

V S P C

Vermont System Planning Committee

All grid solutions considered

Quarterly Meeting
Holiday Inn
Rutland, VT
October 18, 2017
9:30am–3:00pm

Agenda

▶ Morning

- ▶ Subcommittee reports
 - ▶ Geographic Targeting
 - ▶ Forecasting
 - ▶ Coordinating
- ▶ Regional update
 - ▶ ISO New England
 - ▶ VELCO
- ▶ Sheffield-Highgate
Export Interface study
report & discussion

▶ Afternoon

- ▶ VSPC 10th anniversary
- ▶ Project & policy updates
 - ▶ VWAC
 - ▶ Greentech Media NTA
research study
 - ▶ Regional Utility Group
 - ▶ Renewable Energy
Standard implementation
- ▶ Reliability project
updates
- ▶ Merchant transmission
update



Geographic Targeting Subcommittee

John Woodward, Subcommittee Chair

Subcommittee work this quarter

- ▶ Met October 10
- ▶ Matters addressed
 - ▶ Annual VSPC geographic targeting recommendation (see next slide)
 - ▶ VELCO NTA screening for Barre Substation Project
 - ▶ NTA screening by VELCO determined project addresses asset conditions so screens out of detailed NTA analysis — no concerns were raised with this screening by subcommittee
 - ▶ Discussion of VSPC role in NTA analysis of issued like SHEI — see summary on slide 6 (for discussion under SHEI study report)

Annual geographic targeting recommendation letter

- ▶ [Draft in package](#) recommended for adoption by full VSPC
- ▶ Summary
 1. No newly identified area “screens in” using the applicable screening tools for the potential to be resolved with non-transmission alternatives.
 2. With regard to the status of current geographically targeted energy efficiency, no area is currently targeted, thus, no recommendation is needed regarding continuation or discontinuation of a current project.
 3. No new areas have been identified where geographically targeted energy efficiency has the potential, as defined by the applicable screening tool, to cost-effectively avoid or defer an infrastructure project, so no new geographical targeting of energy efficiency should be undertaken. One reliability plan is currently in place addressing the Green Mountain Power (GMP) Hinesburg Area, but as described in previous filings, the needs of the system in this area cannot reasonably be addressed with geographically targeted energy efficiency.

VSPC role in relation to SHEI and similar constraints

- ▶ Question raised by DPS
 - ▶ Should GT subcommittee consider NTAs and least-cost solutions for areas, such as SHEI, where issues are driven by excess generation and load deficiencies
- ▶ VEIC preliminary analysis shows potential for 3 MW to 10 MW of load growth in the SHEI areas
- ▶ Issue is not addressed by Docket 7081 MOU
- ▶ Problem does not impact utilities equally, so solutions may raise cost allocation issues
- ▶ Question for VEC: Would serving VEC Newport block load (10-12 MW at peak) from VT provide a cost-effective solution to the SHEI constraint
- ▶ VEIC: GT subcommittee could provide expertise, perspectives, and experience to meaningfully analyze NTAs for this issue — discussions in this forum preferable to regulatory proceeding
- ▶ GMP: not known at this time whether any SHEI mitigation measures that require regulatory action will be proposed — if CPG is required a least-cost analysis that includes NTAs would be a necessary step — any discussion of NTAs for SHEI is premature at this time — remains to be determined whether GT subcommittee would be the preferred forum

Forecasting Subcommittee

Forecasting subcommittee update

- ▶ Subcommittee met October 5
- ▶ Agenda and action
 - ▶ Reviewed final load forecast for 2018 VT Long-Range Transmission Plan ([see separate presentation](#))
 - ▶ Discussed next steps for subcommittee
 - ▶ Update charter (fix outdated year references)
 - ▶ Potential future focuses
 - Periodic look at trends
 - Forecasting timing of load control for controllable assets
 - Opportunity for DUs to obtain feedback IRP forecasts
 - Ways to improve estimates of appliance saturation
 - Understanding trends in solar profiles and EV profiles.
 - Review the ISO New England draft forecast in the February/March timeframe annually to provide timely feedback
 - Review of ISO distributed generation forecast

Coordinating Subcommittee

2018 meetings

2018 meetings

- ▶ January 24, 2018—DoubleTree Hotel, South Burlington
 - ▶ 2018 VT Long-Range Transmission Plan presented
 - ▶ Action on draft VSPC annual report to PUC and DPS
- ▶ April 25, 2018—Middlebury Inn, Middlebury
- ▶ July 18, 2018—Capitol Plaza, Montpelier
- ▶ October 17, 2018—Holiday Inn, Rutland

