

**VELCO Operating Committee
FINAL MINUTES**

April 18, 2013, 11 a.m. – 3 p.m.
GMP Montpelier

Participating members: Ellen Burt (Stowe Electric), Ken Couture (Green Mountain Power), Tom Dunn (VELCO), Ken Mason (Lyndonville Electric), David Mullett (VPPSA), Ken Nolan (Burlington Electric Department), Bill Powell by phone (Washington Electric Cooperative), Paul Renaud (VELCO), Jeff Wright (Vermont Electric Cooperative).

Other participants: Chris Dutton (VELCO), Deena Frankel (VELCO), Mike Loucy (VELCO), Dan Nelson (VELCO), Thad Omand by phone (VELCO), Allen Stamp by phone (VELCO).

Next meeting

May 16, 2013
11 a.m. – 3 p.m.

GMP Montpelier

Convening

Tom Dunn called the meeting to order at 11:04.

Safety topic

At the suggestion of Mr. Wright, the group discussed the recent NERC alert concerning the PG&E transformer that was shot and communication lines cut at a California substation, resulting in the need for a conservation request by California ISO. The incident serves as a reminder of the importance of field personnel to be vigilant and careful.

Minutes of March meeting

Mr. Mason moved approval. Mr. Wright seconded and the minutes were approved without objection.

Telecommunications

Mr. Loucy presented the telecommunications report slides with phone participation by Mr. Stamp.

- Telecom Operating Committee
 - Mr. Loucy reported that Mr. Nelson held a telecom subcommittee meeting at GMP in early April and future meetings will initially be held monthly.
- Fiber project update
 - VELCO telecom is presenting Emergency Fiber Management Awareness training around the state. Some training has been presented and dates are currently being coordinated for future training with WEC and GMP.
 - The VELCO telecom team has received make-ready quotes from GMP North and Stowe. Conversations are ongoing with VEC and GMP. VELCO is working to reduce inventory as far as possible to prior to the end of the year.
 - The distribution routes to complete the fiber tails are undergoing planning now for 2013 work.
 - Telecom has worked with engineering during past month regarding how to establish connectivity with the sites, and cost estimates will be provided to the utilities in the next several weeks.
 - The team is currently addressing how to complete underground work in Johnson that is essential to completing connectivity in Morrisville. Mr. Wright explained that Johnson recently completed downtown beautification work that will have to be disturbed to complete the underground work necessary to complete this project. This accounts for the delay.
 - To date, the fiber has been extended to 4000 feet east of the Morrisville substation, but the team is not sure whether this is far enough to reach Morrisville 6. Mr. Wright stated the opinion that the current distance is sufficient to complete the connectivity.
 - Remote network management services: VELCO is currently utilizing IBM to “watch the network,” i.e., perform network management. VELCO has an internal platform that may be upgraded for use as an internal network management system and the evaluation by VELCO telecom is underway.

