



Vermont System Planning Committee

Ensuring full, fair and timely consideration of non-transmission alternatives to address Vermont electric system reliability challenges.



**QUARTERLY MEETING
DECEMBER 11, 2013
9:30 A.M. – 4:00 P.M.
DOUBLETREE HOTEL
SOUTH BURLINGTON, VT**

Agenda & Proposed Order of Business

Morning

- Welcome & introductions
- Approval of Sept & Oct minutes
- Subcommittee reports
 - Geotargeting
 - ✦ Report on Nov 12 PSB workshop
 - ✦ Other committee activities
 - Forecasting
 - Coordinating
 - ✦ Potential adjustment to VSPC calendar
 - ✦ Docket 8073 order creating new VSPC seat
 - Public Participation
 - ✦ VSPC website redesign
 - Central VT NTA study group update
- Old business
 - Preparation for VSPC annual report for 2013

Regional update

- VT/NH needs assessment
- VELCO agreement with ISO-NE on the role of sub-transmission northern tier
- DG Forecasting Working Group
- FERC Order 1000 update
- Recent interconnection requests

Project updates

- Screened in
 - ✦ Rutland
 - ✦ St. Albans/East Fairfax
 - ✦ Central VT
- Screened out
 - ✦ VELCO: CT River, Northern Area, PV-20, IBM area
 - ✦ GMP: Colchester, Hartford/Ascutney

Coordinating Subcommittee



**POTENTIAL ADJUSTMENTS TO VSPC
MEETING CALENDAR TO ACCOMMODATE
GEOGRAPHIC TARGETING PROCESS**

**DOCKET 8073 ORDER CREATING A NEW SEAT
ON VSPC FOR SUPPLY RESOURCES
REPRESENTATIVE**

Proposed VSPC annual report timeline



- 1/3/2014** Project-specific action plans and reliability plan updates on screened in projects, and project updates on screened out projects to staff
- 1/10/2014** Draft report to lead utilities for review
- 1/15/2014** Lead utility comments due
- 1/17/2014** Draft report to VSPC for review
- 1/24/2014** Comments/edits due from VSPC
- 1/29/2014** Special phone meeting to act on draft
- 2/5/2014** Additional draft and phone conference if needed
Otherwise, approval by email of final draft
- 2/7/2014** Filing

POTENTIAL REWORK OF VSPC MEETING CALENDAR TO BETTER ACCOMMODATE KNOWN DEADLINES & MILESTONES

	Current calendar	Proposed calendar	Tasks per D.7081 MOU & Geographic Targeting
January	[special meeting]	Fourth Wednesday (e.g., 1/29/2014)	Review draft VSPC annual report (due 2/15 annually) In LRTP years, hold info session on VSPC draft of Plan (60-day window: January & February)
February			Annual report due to Public Service Board & Department 2/15 annually
March	Second Wednesday [current: 3/12/2014]		Review Geotargeting Subcommittee recommendations ahead of utilities' April 1 annual reliability plan filing in connection with standard offer resources outside the annual statutory cap
April		Fourth Wednesday (e.g., 4/30/2014)	
May			
June	Second Wednesday [current: 6/11/2014]		Review Geotargeting Subcommittee's recommendations on non-transmission alternatives screening of distribution constraints.
July		Fourth Wednesday (e.g., 7/23/2014)	
August			
September	Second Wednesday [current: 9/10/2014]		
October	[special meeting]	Second Wednesday (e.g., 10/8/2014)	Issue GT recommendations to PSB by Nov 1
November			
December	Second Wednesday [current: 10/10/2014]		

Future meeting dates (unless modified)



