power company



June 18, 2020

Agenda

- Boston RFP
- Off shore wind study
- New England Clean Energy Connect
- Load Power Factor
- PV Cluster studies

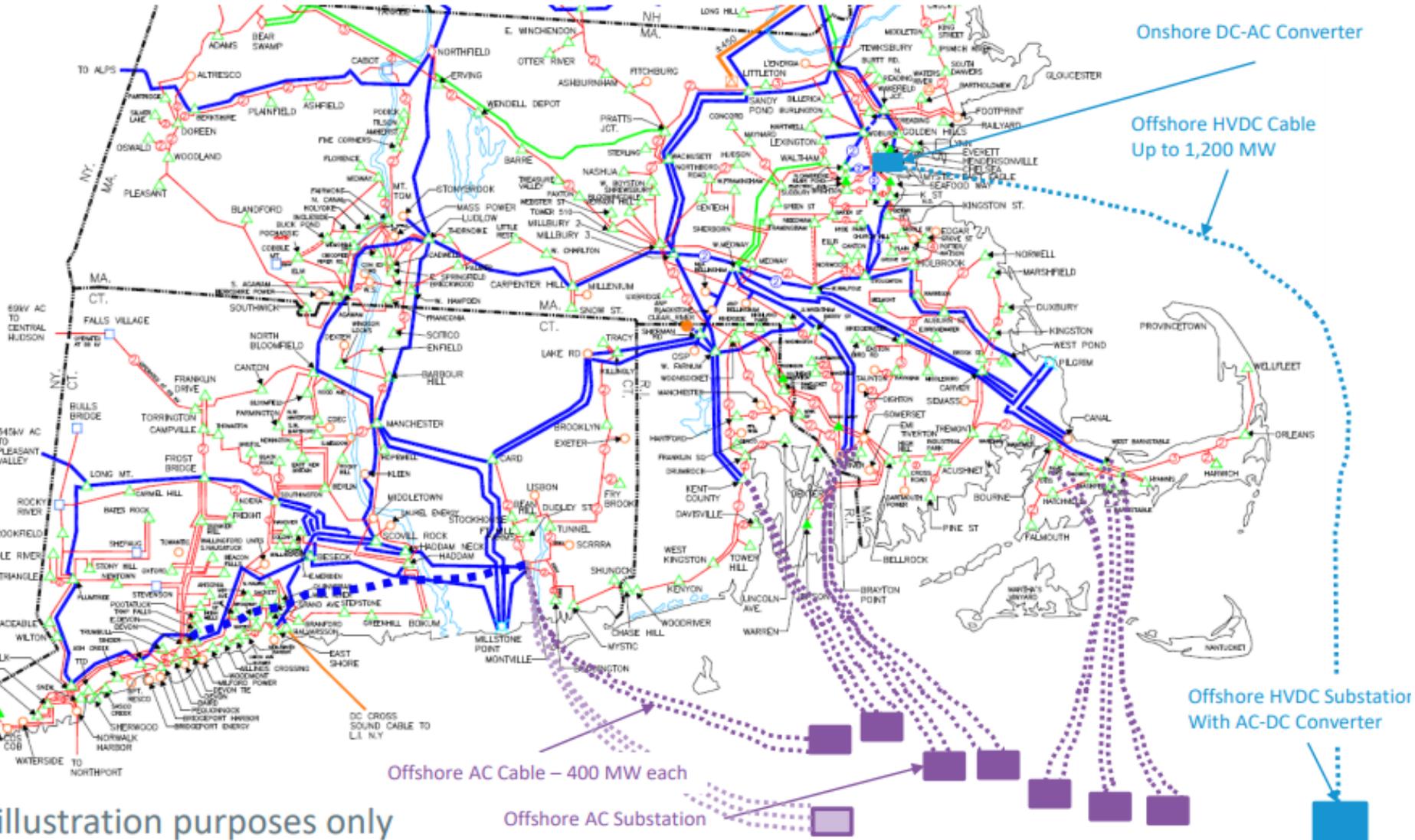
Order 1000 competitive solicitation

- First ever Order 1000 solicitation for competitive transmission for reliability.
- RFP issued in Dec 2019:
 - Received 36 proposals /ISD ranged from 2023-2026
- Cost range from \$49M to \$745M
- Evaluated proposals on cost and speed (assuming they meet the reliability need)
- Most proposals were rejected because they required incumbent TO land.
- In the end, the cheapest, and quickest project was the backstop solution provided by Eversource and NGRID.
 - Install two 11.9 ohm 345kV reactors at the North Cambridge sub.
 - Install a +/- 167 MVAR STATCOM at Tewksbury 345kV sub.
 - Install a DTT on the 394 line to eliminate the contingency that causes the K163 115kV line overload.
- Installed cost of \$49M
- ISD of 10/1/23 or earlier

Off Shore Wind Transmission interconnection analysis

- NESCOE asked ISO-NE to conduct an offshore wind study to investigate the transmission necessary to interconnect 8,000 MW of offshore wind.
- New England can accommodate about 5,800 MW of OSW without major 345kV investment.
- Ballpark cost of \$1B for every 1,200MW of OSW.
- Over 5,800 will need to use HVDC.

One Example of conceptual OW



NECEC

- PPA was approved on 6/16/20 requiring:
 - 27 miles of 345 kV from Coopers Mills to Maine Yankee.
 - Expand Maine Yankee to a 9 1.5 breaker conf.
 - Add a 2nd 345/115 transformer to Larrabee Road.
- Add 2 new 115kV breakers a Larrabee Rd to accept new transformer.
- 50 MVAR reactor at Buxton.
- 207 miles of HVDC line and terminal at Merrill Road substation.
- ISD of 11/22
- Surowiec South interface will increase by 600MW.
Positive outcome not in design.

Load Power Factor changes

- Dean LaForest gave a presentation on LPF.
- ISO is proposing to use SCADA data instead of requiring entities to fill out a survey table manually.
- Sounds like ISO would like to add PF to their compliance department and make compliance more enforceable.

PV cluster studies

- Trends are for solar plants to require cluster studies for them to interconnect. Cluster studies allow participants to share in upgrade costs if necessary.
- Studies recently approved:
 - 3 locations for 10.98MW for NEP at W. Newbury.
 - 5 locations for 16.5MW for NEP at Northbridge.
 - 8 locations for 30.5MW for NEP at Wareham.
 - 10 locations for 49.4MW for Emera for Maine.
- Just the meeting on 6/16 107.38MW of PV approved.