- Statewide Radio Project
 - Mr. Loucy reported that the main challenge is now in optimizing the deployment. For which VELCO needs feedback about weak areas to evaluate how the propagation studies match up with the DUs' actual experience. This information is necessary to focus attention on the highest priority areas.
 - Mr. Dunn observed that there is a mix of places where signal isn't as strong as studies suggested and places where there is a need for adjustment and tuning of VELCO equipment.
 - Mr. Loucy said the Telecom Operating Committee may be a good place to use as the feedback forum. In his experience, it is customary that this fine-tuning is always needed after deploying a new network and is referred to as network performance optimization. Geography affects propagation, making actual results vary from propagation studies. In addition, the leaves coming out will increase signal attenuation.
 - Mr. Wright said that VEC working with VELCO on a place where a filler may be needed.
 - Mr. Renaud said that it is important for feedback to come through trouble tickets to be sure we capture all the feedback.
 - Mr. Couture reported that GMP South recently went live and found that implementation was a little bumpy initially. Staff were underwhelmed by the coverage they found. GMP North's previous system provided coverage close to 100% while this network is only promised 90%, so there was already a lower expectation, in addition to needs for fine-tuning. GMP is planning to post a high resolution map on which field personnel can physically map feedback in relation to the model. There will also be a need for education on the use of the storm channels to address the concern that people will switch over in a big event without adequate capacity. Over time this problem, if unaddressed, will lead field staff to be disgruntled, which could take on a safety dimension. If people switch to calling each other on cell phones because the perceive inadequacy in the radio system, switching will not be as openly visible as it is under old system.
 - Mr. Couture showed a high resolution map marked up to demonstrate that the poorer coverage areas tend to track the roads, which are typically in lower lying areas. If this is the case, the system may have 90% land coverage, but not 90% feeder coverage. The GMP team is getting together for a session to gather feedback to pass along to VELCO.
 - Ms. Burt said that Stowe was encouraged by VELCO to join the system and now is finding that neither Waterbury nor Stowe has adequate coverage. She asked for clarification of whether the issue is the need for a new/additional tower. Mr. Loucy replied that there is a tower available, but the owner wants to put VELCO on a lower position than is ideal. Mr. Nelson will test to determine whether coverage will be adequate if our equipment is placed at the lower position.
 - Mr. Couture observed that we are finding ourselves in a reactive mode for the lack of a more deliberate communications plan for the roll-out of the system to set realistic staff expectation that things would not be perfect upon deployment.
 - Mr. Mullett asked if there has there been feedback from VPPSA members yet.
 - Mr. Mason said that the problems in a new system are not evident until there is a major storm event.
 - Mr. Wright said that, for VEC, the new system is similar in robustness to the old. VEC is about to go live on new system and turn off the old.

Interconnecting wind

- Mr. Dunn provided context for the presentation, stating that it was raised in relation to the Seneca Wind Project and its relationship with Lyndonville Electric Department (LED).
- Mr. Mason said that opponents of the project were interested in knowing about the discussion at this meeting. Mr. Couture asked what decisions the opponents were expecting to come out of this meeting. Mr. Mason replied that they were interested in understanding the relationship of additional wind generation to the condition of VELCO's system in the area. Mr. Wright asked what makes this an operating committee agenda item. Mr. Couture observed that there may be inaccurate expectations of what the VELCO Operating Committee's (OC) role.
- Mr. Dunn noted that the issue raises many questions, but that VELCO may be limited by FERC and ISO-NE requirements in its ability to talk about specific projects.

