



**Draft Meeting Minutes
July 22, 2015
Capitol Plaza
Montpelier, VT**

The Vermont System Planning Committee (VSPC) held a regular meeting on July 22, 2015, at Capitol Plaza, Montpelier, Vermont. Deena Frankel called the meeting to order at 9:35 a.m.

Steve Litkovitz moved approval of the April 29, 2015, minutes (corrections as distributed), Hantz Pr sum  seconded and the minutes as corrected were approved without objections.

Introductions

Participants introduced themselves. A list of attendees by sector appears on page 7 of these minutes.

Subcommittee Reports

GEOGRAPHICAL TARGETING SUBCOMMITTEE

John Woodward, the new subcommittee chair, reported that subcommittee solicited the utilities to bring their capital projects forward to share their NTA screening. Most utilities have responded that they did not have load-growth related issues. GMP and VEC shared project-specific information (see subsequent presentations). VELCO shared its PV20 project, which screened out using the Docket 7081 screening tool.

The Vermont Long-Range Transmission Plan (LRTP) was filed on June 25, 2015, with no new bulk system issues screening in for full NTA analysis. Two GMP projects have NTA potential in Rutland and Hinesburg. A reliability plan was previously filed for Rutland. In September the subcommittee will make its recommendation to the full VSPC concerning the need for a reliability plan for Hinesburg. VSPC will receive GT subcommittee recommendation and file the VSPC recommendation with Public Service Board (PSB) by October 30, 2015.

VEC's projects generally addressed asset condition and reconductoring. Their NEK connector project has an economic development focus and involves a federal grant to expand three-phase power in the area. VEC is not expecting to reflect significant load growth in its updated integrated resource plan (IRP).

Steve Litkovitz gave an update on GMP's projects. He reported that the Susie Wilson road area, which was previously studied, is now being monitored due to slower than anticipated load growth. Mr. Litkovitz reported that GMP's airport substation is now being targeted for rebuild due to asset condition. GMP will take advantage of the rebuild to alter the layout for additional feeders. GMP planning is taking a wider view of Chittenden County that encompasses seven or eight substations in the area. This wider study, prompted by the airport substation rebuild, will take a year to complete and may reveal further opportunities or constraints.

Kim Jones reported on the Hinesburg area. The Hinesburg load is located eight miles away from the feeding substation, with a load level of 3MW. This long distance results in challenges with voltage and circuit protection. Last year, the Geographic Targeting Subcommittee (GTS) discussed the value of a closer look at the area. Subsequently, GMP identified a solution to the circuit protection issues using distance relaying. GMP is now studying ways to address the voltage concerns. They are currently working with RES America to identify possible storage and other components of a non-wires solution. Under consideration is 2-4MW of battery storage in combination with a 5 MVAR compensator to control flicker. A synchronous condenser will bring strength into the area. Results will be brought to the August 5 meeting, with a high probability that this will be an area need a reliability plan.

Subcommittee reports

FORECASTING SUBCOMMITTEE

Carole Hakstian reported that increased uncertainty in forecast inputs has led the subcommittee to consider taking a scenario modeling approach to developing forecast for the next LRTP. Variables such as public policy changes, climate trends, and new technologies have become more important and more uncertain variables. At its May meeting, VELCO helped present data on the comparison of Vermont ISO-NE load shapes. The presentation is on the VSPC website.

On July 9, the subcommittee discussed analyzing demand and generation resource data by VT load zone to address locational aspect of resources. The subcommittee is narrowing the discussion to EVs, electric heat pumps, PV installations and how they would be incorporated into the forecast. The subcommittee will continue discussions about levels of uncertainty in load forecast inputs.

Mr. Woodward contacted Tom Kavet, state economist, to discuss economic modeling. Kavet is customizing Moody's model equations to better predict VT macroeconomic indicators. Next step is to meet with utilities.

PUBLIC PARTICIPATION SUBCOMMITTEE

Ms. Frankel reported the public participation subcommittee has a new chair, Kelly Lucci from VEIC. Mike Kanarick (BED) and Andrea Cohen (VEC) and Ed Ed Delhagen (PSD) participated in the subcommittee to help the group review the breadth of public engagement efforts recently or currently underway concerning energy issues. At the June meeting, the subcommittee discussed lessons learned from recent public engagement processes during the Comprehensive Energy Plan and the LRTP. Key learnings were that people want more education and outreach from credible sources, but the most effective forums and strategies are less clear. General public is not drawn to meetings unless they are focused on a specific controversy with personal impact.

The Vermont Energy Action Network (EAN) held a meeting in June on energy-related communication to discuss a network model to be increase effectiveness of public communication strategies on the state's renewable energy goals. The Vermont Sustainable Jobs Fund's (VSJF) Farm to Plate network is a good example of a network model, multiplying the communications effectiveness of a variety of groups who share a common goal. The subcommittee discussed how this might be helpful in our communications about consumer behavior change and energy siting policies. Andrea Colnes, Executive Director, would like to attend the VSPC meeting in October to learn more about the VSPC process and to explain more about the EAN.