December 11, 2013 – Burlington

March 12, 2014 – *Randolph*

June 11, 2014 – *Montpelier*

September 10, 2014 – *Rutland*

December 10, 2014 - *Burlington*

ISO-NE Distributed Generation Working Group



UPDATE TO VSPC 12/11/13

Background



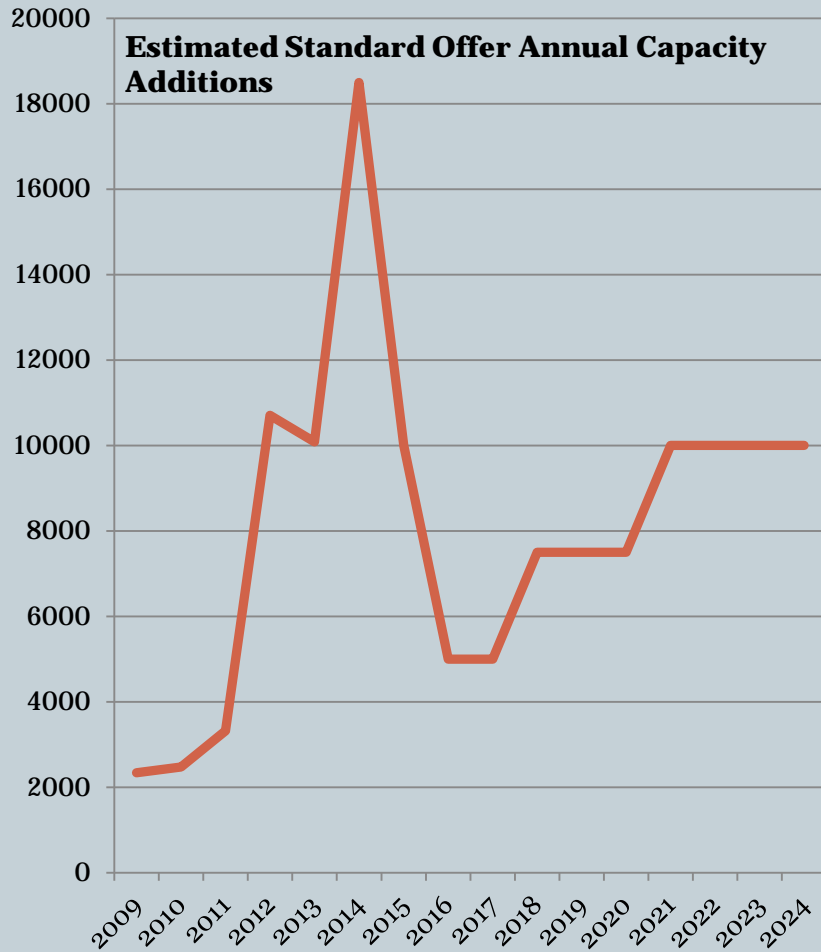
- Stakeholders have encouraged ISO-NE to include the impacts of distributed generation (DG) in Regional System Plan (RSP)
- Goal – Interim forecast to be included in RSP 2014
- General agreement to begin with solar PV
 - Significant public policy push
 - Improving economics
 - Potential for reliability impacts of high penetrations
- September kick off meeting; Dec 16 next meeting

