



**Final Meeting Minutes
April 27, 2015
Courtyard Inn
Middlebury, VT**

The Vermont System Planning Committee (VSPC) held a regular meeting on April 27, 2016, at the Courtyard Inn, Middlebury, Vermont. Deena Frankel called the meeting to order at 9:35 a.m.

Approval of the minutes

Bill Powell moved and Steve Litkovitz seconded approval of the minutes of the January 20, 2016, meeting, which were approved without objection.

Introductions

Participants introduced themselves. A list of attendees by sector appears on the last page of these minutes.

Subcommittee reports

GEOGRAPHIC TARGETING SUBCOMMITTEE

John Woodward, Geographic Targeting (GT) Subcommittee Chair, reported that GMP's Hinesburg area is the only constraint on the grid that is currently under consideration for NTA analysis. The subcommittee met with GMP in February to hear the results of a study on potential battery storage solutions prepared by RES America. The preliminary review determined that battery storage could be cost-effective, subject to full comparison of alternatives. GMP and VEC are also discussing the possibility of a joint substation project in Hinesburg. The Public Service Board (PSB) granted an extension until October 1 for GMP to complete a thorough analysis of alternatives, including a joint substation versus a battery solution.

In addition, the GT subcommittee requested distribution utilities to submit their 2016 non-wires alternatives screening results for current year's analysis cycle to be reviewed at the May 24 subcommittee meeting. If any issues "screen in," further analysis will be needed this summer, leading to the October recommendations due from the VSPC to the PSB.

FORECASTING SUBCOMMITTEE

Ms. Frankel reported that the Forecasting Subcommittee has been meeting jointly with GT to develop the draft VSPC charter. Items in the subcommittee's work plan are dependent on the outcomes of Docket 8550, Renewable Energy Standard. The subcommittee is taking a pause until the Docket 8550 framework is established. The cycle for the next load forecast to support the Vermont Long-Range Transmission Plan update cycle will also drive timing of the subcommittee's work.

PUBLIC PARTICIPATION SUBCOMMITTEE

Ms. Frankel reported on several membership changes taking place. The VSPC's residential and alternate representatives have indicated they intend to step down from the VSPC. Both reps must formally notify the PSB. In addition, the supply alternate seat is vacant as a result of Gabrielle Stebbins' departure from Renewable Energy Vermont. The PSB, once formally notified of these vacancies, is likely to solicit letters of interest from stakeholders who want to fill the seats, as has been the custom. The PSB has, in the past, asked the VSPC to provide input on interested stakeholders. Feedback to the Board was done on individual basis; not by the VSPC collectively. Ms. Frankel reported that Mike Wickenden expressed interest in serving as a residential representative.

COORDINATING SUBCOMMITTEE

Ms. Frankel proposed meeting dates for 2017:

- January 25, 2017—Doubletree Hotel, South Burlington
- April 26, 2017—Middlebury Inn, Middlebury
- July 19, 2017—Capitol Plaza, Montpelier
- October 18, 2017—Holiday Inn, Rutland

Hearing no objections to the schedule, it was adopted.

VSPC Evolution

Ms. Frankel reported on the work underway to develop a VSPC charter. Docket 7081 was litigated at a time when load growth was driving transmission upgrades. Transformation to a more distributed grid and changes in regulation have virtually eliminated load growth-related infrastructure projects in Vermont, at least for the present. In light of these changes, the GT and Forecasting Subcommittees have been meeting jointly to develop a draft VSPC charter intended to frame the VSPC's role in a changing energy environment. Three joint sessions have been held since the January 2016 quarterly meeting. VSPC staff prepared a background paper to frame the issue. The joint subcommittee recognized the VSPC did not have a charter to define the VSPC's mission and scope of work. Instead, the Docket 7081 Memorandum of Understanding (MOU) had framed the VSPC's role largely in procedural terms. The group decided on the strategy of drafting a charter as the means of updating and refining the vision in light of changes in the grid. The group will complete work on a draft for discussion at the July quarterly meeting but sought input at this meeting.

