VERMONT SYSTEM PLANNING COMMITTEE

MEETING MINUTES
JUNE 13, 2012
CAPITOL PLAZA, MONTPELIER

The Vermont System Planning Committee (VSPC) held a regular quarterly meeting on June 13, 2012, at the Capitol Plaza, Montpelier, Vermont. Deena Frankel called the meeting to order at 9:35 a.m.

Bruce Bentley moved for approval of the minutes of the February 13, 2012, and March 14, 2012, VSPC meetings, David Mullett seconded and the minutes were approved without objection.

Introductions

Participants introduced themselves. A list of attendees by sector appears on page 6 of these minutes.

Regional Update

Status of VT/NH solutions

Hantz Présumé reported that ISO-New England (ISO-NE) will update the VT/NH study, presenting the study scope at the July Participant Advisory Committee (PAC) meeting. The scope should be similar to the previous study but will use a lower load forecast. Completion is expected by year end. Mr. Présumé anticipates that the results of the study will extend the need date for projects in the 2012 Vermont Long-Range Transmission Plan. ISO-NE is predicting a slight decline in load over the next ten years and VELCO's forecast predicts a slight increase of approximately .5%. VELCO's consultant, ITRON, is working with ISO-NE to understand the differences and minimize the gap. Mr. Présumé anticipates an opportunity for discussion on the forecast detail and the modeling of Vermont. At the suggestion of T.J. Poor, Mr. Présumé will recommend that the study include PV20 both at 0 MW and with load flow. Treating PV-20 in this manner would be similar to the way VY was treated in VELCO's long range transmission plan. Mr. Bentley added that, while studying the short term impacts of Tropical Storm Irene on loads, CVPS noticed a big decrease in sales due to net metering and SPEED initiatives. He encouraged the consideration of those impacts in forecasting. Mr. Présumé agreed that net metering is not currently captured in Vermont forecasting. Members expressed an interest in learning more about net metering. The group suggested inviting Andy Perchlik of the Department of Public Service, who has collected information on Vermont's net metering projects, to present to the full VSPC at the September meeting.

ISO-NE strategic initiative to align markets and planning Status of Solutions

Eric Johnson, ISO-NE Director of External Affairs, and Eric Wilkinson, ISO-NE External Affairs Vermont Liaison presented on ISO-NE's strategic planning initiatives. ISO-NE has three major areas of responsibility: (1) keep the lights on in New England, (2) administer the wholesale markets in New England, and (3) long-term planning. ISO-NE is independent of all transmission owners, generators, brokers and suppliers. It continually reassesses the needs on the system and the change in the forecast, and extensively engages stakeholders and the public. ISO-NE planning considers the economy, pricing, forecast changes, and the entry and exit of supply and demand-side resources. Many factors influence regional system planning such as state incentives for renewable, energy-efficiency investments, integration of demand response into the energy markets, gas and oil prices, Forward Capacity Market reforms and state and federal regulations. Planners are seeing a transition from oil to natural gas resources. New England gets more than 50% of its energy from natural gas-fired resources, up 15% from a decade ago. Natural gas is a cleaner and more efficient resource. Environmental restrictions are also driving this transition, which is expected to continue until oil units are phased out entirely. Today the system is very reliant on these oil units. The wholesale price of natural gas, which tends to set the price of electricity, is at an historic low. Any disruption in gas supply to power plants can impact electricity prices. A third of the proposed projects in ISO-NE's queue are wind projects. The addition of more natural gas plants to balance intermittent renewables could

exacerbate New England's heavy reliance on natural gas. The system needs the resources to be available when the wind is not blowing, but the pricing is not favorable for gas plants. The lack of a proper balance would have both market and operation implications. All generators are studied to assess impacts on the system. In an area where there are several resources, if there is not enough transmission capacity, the more costly resource will be asked to back down or be curtailed. Gas units are backed down first because they command a higher price.