ISO current DG forecast practice

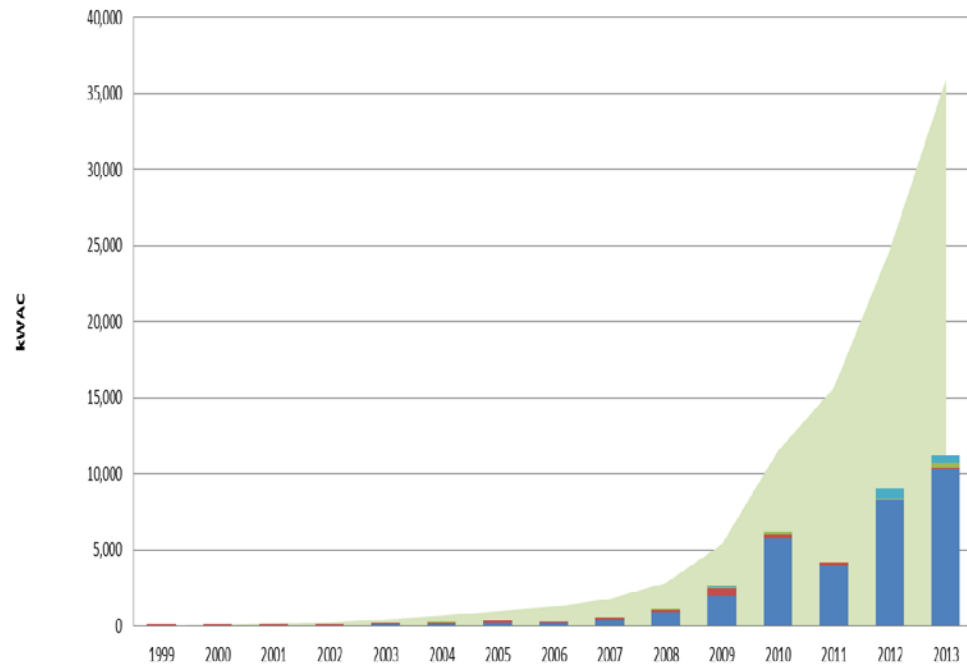


- DG with obligations in FCM included in load and forecast
- Existing non-FCM DG registered in wholesale energy markets are counted
- Load reductions from remainder of existing DG are embedded in historic loads used to develop ISO's 10 year load forecast used in ICR calculation
 - Existing DG that ISO doesn't know about

Vermont presentation at DGFWG illustrates importance of including forecast of PV now



Net Metered Installed Capacity by Year and Type



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Cumulative Capacity	49.82	98.55	171.13	218.08	430.68	666.75	976.47	1258.56	1778.75	2811.86	5358.96	11461.13	15652.03	24729.17	35927.15
Hydro	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.25	0.00	0.00	716.15	514.25
Methane	0.00	0.00	0.00	0.00	0.00	65.00	0.00	0.00	0.00	19.00	39.00	126.75	0.00	53.30	248.00
Wind	31.91	9.50	27.95	30.95	98.50	74.44	122.78	101.51	147.23	141.94	491.91	179.55	204.50	56.98	124.88
Solar	17.91	39.24	44.63	15.99	114.10	96.64	186.94	180.58	372.96	872.18	1997.94	5815.96	3966.31	8250.71	10310.85

Implications of a long-term DG forecast



- **May affect system studies of resource adequacy, transmission planning, and economic studies**
- **Work with DG Forecast Working Group will enable stakeholders to share information**
 - Better understanding of DG Impacts on peak
 - Address DG integration challenges

Challenges to forecast DG



- Long-term funding for some state DG programs unclear; unlike EE rely more on mix of public/private investment
- Market and technology uncertainties affect potential and realizable amounts of DG development
- Avoiding double counting of DG resources
- Timing of development
- Location
- Potential reliability impacts – voltage issues and reverse power flows
- Development of Resource Capacity Credit

Other issues



- **PV Impacts on system operation**
 - No noticeable negative effects to date
 - Increased Ramping in winter?
 - What will be incremental impact of increased penetrations on reserve/regulation requirements?
- **ISO has potential system reliability concerns**
 - Interconnection standards – no ‘ride through’ capability – potential for significant amounts of DG to be lost if there is grid disturbance
 - At what penetration do these impacts begin

DG Forecast Working Group to date



- **September 30 kick off meeting**
 - ISO identified issues above
 - States shared data on existing DG
- **December 16th second meeting**
 - ISO expected to share publicly draft PV forecast
- **[Note – potential for further update on 12/11 with updated slides]**

Recent Interconnection Requests



**VELCO UPDATE ON POTENTIAL
MERCHANT TRANSMISSION PROJECTS**

Potential merchant transmission projects: Strong interest in Vermont due to...



- **Supply, demand and geography**—Vermont's geographic location places the state between significant renewable power supplies to the north and west, and significant demand to the south and east.
- **Policy/retirements driving interest**—Existing renewable power supply mandates in each of the New England states create a collective regional need for over 8000 gigawatt hours of electricity deemed renewable. Generation need is also driven by 6000 MW of scheduled coal/oil power plant retirements.
- **Vermont as transmission lynchpin**—There is a strong and growing interest in building transmission in Vermont. Three proposals impacting VELCO's system and totaling almost 2000 MW are at various stages of development and more proposals are likely.