During the discussion Dave Westman from VEIC suggested having an ad hoc group of interested participants complete the next steps. Staff would determine who wants to participate via an email to the full group.

The committee agreed on the path to have interested members of the joint committee continue their work and provide a product for consideration at the July meeting.

On a separate track, John Woodward indicated the Public Service Department (PSD) may suggest revisions to the screening tool for the VSPC's consideration. There were no objections to the proposed process.

Recap of next steps:

1. Staff will poll to determine who wants to participate in the ad hoc group
2. Work will be completed by the group on the draft charter, including re-framing a specific item in the deliverables concerning the mechanism for addressing emerging issues
3. The PSD may propose for consideration by the GT subcommittee revisions to the screening tool(s).

Regional Update

Mark Sciarrotta, Assistant General Counsel at VELCO, provided a regional update. He reported on the Return on Equity (ROE) cases currently pending before the Federal Energy Regulatory Commission (FERC) ROE cases and on changes in the way local transmission projects are funded.

Mr. Sciarrotta gave background information about how transmission companies receive their revenue through Local Network Service (LNS) and Regional Network Service (RNS) rates. He then reported on the complaint filed by the Massachusetts Attorney General with FERC challenging the 11.14% rate of ROE that was in place as being too high in light of current costs of capital. The first complaint was resolved by FERC with a reduction in ROE to 10.57%. That case is currently on appeal. Three cases seeking further reductions are currently pending. Ultimately, FERC wants a reasonable rate that will still provide an incentive for transmission investment. In addition, predictability is important to investors. The ROE cases are being challenged by a number of transmission owners including VELCO.

Mr. Sciarrotta then reported on the status of RNS treatment for Pool Transmission Facility (PTF) components of local projects. In the past, some portions of projects needed to meet local needs were regionally funded when the elements have been classified as PTF. FERC Order 1000 now requires that regionally funded projects be awarded through a competitive process. Transmission owners and ISO-NE are discussing how to handle that change. Two possible paths are to seek an exemption or to set up a competitive process. Unless some alternative is developed and approved, future PTF components of local projects will be paid for locally.

Molly Connors, ISO-NE's new external affairs liaison to Vermont, reported on recent publications available to the public and regional trends in the electric grid. (See presentation or further detail.) Ms. Connors spoke about ISO-NE's participation in the Department of Energy 2016 Quadrennial Energy Review, which is focused this year on energy infrastructure challenges. ISO-NE offered comments regarding New England's transition from traditional to renewable resources and the development of a hybrid electric grid.

As of April 1, 2016, 14 elective transmission projects totaling 9,000 MW have been submitted to ISO's interconnection queue largely to bring wind or hydro into the grid. None of these projects will be covered in the New England transmission rates.

Eric Johnson, ISO-NE's Director of External Affairs, reported on impacts of current public policy goals on the grid. Energy use is growing across the region, but energy efficiency and behind-the-meter solar are slowing the growth rate and the overall demand for electricity is flat. Gas-fired generation and wind power are dominating the new resource proposals in the ISO-NE queue. Currently, behind the meter PV appears to ISO-NE as net load reduction, rather than power supply. ISO is working on ways to improve solar forecasting in the future.

The Distributed Generation Forecast Working Group discussed the draft PV forecast in February. The final PV forecast will be published in the 2016 CELT report. About 3200 MW of solar resources are included in the 2016 regional PV forecast. Most of the solar embedded in the forecast is being driven by Massachusetts.

In a change from past practice, ISO-NE will now draft regional system plans on a two-year cycle, rather than annually. Study work with stakeholders will continue to take place through the Planning Advisory Committee. FERC wants to shift planning to be consistent with the competitive model in which ISO-NE will identify the reliability need, but will no longer develop the solution. Once the need is identified, competitors will be invited to propose solutions. ISO-NE will be the evaluator.