Regional updates

See ISO New England presentation (to follow)
and [VELCO memo](#)



2018 VT Long-Range Transmission Plan update

Plan development timeline

Jan to Jul 2017	Prepare a load/renewable energy forecast
May to Jul 2017	Prepare load flow cases and auxiliary files
Jun 2017	Consultation with distribution utilities
Jul VSPC quarterly meeting	Review high level scope with the VSPC
Jul to Nov 2017	Perform system analysis
Jul to Oct 2017	Identify deficiencies and develop solution options
Aug 2017	Engineering support (modeling data)
Sep and Oct 2017	Construction Controls support (Cost estimates)
Nov and Dec 2017	Prepare the draft report for VSPC review
Jan to Mar 2018	Obtain formal feedback from VSPC
Mar 2018	Incorporate VSPC comments
Apr to May 2018	Conduct public meetings for input to the report
Jun 2018	Incorporate comments from the public
Jun 2018 (by 7/1/18)	Publish plan

Docket 7081 MOU steps for VSPC input

- VELCO consults with DUs, PSD and ISO-NE during plan development
- VELCO provides draft to VSPC
 - Minimum 60-day review period
 - Input on content
 - Specific review of system level determinations and NTA screenings
 - Formal memo of response to VELCO
- VELCO incorporates VSPC input or provides rationale why not

Sheffield-Highgate Export Interface Study Report & Discussion

Separate presentation to follow

Policy & Project Updates

Vermont Weather Analytics Center
Nationwide Non-Transmission Alternatives Study by Greentech Media
Regional Utility Group
Renewable Energy Standard Implementation