All resources coming on to or exiting the system must notify ISO-NE and it performs a comprehensive system impact study. ISO-NE needs a clear understanding of what resources are available at all times. ISO-NE would like to see a more efficient, faster fleet of resources. During the September outage, it called on several units that did not perform as expected, resulting in a NERC violation. ISO-NE has identified five areas of risk: (1) resource performance and flexibility, (2) retirement of generators, (3) increased reliance on natural-gas-fired capacity, (4) integration of variable resources, and (5) alignment of planning and markets. The system can handle approximately 12,000 MW of wind. In the future it may be necessary to forecast load and forecast wind. ISO-NE recognizes that planning and markets are not aligned. For instance, the Forward Capacity Market looks out three years and planning looks out ten. ISO-NE prepared a discussion paper, which coincidentally was released during the meeting, entitled *Aligning Markets and Planning*. Stakeholders and the ISO have noted that existing wholesale markets do not fully reflect system reliability requirements that are identified through the region's transmission planning process. When a future reliability problem is identified today, the region typically commences a cost-of-service transmission project without considering alternative, market-based solutions to the problem. ISO recognizes that an investment in new generation or demand-side resources, obtained through competitive markets, may prove a faster and superior solution. ISO-NE is not going to propose its own amendment to the tariff to resolve the issue of cost allocation; it will leave that question to stakeholders representing load, including states. The New England States Committee on Electricity (NESCOE), a not-for-profit organization appointed by the New England governors to represent the public interest region-wide, and other stakeholders are having conversations about cost allocation. ISO-NE anticipates that further discussion will occur at NEPOOL and other groups once stakeholder have had an opportunity to review the paper.

ISO-NE is recommending a number of capacity market enhancements to help the region meet the five strategic planning initiative challenges. The changes will take time to implement so additional solutions will be needed in the interim. ISO-NE is actively working on developing proper market mechanisms to promote certain types of investment such as dual-fueled capability and firm gas arrangements. If the region is going to rely heavily on gas units, firm gas contracts are key.

NESCOE proposal on NTA analysis

Frank Ettori described NESCOE's regional framework for non-transmission alternatives (NTA) analysis. NESCOE has heard from VELCO and other transmissions owners (TOs), that TOs want (NTAs) to be considered earlier in the planning process to help ensure that there is no bias in timing between resource types. The states also expressed interest in more uniform analysis from TOs across the region than TOs produce today. NESCOE is trying to develop a framework for NTA analysis to be used by all states. This framework is similar to what Vermont does today and will not contradict or increase burden on Vermont. VELCO has been performing NTA analysis for some time now. The objectives of the framework are to: (1) obtain NTA analysis at a point in time in the regional planning process that provides more practical value to states and market participants than what is done today, (2) make state siting processes more efficient by reducing the need for states to ask TOs for additional analysis during siting proceedings, (3) obtain more uniform alternative analysis across the region, and (4) conduct NTA analysis across the region. The framework is not meant to disrupt the region's general reliance on markets to select and fund resources to meet needs or to create a new cost allocation mechanism. The intent is to get the NTA analysis done in time for NTAs to be a viable solution. Mr. Ettori anticipates significant resistance from other TOs. Studies that are part of planning are recoverable under the regional transmission owners' allocation agreement. VELCO will look more into the cost recovery of NTAs. Michael Wickenden pointed out that FERC cost allocation methodology follows benefits and ISO-NE's follows load. If you look at an alternative solution such as energy efficiency, the benefits are energy-related and those benefits don't flow in the same percentage to the region. Cost allocation

becomes very complicated and we haven't come up with a good way to model the benefits. ISO-NE does not intend to conduct economic analysis of market resource alternatives (MRAs)[1] and NTAs.

VELCO has been advocating for parity treatment of NTAs and is using the VT/NH study as an example to demonstrate a practical example. Vermont could defer projects at considerable cost savings using NTAs in the Northwest and Central Vermont areas. Other states have no regulatory requirement to perform NTAs or MRA analysis. The allocation of costs of implementing an NTA that provides a regional benefit is a challenge. ISO-NE will present the NTA framework for feedback to NEPOOL and the TOs. NESCOE will discuss any proposed changes with ISO-NE and provide the template to the states. Each state can then modify the template to meet state requirements/preferences and implement a process to execute the NTA framework. NESCOE will monitor the implementation of the framework and the development and implementation of market mechanisms to determine whether modifications to the NTA are warranted.