VELCO Presentation: Transmission-Level Storage Study

Hantz Pr sum  presented VELCO's transmission-level storage analysis including benefits, cost effectiveness, and technological challenges. Today most storage installations are pumped hydro (95%) and thermal storage (36%), and batteries (26%). A number of storage technologies are in demonstration projects and in early stages of development. Applications of storage range from bulk energy, ancillary, transmission and distribution infrastructure, and customer energy management services. Mr. Pr sum  summarized ISO-NE's storage paper and recommended contacting ISO-NE for market opportunities. Grid-scale storage can participate in energy, capacity, reserves and regulation markets. No classification has been established for storage; it can be defined as transmission, generation or load.

VELCO performed a high-level study with Quanta Technology on the time shift application that is storing energy at times of curtailment due to transmission constraints and delivering that energy at a later time. The study found that a storage device would remain idle for long periods as there are not enough energy charge/discharge transactions to offset the installed cost of storage; payback periods of tested storage scenarios were in hundreds of years range; and financial performance can be improved with participation in wholesale markets. Opportunities may still exist for viable storage projects.

Policy and Project Updates

LEGISLATIVE UPDATE

Shana Louiselle provided an update on the legislative activities surrounding the energy siting bill (S.230). The bill was voted out of the House Natural Resources Committee (with several provisions cut from the bill as passed by the Senate). The bill will go to the House floor for third reading and final vote. The bill will then go to conference committee to reconcile the differences between the bills passed by each chamber. Members of the renewable energy community are concerned about a moratorium on wind.

House Agriculture Committee introduced a bill concerning the regulation of treated articles. The language in the bill unnecessarily duplicated regulation of utility poles by giving regulatory authority to the Agency of Agriculture. New language was proposed to demonstrate the PSB's oversight and its recognition of the best management practices for the treatment of utility poles created and adopted by Vermont utilities and Agency of Natural Resources. Both House and Senate Agriculture committees accepted the new language.

RENEWABLE ENERGY STANDARD/DOCKET 8550 IMPLEMENTATION

Mr. Westman reported on development of requirements for Tier Three of the Renewable Energy Standard in Docket 8550. VEIC and the Vermont distribution utilities submitted a straw proposal to the PSB for Board rules on Tier Three implementation, including annual planning for energy transformation projects, evaluation mechanisms, reporting requirements, utility responsibilities for claiming savings, and cost effectiveness tests. VPPSA proposed a trading concept that would allow utilities to trade fossil fuel savings across service territories. Questions remain about how to collaborate statewide and how to ensure equal opportunity for customers to participate. The working group agreed to review the standard in 2020 after its implementation to evaluate cost effectiveness, rate impacts, and usefulness of annual plans. Stakeholders have largely supported the proposals. Final comments and final Board order are expected this summer. It is likely the group will reconvene next year to begin drafting the rules.

NET METERING RULEMAKING UPDATE

Melissa Bailey updated the group on proposed changes to the net metering rule. The new rule will set net metering rates at each utility's blended retail rate, establish five categories of net metering projects based on size and siting, set "Renewable Energy Credit (REC) adjustor" depending on REC disposition chosen by customer, establish a two-year review date of REC and siting "adjustors" and eliminate the 15% net metering cap. The most recent draft eliminated language allowing utilities to charge a grid service fee. Board is specifically seeking comments on whether or not customers should be allowed to participate in more than one net metering group. The PBS is holding meetings on May 4 and 5 on the rule. Public comment deadline is May 12. The final proposal will be reviewed by the Legislative Committee on Administrative Rules, and should be adopted by the Board by July 1, and effective by 2017.

INTERCONNECTION RULEMAKING UPDATE

Carolyn Anderson reported the interconnection working group has met nine times. The PSD drafted a rule and filed a petition with the PSB on March 18 to initiate a rulemaking process. Stakeholders provided input, but the group did not reach consensus on all issues, so the draft reflects the PSD position, not agreement by all participants. A summary of proposed revisions can be viewed on the [PSD website](#). A first round of comments is due by May 13.