Reliability Updates

Oral reports

Merchant Project Update

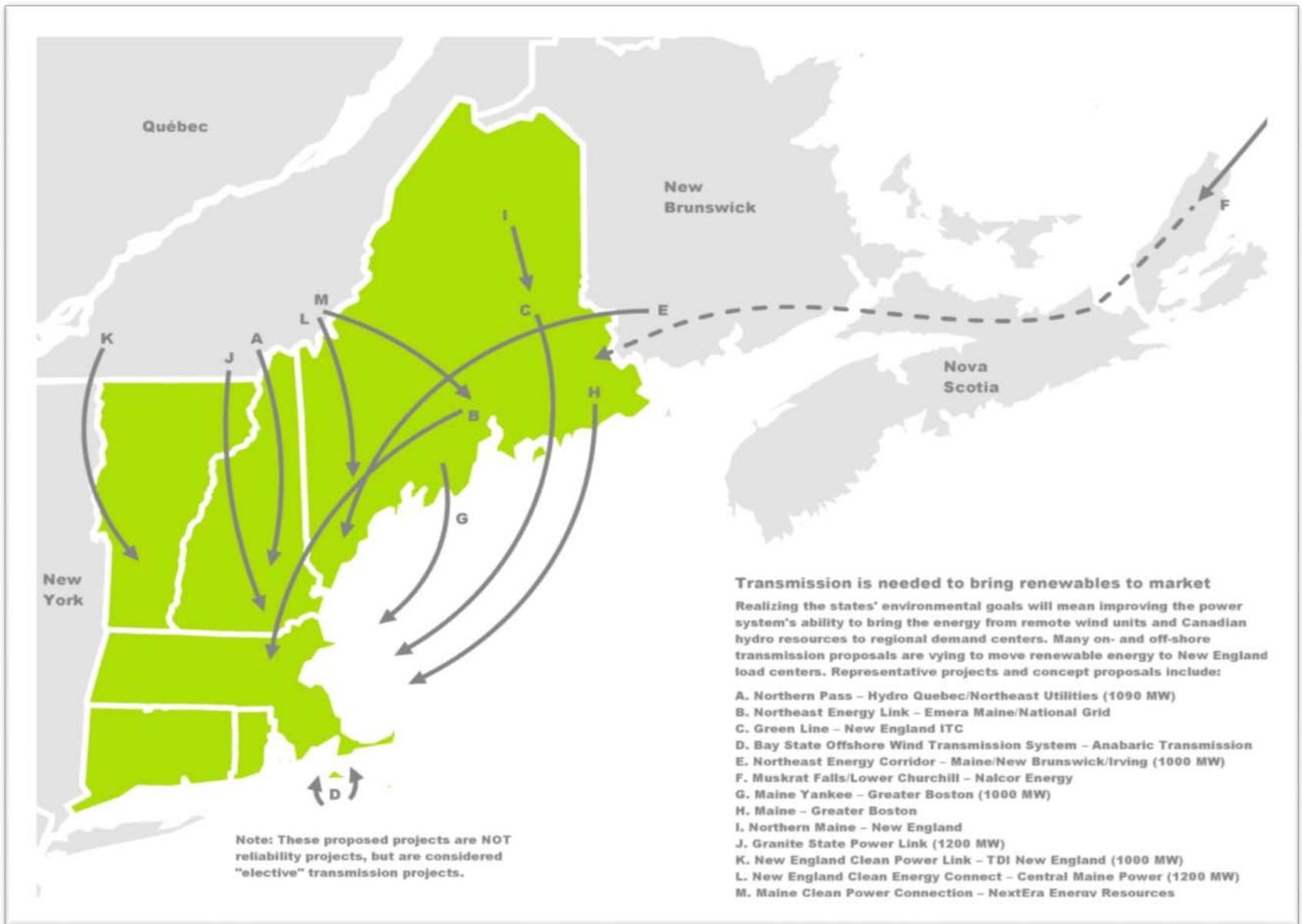
Shana Louiselle, VELCO

MA Clean Energy RFP schedule

Massachusetts investor-owned electric distribution companies and Massachusetts Department of Energy Resources (DOER) issued a joint request for proposals (RFP) for 9.45 TWh/year of renewable energy generation (hydro, wind, solar, energy storage)

Date	Event
August 8, 2016	MA Governor signed energy law
March 31, 2017	RFP issued
July 26, 2017	Proposals due
January 25, 2018	Projects selected for negotiation
March 27, 2018	Long-term contracts negotiated and executed
April 25, 2018	Long-term contracts submitted for DPU approval

In a separate bid process, Massachusetts utilities solicited 1600 MW of offshore wind power — three developers are now competing for those contracts



Merchant transmission proposals

Central Maine Power/Avangrid

- ▶ **New England Clean Energy Connect:** 1,200 MW hydro from HQ; 145 mi transmission line from Canadian border to Lewiston, ME
- ▶ **Maine Clean Power Connection:** 1,110 MW wind/solar from NextEra facilities; 140 mi transmission line from western Maine to Lewiston connector; possible storage component

Emera

- ▶ **Atlantic Link Project:** 900MW wind/hydro from Canada; 370 mi underwater cable from New Brunswick and Nova Scotia to Massachusetts

Eversource

- ▶ **Northern Pass Project:** 1,090MW hydro from HQ; 192 mi transmission line through NH
- ▶ **Northern Pass Project:** 1,090MW combination hydro/wind under development by Gas Metro and Boralex

National Grid

- ▶ **Granite State Power Link Project:** 1,200MW wind from Canada; 59 mi transmission line from Canadian border to Monroe, NH; 109 mi existing transmission line upgrades from Monroe to Londonderry, NH
- ▶ **Northeast Renewable Link:** 600MW wind/solar/hydro from Avangrid/Brookfield Renewables; 23 mi transmission line from National Grid substation to Eversource substation in Berkshire County

TDI-New England

- ▶ **New England Clean Power Link Project:** 1,000MW hydro from HQ; 98m underwater cable and 56 mi underground transmission line from Canadian border to Ludlow, VT
- ▶ **New England Clean Power Link Project:** 1000MW combination hydro/wind from HQ/Gas Metro/Boralex;

Bid & contract review process

- ▶ RFP contemplates three-stage evaluation of submitted bids by distribution companies and DOER
 - ▶ Stage 1: Initial review to ensure satisfaction of eligibility and threshold requirements
 - ▶ Stage 2: Detailed quantitative and qualitative evaluation of each proposal using identified criteria
 - ▶ Stage 3: Further discretionary evaluation of remaining proposals applying “considered judgment” of distribution companies to ensure selected projects provide greatest benefit with limited risk to MA ratepayers
- ▶ Long-term contract(s) must be reviewed by MA Department of Public Utilities (DPU), and approved upon a DPU finding that contract is “a cost effective mechanism for procuring low cost clean energy on a long term basis”
- ▶ DPU will consider Attorney General’s recommendations
- ▶ DOER and AG required to select independent evaluator to monitor and report on solicitation and bid selection process — evaluator will assist DOER in determining whether a proposal is reasonable and assist DPU in considering long-term contracts filed for approval