



NEW ENGLAND CLEAN POWER LINK

NECPL Overview

VSPC Quarterly Meeting

JANUARY 25, 2023



TDI New England

A **Blackstone** *Portfolio Company*

NECPL: PROJECT Update

1,000 MW buried HVDC transmission project

- 154-mile route from Canadian border to Ludlow, VT
- 100% buried; no above ground transmission
- 2/3 buried in Lake Champlain; 1/3 buried along road rights-of-way

Strong Interconnection and Resilient Infrastructure

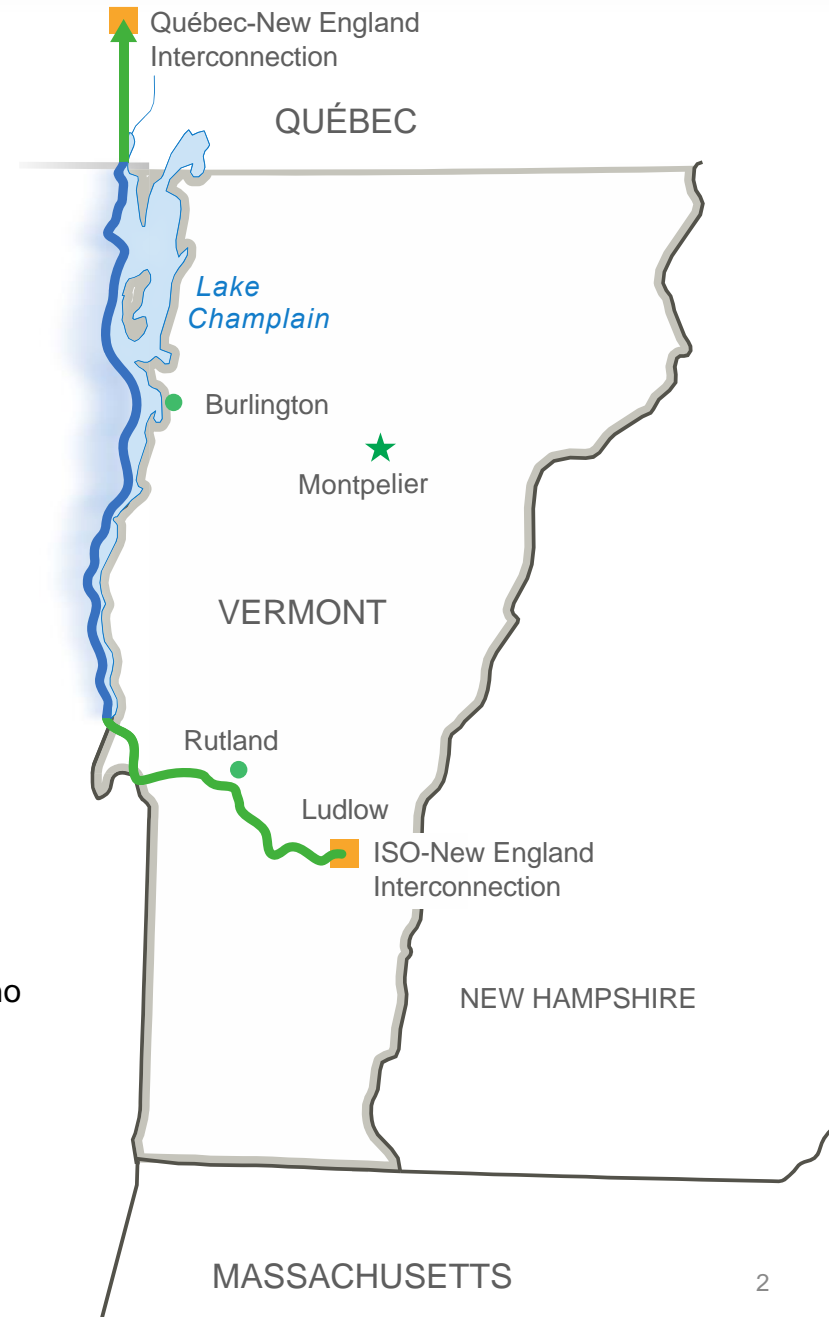
- Connects to ISO-NE system at Coolidge substation in Ludlow, VT
- Buried transmission lines protects infrastructure

Fully permitted and supported; minimal impacts

- Enjoys widespread support in VT and region
- All permits received
- Interconnection Agreement completed