Subcommittee reports

Ad Hoc Process Improvement Group

Ms. Frankel reported on behalf of Asa Hopkins that the group continues to meet and develop recommendations related to improving the efficiency and effectiveness of the VSPC process and implementing the modifications to the MOU approved by the Public Service Board in December 2011. One of the approved modifications is to eliminate the requirement that a "project priority list" (PPL) be developed following the submission of VELCO's long-range transmission plan, and instead that the VSPC develop a "project-specific action plan" for each reliability deficiency identified in the Plan. The Ad Hoc Process Improvement Group was charged with defining the project-specific action plans, and is requesting comment on its proposed action plan as follows. VELCO will file its long-range transmission by July 1. In September the VSPC will review and confirm/revise the lead and affected utility determinations made by VELCO. Based on the adjustments and comments during the development of the Plan, no dispute regarding affected and lead utility determinations is anticipated. If a dispute does arise, however, it would be resolved in accordance with the MOU. The lead utility will develop a brief description of the critical path for resolving the deficiency identified and present it to the VSPC at the December quarterly meeting. The critical path will include the NTA analysis timing, participants and the approach to be taken for the full NTA analysis, as well as the timing of solution selection, cost allocation and implementation strategy. If the problem is not going to be resolved in the default time frame established in MOU, the alternative time frame would be included in the description. Following the presentation of the critical path document, an update on the project would be provided at each quarterly VSPC meeting. The update would include any adjustments or changes to the project-specific action plan. The Project Priority List was relatively inflexible and required a filing with the Public Service Board if a date could not be met. The project-specific action plans are meant to hold parties accountable, but be more flexible. The project-specific action plans will also serve as the basis for the VSPC annual reporting to the Board and Department. An example of a project-specific action plan will be presented by Steve Litkovitz at the September meeting.

Ms. Frankel also reported that Mr. Hopkins had circulated a list of questions to subcommittee chairs to obtain feedback about the subcommittees structure and function, and to assess whether subcommittee charters are accurate descriptions of current work. He has received feedback from some committees and others have meetings scheduled to discuss the questionnaire. Jenny Cole reported that the Public Participation Subcommittee had submitted comments. This subcommittee felt there were things that hadn't been followed through on that were contained in its charter such as consultation related to public outreach for the long range transmission plan. The subcommittee wants the opportunity to provide communications advice and support to other subcommittees of the VSPC. Mr. Poor reported that the Energy and Efficiency Subcommittee met quite regularly and members found

[1] MRA is ISO-NE's term for NTA, and implies analysis of the location and magnitude of demand and supply-side resources that could meet a reliability need, with that need then potentially being met by the market.

value in the meetings, crediting this active membership to the fact that there is no alternative forum for discussion of energy efficiency and load forecast-related issues. The subcommittee also recognized that there are forums for other work that isn't happening at the VSPC such as advanced metering initiatives. Comments of all the subcommittees will be circulated to the VSPC.

NTA Screening Tool Revision

Mr. Bentley reported that the committee is considering when a NTA analysis should be completed. The current screening tool was created some time ago and it has become evident that it needs to be modified. The group is evaluating the tool based on scenarios that have come before it or likely scenarios. The tool was developed to get NTAs into place that would really solve problems, and it is used by VELCO for bulk or predominantly bulk transmission, but is not used by the distribution utilities. The subcommittee continues to work on revising the screening tool and welcomes comments. In its January 30 Order, the Board requested that revisions to the screening tool be filed within six months of the date of the Order. There is more work to be done, and the subcommittee wants to extend the filing date to September. This would enable the committee to present the revised screening tool the VSPC at its September meeting.