Merchant transmission project summary & VELCO view

Grand Isle Intertie

- 400 MW, 230kV merchant transmission line from Plattsburg, NY, to new Champlain substation in Essex, VT
- Proposed by Grand Isle Intertie LLC, a subsidiary of Anbaric Transmission
- Currently in the ISO-NE interconnection queue

Highgate Expansion

- 425 MW transfer capacity line from Hydro-Quebec system to Highgate, VT
- Submitted by HQ Production to Transenergie

New England Clean Power Link

- 1000 MW HVDC merchant transmission line from HQ's system, under Lake Champlain, and terminating at Coolidge substation
- Currently in the ISO-NE interconnection queue

VELCO's view

VELCO is working with our customers, regulators, ISO-NE and other stakeholders to better understand our options and opportunities with a focus on how best to maximize a project's value to Vermont.

FERC Order 100



**VELCO UPDATE ON NEW ENGLAND'S
FURTHER COMPLIANCE FILING**

At issue: cost allocation for public policy projects, e.g., renewable portfolio standards



- **October 2012**—“Beneficiary pays” formula submitted to FERC.
- **September 2013**—TOs propose 50/50 cost allocation formula.
- **September 2013**—Massachusetts proposes 100% cost allocation formula.
- **October 2013**—NESCOE rejects 50/50 formula; instead, with support of CT, MA, ME and VT, proposes instead 70/30 formula.
- **October 30, 2013**—Vermont PSD withdraws 70/30 support.
- **November 15**—ISO-NE and TOs (except VELCO) submit joint compliance filing with 70/30 cost allocation formula; CT, MA & ME support, NH, RI & VT oppose
- **December 16**—Opportunity to file additional comments

For more details, see VELCO’s ISO-NE report in December meeting materials

VELCO's position



1. New England customers are already scheduled to absorb an est. \$4.8 billion in transmission costs over the next five years—on top of the \$5.6 billion currently being paid for—and socialization would increase transmission cost burdens.
2. With current flat or declining retail sales, proposed policy creates perverse incentive to build transmission rather than lower cost, more local renewable options.
3. Policy incents transmission projects that do not serve Vermont public policy requirements, but do further increase Vermont's transmission costs.
4. No entity has demonstrated that 70% is a reasonable proxy for the general, regional benefit of building these types of transmission projects.
5. Socialization could lead to miles of new transmission lines across Vermont landscape with benefits not commensurate with environmental impact.
6. Alternative proposal—30/70—garnered stronger support than 70/30 and would have been much less costly.
7. Adoption of 70/30 by ISO and transmission owners undermines VELCO's campaign to flatten the transmission cost curve—one of three company strategic initiatives.

Key Order 1000 considerations & next steps



- **FERC reaction/financial impacts unclear**
 - Advisory vote results at ISO-NE PAC meeting favored 30/70 formula by 52.8% margin vs. 51.57% for 70/30
 - Under legal challenge in a number of other jurisdictions
 - Opposition from three states
- **Join with allies**
 - Work with customers and other stakeholders e.g. Congressional delegation
 - Advocacy with PSD—open to ideas but seemingly skeptical of results
 - Information/coordination with NH regulators who vow aggressive, sustained opposition (also MMWEC, RI)
 - Determine cost-benefit of December 16 filing
- **Timing and potential strategy**
 - “New normal” forces may significantly mitigate impact
 - Consider active pursuit of alternative funding model “success story”
 - Interrelationship with NE Governors’ Hydro/Natural Gas procurement
 -

Project Updates



PROJECT-SPECIFIC ACTION PLAN STATUS REPORTS

CURRENT PLANS IN VSPC ANNUAL REPORT
[HTTP://GOO.GL/2VFH0](http://goo.gl/2VFH0)

RUTLAND

ST. ALBANS