Bidirectional power flow

- Project technology already designed for bidirectional power flow (no additional environmental impacts)
- Permit updating and ISO-NE upgrade studies required



NECPL – Opportunity

Infrastructure Investment and Jobs Act (the “IIJA”), Public Law 117-58, codified at 42 U.S.C. 18713

- **US DOE’s Transmission Facilitation Program RFP**
 - New transmission with a minimum capacity of 1,000MW
 - HVdc technology preferred
 - Bidirectional capability preferred
 - Hardened infrastructure preferred
 - Regional benefits preferred
 - Interconnecting markets preferred
 - Opportunity for up to a 50% capacity contract between NECPL and the DOE for 40 years.
 - Part I response due Feb 1., 2023 / Part II 45 days after if invited by the DOE.
 - DOE seeking contract execution in Summer, 2023

- **US DOE’s Grid Innovation Program (BIL Sec. 40103(B))**
 - Vermont, supported by other New England states, filed of Jan 13, 2023 a Concept Paper in the Grid Innovation Program (BIL Sec. 40103(B)) program for the NECPL project
 - Intended to fund projects that improve grid reliability and resilience using advanced technologies and innovative partnerships and approaches.
 - States are eligible to apply for GIP funding, with \$1.82 billion in total funding available and project awards of \$250 million, or up to \$1 billion for interregional transmission projects

Critical Need for additional NE – Quebec Interconnection

MIT CEEPR: Two-Way Trade in Green Electrons: Deep Decarbonization of the Northeastern U.S. and the Role of Canadian Hydropower: Feb 2020

“Adding 4 GW of transmission between New England and Quebec is estimated to **lower the costs of a zero-emission power** system across New England and Quebec **by 17-28%.**”

MIT Energy Initiative: New England renewables + Canadian hydropower A pathway to clean electricity in 2050: January, 2022

“Our study shows that by viewing Canadian hydropower as a baseload source of electricity—or indeed a source of electricity at all—**you’re not taking full advantage of what that resource can provide.** What we show is that Quebec’s reservoir hydro can provide storage, specifically for wind and solar. It’s a solution to the intermittency problem that we foresee in carbon-free power systems for 2050.”

“Thus, the analysis shows that **everyone wins as transmission capacity increases**—and the benefit grows as the decarbonization target tightens”

Critical Need for additional NE – Quebec Interconnection

The Massachusetts Clean Energy and Climate Plan for 2025 and 2030 (dated June 30, 2022) indicates that:

“In almost every deep decarbonization scenario, **new transmission capacity to import firm hydroelectricity from Canada** is found to be a significant least-cost clean energy resource for the region largely because it complements and balances offshore wind generation, **reducing energy costs for the entire region.**”

Connecticut’s 2020 Integrated Resource Plan (dated Oct 2021) says:

“Notably, when Millstone is assumed to retire at the expiration of its current contract in 2029, the region will need to fill the zero carbon electricity demand left behind, which the Reference scenario achieves primarily through **an additional high voltage direct current cable (HVDC) line importing more hydroelectricity from Canada**”

Massachusetts’ commissioned December 2020 report “Energy Pathways to Deep Decarbonization” finds that:

“**Expanded transmission capacity between Quebec and Massachusetts** was important in all pathways, with a **minimum of 2.7 GW and a maximum of 4.8 GW required above today’s level**. In the near term, these lines were used to import carbon free electricity from Quebec, largely from new onshore wind projects. In the long term the lines were used to allow **bidirectional power flow for balancing a high renewables power system** throughout the northeast region.”

NECPL: BENEFITS

Benefit	Status
Economic	<ul style="list-style-type: none"> • \$930 million in Tax and Lease Payments in Vermont over 40 years • \$136 million in reduced electrical costs for Vermont ratepayers over 40 years • The creation of approximately 500 jobs during construction in Vermont
Environmental	<ul style="list-style-type: none"> • \$202 million contribution to the State's Clean Water Fund, paid at a rate of \$5 million annually over 40 years • \$61 million Fund to support habitat restoration and recreation improvements in Lake Champlain • \$109 million contribution to Vermont's Clean Energy Development Fund over 20 years • The transmission cable is fully buried, solid state and contains no liquids or gasses
Reliability	<ul style="list-style-type: none"> • Enhance region's fuel diversity by bringing in renewable supply from outside of ISO-NE • Provides buffer against winter fuel shortages • Buried HVDC cables are protected against natural disasters • "Black Start" Capability can quickly restart the grid in case of a blackout