MOTION TO REQUEST EXTENSION FROM PUBLIC SERVICE BOARD (PSB) TO FILE REVISED SCREENING TOOL. SUBCOMMITTEE WILL BRING REVISED SCREENING TOOL TO THE VSPC AT THE SEPTEMBER MEETING. The motion was moved and seconded, and approved without objection.

Energy Efficiency & Forecasting (EE&F)

T.J. Poor, Chair, reported the subcommittee, in response to a request from the PSB for a recommendation, discussed the funding mechanism for geographical targeting of energy efficiency going forward. Geotargeting is currently funded by the statewide energy efficiency charge, but consideration is being given to whether funding should be more area-specific or some combination of statewide funding and area-specific funding. The subcommittee discussed in detail the advantages and disadvantages of different options. The committee is reviewing how to allocate funding and where the benefits flow relative who pays. The Board also established a group to review the avoided costs of transmission deferral. This group is dealing with many of the same issues that the subcommittee faces. DPS hired a consultant to help the two groups work through these issues. Updating the values assigned to the deferral of transmission—"avoided costs"— may or may not help with valuing geotargeting. A status report is due from the VSPC in July, and the committee is requesting authority to file a report with the Board indicating that it wants to wait until there are results from the avoided cost study. The subcommittee would then meet again and come up with a recommendation for the VSPC.

MOTION TO GRANT THE EE&F SUBCOMMITTEE AUTHORITY TO FILE A STATUS REPORT REFLECTING ITS PROGRESS TO DATE AND ESTABLISHING THAT A PROPOSAL ON THE FUNDING OF GEOTARGETING WOULD BE SUBMITTED VIA E-MAIL TO THE VSPC FOR CONSIDERATION. IF MEMBERS DO NOT OBJECT TO THE CONTENTS OF THAT PROPOSAL, IT WOULD BE FILED AS THE VSPC'S RECOMMENDATION. IF REQUESTED, FURTHER DISCUSSION WOULD OCCUR WITH THE VSPC PRIOR TO FILING WITH THE BOARD. The motion was moved, seconded and approved without objection.

Mr. Poor also reported that the subcommittee has discussed extensively the differences between the forecasts of ISO-NE and VELCO. VELCO's load forecast, developed with input from EE&F and the distribution utilities, shows a small upward trend in peak load of half a percent. ISO-NE's load forecast shows a small decline in load over time and the committee is trying to understand the differences. ISO-NE does not count some of the load that VELCO counts. Further, the Highgate Converter losses are treated differently by ISO-NE. Differences in the forecast models are also a source of divergence. ISO-NE uses a simple energy model to drive a daily peak model and VELCO uses monthly energy forecasts built up from the customer class levels. VELCO incorporates end-use energy intensities that reflect the impact of current and future efficiency standards. ISO-NE treats energy efficiency differently than VELCO. ISO-NE captures energy efficiency in the Forward Capacity Market so it counts 100 percent whereas VELCO captures 50 percent to account for efficiency that is already embedded in the forecast. The committee will continue to review these differences. The next step is to discuss with ISO-NE's load forecasting committee.

NW & Central VT NTA Study Group

Doug Smith reported the substantial time and effort of the NTA Study Group to date. This group represents the first collaborative NTA study of its kind, and the group has identified a number of new or un-answered questions. The effort has produced side benefits such as discussion on practical analytical problems and methods, development of common models, and extensive cooperation among the distribution utilities. The screening analysis has demonstrated that there are a few existing resources to consider that have relatively low cost implications. The screening is based on each resource's projected all-in costs, less market revenues and other avoided costs. Public outreach was done in the spring explaining the study and seeking information about potential resources. Responses were received from 12 individuals and groups. Further dialogue is expected with several developers. An alternative resource configuration (ARC) analysis is underway to develop groups of resources that will be subject to more detailed economic analysis. The group is developing a cash flow model, refining inputs for key resources to construct ARCS, and identifying and quantifying resources already being developed for other reasons. A PV20 solution would eliminate the Central Vermont reliability gap for year 2016. Until New York completes required upgrades of its system, the PV20 solution is not viable, requiring a plan for other resources. The findings to date suggest that available demand response is not sufficient to fill the gaps. A viable ARC may, however, include a package of multiple resources none of which is sufficient alone. Large savings to Vermont seems unlikely because of the PTF cost sharing arrangement. Significant additional effort and cost is required to complete a full NTA study. A second, broader round of public outreach is anticipated when the NTA analysis is in public draft form. The study may ultimately raise policy issues, such as whether to consider an NTA based on its societal benefits even if it is not the lowest cost option in terms of cost to Vermont ratepayers. Utilities also struggle with procedural challenges and cost allocation. The distribution utilities are caught between ISO-NE and Vermont's least cost planning principles. ISO-NE's schedule is driving the process, which is further complicated by having two different load forecasts. Though there remain many unanswered questions, the group continues to meet to work through the issues.