The subcommittee's next work will focus on VSPC social media plan and website content revisions/refresh.

Presentation: VECAN overview and public engagement on energy/transmission issues

Johanna Miller gave an overview of the Vermont Energy and Climate Action Network (VECAN), an organization comprised of more than 100 Vermont local energy committees. VECAN's mission is to strengthen and support energy committees in their efforts to promote energy conservation and clean renewable energy supplies. VNRC coordinates and supports VECAN through website communications, regional energy roundtables, and direct technical assistance.

Ms. Miller asked the committee what role the VSPC might play in deepening the towns/energy committees' understanding of the grid's role in our energy future. The upcoming VECAN Conference on December 5, 2015, is a good opportunity for a grid-related workshop.

GMP Solar Mapping Project

Dan Belarmino from Green Mountain Power (GMP) gave a presentation and demonstration of GMP's solar mapping project. The project began in 2012 to help customers with the challenges of distributed resource interconnection. The produced will be a map-based tool that provides information online regarding infrastructure, capacity and interconnection factors. The project will enable customers to make more informed siting choices of distributed energy resources that will help reduce interconnection costs and project lead time, improve the efficiency and accuracy of GMP's analysis, and make technical grid information available to developers.

Good data has been a challenge for the project. A Department of Energy (DOE), obtained by the PSD, will help calibrate circuit models and refine automated data. GMP is developing a load calibration tool to keep the process sustainable as information changes.

Subcommittee reports

COORDINATING SUBCOMMITTEE

Deena Frankel reported the remaining schedule for 2015 and the entire 2016 VSPC meeting schedule.

- October 14, 2015, Holiday Inn, Rutland
- January 20, 2016, DoubleTree, Burlington
- April 27, 2016, Courtyard Marriott, Middlebury
- July 20, 2016, Capitol Plaza, Montpelier
- October 19, 2016, Holiday Inn, Rutland (This meeting was originally proposed for October 12, but was changed to October 19 to accommodate participant schedules.)

Regional/ISO-New England Updates

Frank Etori reported on the ISO-New England white paper on distributed generation, which suggests significant increase in zero-cost energy resources (such as solar and wind). As these resources increase,

capacity prices will have to increase to pay the non-intermittent generation fleet to provide generation on days when the zero-cost resources are not producing.

The Supreme Court is considering an appeal of the case that struck down the provisions of FERC order 745 that call for demand response (DR) to be paid on equal footing as generators in wholesale energy markets. While this appeal is pending, ISO-NE has delayed full implementation of the new DR treatment until at least 2018.

The region has continued concerns about over-reliance on natural gas during cold winter periods. ISO-NE's winter fuel procurement program allows generators to participate in the market by paying for them to have fuel on hand. ISO-NE has proposed to expand the program for the winter of 2015-2016 to encompass all generators including nuclear and hydro. ISO's proposal, as well as a competing, less expensive proposal by NEPOOL to continue the approach used in 2014-2015, will be filed with FERC. (Note: FERC ruled in favor of the NEPOOL proposal in September, 2015.) This issue will continue annually until the pay-for-performance program goes into effect in 2018.

FERC Order 1000 implementation will result in competition for building reliability upgrades. Competing, non-incumbent developers will have the opportunity to submit proposals to address system deficiencies. In addition, 70 percent of costs of projects serving a public policy need will be shared among all New England rate payers, with 30 percent borne by the benefitting states.

Inter-regional planning coordination—Order 1000 also has provisions requiring ISO-NE to plan long-term needs with neighbors such as NY-ISO.

ISO-NE process for stakeholder input to Regional System Plan (RSP)—Eric Wilkinson of ISO-NE reported that the public draft of this year's RSP was published in July. All written comments are due from Planning Advisory Committee (PAC) members by July 23. The PAC will discuss submitted comments on August 6 and a public meeting will be held on September 10. ISO is looking for substantive feedback.

Old Business

NET METERING AND INTERCONNECTION PROCESSES UPDATE

Melissa Bailey reported that the PSB convened two working groups—general process issues and rate structure—to redesign the existing net metering program as required by Act 99. The working groups met six times over the spring and summer. Parties submitted initial comments in June 2015, followed by a workshop to discuss comments. A draft revised rule is expected to be issued by the PSB in the summer or early fall in order for the Board to meet its January legislative deadline. Some of the issues were raised by the comments concern streamlining smaller projects/thresholds, siting, and rate incentives for preferred siting. The group developed four different proposals on rate structure. One was to calculate a value for solar, pin the rate to the retail rate, retail rate plus adder (no specific proposals on adder amount), and lastly the PSD's proposal for a retail rate +/- adder. Customers would be compensated for the renewable energy certificate (REC) value.