VERMONT WEATHER ANALYTICS CENTER UPDATE

Kerrick Johnson provided an update on the project. The contract with IBM has been extended twice and expires on June 11. VELCO management will be recommending a two-year extension at its next board of directors meeting. At the end of 2015, the project had a forecasting breakthrough, making it the most accurate wind and solar generation forecasting model currently available. As a result, distribution utilities and other agencies are finding value for the data. For example, GMP is using the data for better weather forecasting and demand data for its Stafford Hill and microgrid projects. ISO-NE is interested in a one-year pilot project to learn how to extrapolate Vermont's lessons learned across the entire region. Vermont Agency of Transportation is using the VWAC data to optimize its resources to keep roads safe. VELCO's Energy Management System department has been utilizing the data to better manage the grid.

VELCO and GMP were both selected among eight finalists for the 2016 Edison Electric Institute Edison award recognizing the Vermont Weather Analytics Center and GMP's integrated energy services. The

award honors distinguished leadership, innovation and contribution to the advancement of the electric industry for the benefit of all. The winner will be announced in June.

Project reports

STATUS UPDATE OF REMAINING DEFICIENCIES

Connecticut River Valley: Mr. Pr sum  reported that the PSB technical hearing took place and a CPG is expected by the end of the year.

Northern Area: Mr. Pr sum  reported there has been no activity since the last meeting.

Rutland: Mr. Kirby stated that the Rutland reliability plan is on track. GMP is watching peak loads in the Rutland area this summer to monitor the margin.

Hinesburg: Kim Jones reported more work has been done with RES America on the storage solution and GMP will share details at the next GT meeting, however, more work needs to be done with the Frequency Regulation Market to ensure the reality of the benefits and payback of the storage solution. GMP has met with VEC to discuss potential sites to locate a combined substation. Cost estimates to rebuild versus new construction will be part of the analysis. Additional analysis will be done to ensure it will be beneficial for both companies.

OTHER VELCO PROJECTS

PV-20 Cable Replacement: Mr. Pr sum  reported the PBS hearing is scheduled for April 28.

Structure Replacement Project: Mr. Pr sum  reported the SCI program is aimed at replacing aging structures and is currently replacing 300 structures per year.

REGIONAL PROJECTS:

Hantz Pr sum  reported on the developments of the New England Clean Energy RFP. The project received four bidders including Northern Pass (Eversource), VT Green Line (Anbaric, others), Clean Energy Connect (Eversource, others), and Evergreen Express (NextEra, others). Northern Pass and Vermont Green line studies are almost complete. Clean Energy Connect study has started recently. No information on Evergreen Express.

Adjournment and next meeting

The meeting was adjourned at approximately 2:00 p.m. The next quarterly meeting is scheduled to be held from 9:30 a.m. to 4:00 p.m. on July 20, 2016, at the Middlebury Inn, Middlebury, Vermont.

ATTENDANCE

*Indicates voting member

**Indicates alternate

PUBLIC SECTOR

TRANSMISSION UTILITY (VELCO)

Kerrick Johnson (VELCO)
Mark Sciarrotta (VELCO)
*Hantz Pr sum  (VELCO)

DISTRIBUTION UTILITIES PROVIDING TRANSMISSION (GMP, VEC)

Kim Jones (GMP)
*Steve Litkovitz (GMP)
Rip Kirby (GMP)
Dean Denis (VEC) by phone
Mike Beaulieu (VEC) by phone
Cyrill Brunner (VEC) by phone

LARGE TRANSMISSION-DEPENDENT DISTRIBUTION UTILITIES (BED, WEC)

*Munir Kasti (BED)
*Bill Powell (WEC)

TRANSMISSION DEPENDENT DISTRIBUTION UTILITIES (MUNICIPALS)

*Melissa Bailey

SUPPLY & DEMAND RESOURCES

Carole Hakstian (VEIC)
*Mike Wickenden (VEIC)
David Westman (VEIC)
Nathaniel Vandal (Generation Developer)

NON-VOTING MEMBERS

John Woodward (PSD)
Allan St. Peter (PSD)

STAFF

Deena Frankel (VELCO)
Shana Louiselle (VELCO)

GUESTS

Eric Johnson (ISO-NE England)
Molly Connor (ISO-New England)
Louis Cecere, VELCO
Scott Harding,