Technical Coordinating Subcommittee

Ms. Frankel reported that given time considerations, a schedule of 2013 meeting dates will be circulated via e-mail for comment.

Update on the SPEED Program

John Spencer provided a SPEED[2] Standard Offer Program update. Several projects are being developed throughout the state, though none is currently proposed in Chittenden and Rutland Counties where they would be most beneficial to transmission system reliability. Several projects in the queue may not be constructed for a variety of reasons. Vermont's Comprehensive Energy Plan has codified the renewable targets for Vermont. A SPEED Standard Offer Project must be a new renewable energy project that is 2.2 MW or less in size. It can be landfill methane, solar, wind, hydro, biomass or farm methane. The benefits of these projects are stable pricing over the next 20-25 years and no ratepayer or utility investor capital is required. The negatives include above market pricing and projects that are not necessarily located in areas of need. The Vermont Energy Act of 2012 supports NTAs by allowing an unlimited amount of targeted distributed generation if there are sufficient benefits because of design characteristics, location or other discernible benefit to the operation and management of the electric grip or a utility's sub-transmission or distribution system. The Public Service Board is holding a workshop on June 22 to discuss the programmatic changes to the Standard Offer Program and the development of standard offer pricing. The group agreed that the VSPC is a good forum to discuss the issue of geographically targeting SPEED Standard Offer resources.

[2] Sustainably-Priced Energy Enterprise Development.

Old Business

Project updates

Due to the lateness of the hour, project updates were done by exception. Mr. Bentley noted that CVPS will be requesting an extension for the Rutland study.

OTHER BUSINESS

None.

Adjournment

The meeting was adjourned at approximately 3:30 p.m.

Next Meeting: Next quarterly meeting to be held September 12, 2012, at the Holiday Inn, Rutland, Vermont at 9:30 a.m.

ATTENDANCE

*Indicates voting member at this meeting
**Indicates Alternate

Public Sector
*Jenny Cole – Residential
*Johanna Miller – Environmental

Transmission Utility (VELCO)
*Hantz Présumé, VELCO
Diana Lee, VELCO
Cleveland Richards, VELCO
**Frank Ettori, VELCO

Distribution Utilities Providing Transmission (CVPS, GMP, VEC)
*Bruce Bentley, CVPS
**Kim Jones, CVPS
*Steve Litkovitz, GMP
**Doug Smith, GMP
*Kris Smith, VEC (via phone)

Large Transmission-Dependent Distribution Utilities (BED and WEC)
*Munir Kasti, BED (via phone)

Transmission Dependent Distribution Utilities (Municipals)
*David Mullett, VPPSA
Proxy for Barton
Proxy for Village of Johnson
Proxy for Village of Ludlow
Proxy for Village of Northfield
Eric Werner, Hardwick Electric Department

Supply and Demand Resources
*Michael Wickenden, EEU
Carol Hakstian, EEU (via phone)

Non-Voting Members
John Spencer, SPEED
Walter Poor, DPS
Ann Margolis, DPS

Staff
Deena Frankel, VELCO
Kimberly Pritchard, VELCO

Guests
Eric Johnson, ISO-NE
Eric Wilkinson, ISO-NE