The Board is required to submit a proposal by January 2016 after a comment process. The PSD suggest that VSPC be an avenue to discuss transmission avoided cost. The group did not reach a conclusion, and Ms. Frankel proposed informal discussion to follow up by phone.

Ms. Frankel thanked VSPC members for their quick response on the Act 56 Solar Siting Task Force appointment. The VSPC appoint of Robert Dostis was submitted to the Public Service Department on July 17, 2015.

INTERCONNECTION RULEMAKING UPDATE

Carolyn Anderson reported on PSB Rule 5.500 (interconnection) working group that is seeking to consolidate the state interconnection process within one rule. Currently, net metering interconnection is addressed in a separate rule (Rule 5.100). The interconnection group is working to incorporate some provisions of ISO-NE Small Generator Interconnection Process into the state rule, streamline the process to move projects through the queue more quickly, provide greater flexibility for changing technologies and update the rule in light of the increasing portion of Vermont's load served by distributed generation.

Group members in the PSD process include utilities, developers, PSD, and ISO-NE. Two drafts of a revised rule have been circulated to the working group. Important draft revisions to date are new fast track screening provision to move projects through more quickly, more description of preliminary screening, and a provision that resources smaller than 75 kW can interconnect with minimal process unless utility raises issue within 30 days.

The Underwriters Laboratory (UL) listing, ride-through, IEEE 1547 standards, queue management, and other technical provisions still need to be addressed. The final draft will be submitted by the PSD to the PSB, which will then initiate a formal rulemaking process.

The Interconnection rule will be filed separate from Net Metering Rule but may gain some efficiency through a combined review by the Interagency Committee on Administrative Rules (ICAR).

VERMONT WEATHER ANALYTICS CENTER UPDATE

Kerrick Johnson reported on the Vermont Weather Analytics Center Project. The project is under budget having only used \$9.4 million out of \$13.6 million. New developments: forecasts for specific renewable generators have been added, the number of vertical resolution levels has been increased to 51 in order to match turbine heights, point forecasts have been added for Vermont distribution utilities' main offices as well as added service territory-specific views for GMP, VEC, WEC, and Stowe. The project's next steps are to complete weather station installations and ingest them into model, develop and implement Renewable Energy Stochastic Engine (RISE) tool and create Forecaster Discussion tab to allow forecaster and Deep Thunder users the opportunity to discuss Deep Thunder forecasts. Each model has been meeting its milestones and the RISE model will be ready for demonstration in August.

DG DATABASE DISCUSSION

Ms. Frankel discussed the development of a database to address the lack of visibility of distributed resources in Vermont. Conversations are underway regarding what kind of state-utility collaboration might meet all stakeholder needs, potentially through VELCO.

Project Updates

STATUS UPDATE OF REMAINING DEFICIENCIES

Connecticut River Valley: Mr. Pr sum  reported that VELCO is preparing to file an application for a Certificate of Public Good in August. A public outreach process is currently underway seeking comments from communities. VELCO received Section I.3.9 approval from ISO-NE indicating that the project will not have an adverse impact on the transmission system. New conductors (wires) will be installed on three sections of the subtransmission system. In-service dates for the projects will be staged based on GMP's project process.

Northern area: Mr. Pr sum  reported the project is on hold until VELCO and Vermont Electric Cooperative (VEC) determine how to address the issues of the large customer loads that would affect the area. This deficiency is related to voltage and not transmission capacity.

PV 20: Mr. Pr sum  reported a petition a Certificate of Public Good from the PSB is being prepared to be filed in July.

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 October 19, 2015, at a Holiday Inn in Rutland.

ATTENDANCE

*Indicates voting member

**Indicates alternate

Public Sector

*Johanna Miller, VNRC

Transmission Utility (VELCO)

*Hantz Pr sum , VELCO

**Frank Etori, VELCO

Kerrick Johnson, VELCO

Distribution Utilities Providing Transmission (GMP, VEC)

*Steve Litkovitz, GMP

Kim Jones, GMP

Dan Belarmino, GMP

Carolyn Anderson, GMP

*Mike Beaulieu, VEC

Mike Vollier, VEC

Large Transmission-Dependent Distribution Utilities (BED, WEC)

*Bill Powell, WEC

*Ken Nolan, BED

Tom Lyle, BED

Transmission Dependent Distribution Utilities (Municipals)

*Melissa Bailey, VPPSA

Supply & Demand Resources

*Nathan Vandal,

*Gillian Eaton, VEIC

Carole Hakstian, VEIC

Non-Voting Members

John Woodward, PSD

Allan St. Peter, PSD

Staff

Deena Frankel, VELCO

Shana Louiselle, VELCO

Guests

Life Rasmussen, VNRC intern

Eric Wilkinson, ISO-NE