- Mr. Nolan observed that the OC is a place where the utilities can try to reach consensus, to the degree possible, and to understand the concerns raised by issues and decide how to deal with them.
- Mr. Wright noted that project studies for Seneca are not done yet. VEC understands that the interconnection process involves a long study effort that is not done yet in this instance.
- Mr. Dunn reviewed the slides presentation, “Interconnecting Wind Generation in Northern Vermont,” in the meeting package.
- In response to a discussion about questions from the public to LED regarding whether GMP was fined in connection with Kingdom Community Wind (KCW), no fines were imposed; rather KCW was curtailed due to absence of a synchronous condenser at the time of startup. Mr. Wright noted that the payments by GMP were the result of not having the synchronous condenser in place at the time operations commenced and these were not fines. Mr. Dunn concurred that, until the synchronous condenser is operational, GMP is not in compliance with the Minimum Interconnection Standards (MIS). In contrast, Sheffield Wind has completed interconnection requirements, but that does not mean they will not be curtailed for operational reasons.
- Mr. Mason observed that KCW was the most recent generator to come online and is being drastically curtailed. Sheffield is seeing some curtailments from being in an area where the system is weak. Georgia Mountain is on a stronger system and is seeing almost no curtailments. The ability to run depends on what part of the system a generator is on and whether the generator has installed all the equipment required.
- Mr. Dunn emphasized that at no time do these projects pose a threat to system reliability. Projects are on an equal footing once they have completed all the requirements of the MIS. Mr. Johnson agreed completion of MIS requirements puts the generators on equal footing, but there are things the generators can do that influence curtailments, such as participation in the market and bidding strategy. He explained that litigation at FERC had shaped the process for determining what would be needed to operate without curtailment.
- Mr. Dutton observed that generators that want to ensure unconstrained operation must pay for more elaborate studies and then, potentially, for system upgrades that allow unconstrained access. This typically does not happen because of the associated expense.
- Mr. Johnson explained that the American Wind Energy Association and FERC had negotiated agreement to relieve wind generators of certain voltage-control requirements that apply to other generators because of inconsistency of the requirements with the technology. Even with MIS, wind does not have the same characteristics as other types of generation.
- Mr. Mason asked how the ISO-NE process interacts with Public Service Board Rule 5.500 concerning Interconnection Rules for Proposed Electric Generation Resources. Mr. Dunn displayed the rule to the group, which begins with the applicability statement that the rule does not apply to generation resources within Vermont that are “lawfully subject of ISO-NE interconnection rules...”
- Mr. Mullet asked if 5 MW is a bright-line test for whether a project is subject to ISO-NE interconnection rules. Mr. Renaud replied that it depends on whether or not a generator is selling into the regional wholesale market.
- Mr. Dunn said that the northern area is a “skinny system,” with limitations on the amount of power that can get in and out. The system is reliable, but reliability is maintained by curtailing generators.
- Mr. Mason asked if it is possible to determine the actual physical limitations on what the system can carry. Mr. Dunn replied that different limits—voltage, thermal—have to be modeled based on contingencies to set the operational guidelines. Most of the limits in the area are voltage-related, not thermal.
- Mr. Mason thanked Mr. Johnson for attending the recent public meeting in Lyndonville, and asked how a DU can get someone from ISO to provide info, answer questions and make the regional process more transparent. Mr. Dunn said that Mr. Johnson can put LED in touch with Eric Wilkenson at ISO-NE. Mr. Dutton offered that VELCO’s Frank Ettori could also be helpful in establishing a Lyndonville-ISO-NE connection. He pointed out that the recent VELCO letter to LED about Seneca was possible because ISO-NE made study information available, whereas there are often significant restrictions related to confidentiality.

Power accounting

- Mr. Omand presented the power accounting update contained in the meeting package. He explained that VELCO was working with ISO-NE to review the daily estimated loss calculation that may impact the DUs similarly to the recent modification at Highgate. Mr. Couture indicated he will work with Mr. Mason before the next operating committee meeting to reach an agreement on compensation for losses since the inception of the Lyndonville substation. He explained the problem with two new SPEED units that are coming onto a subtransmission line that has no load. It will be necessary to determine how to allocate the losses from these projects. In other places, losses are offsetting the load, but in this case there isn't any load to offset, requiring a special determination.
- Mr. Nolan clarified that GMP, not BED, is installing and will own the McNeil metering. BED and GMP are working out the details now.

Strategic plan

- Mr. Renaud presented the strategic planning slides in the meeting package. He noted that VELCO has been doing strategic planning annually for several years, including a leadership team retreat each summer. This year the team is enhancing the process by seeking more input from stakeholders and VELCO associates. One of the focuses is to get to a 2-year budget cycle. Mr. Renaud asked for input on the four questions in the strategic planning presentation.
- Mr. Couture raised a topic in the form of the question, what does it mean to our business model if the grid-connected load drops in half? Mr. Dutton observed that this trend has picked up speed rapidly in the past year, citing the recent analysis by VELCO planning in connection with the Central Vermont NTA analysis. Mr. Dunn noted that another driver of the trend is increasing transmission cost at the same time as dropping loads, spreading the fixed costs over a smaller base. These trends will demand advocacy for cost control at the regional level. The Central Vermont deficiency is a good test case for a new approach because the gap is small and constant. We will need to rethink whether you build transmission to resolve a constant gap of 10 MW.
- Mr. Nolan observed that there has been little talk so far about the nexus between transmission and greenhouse gas reduction. The IBM Smart Cities team recommendations talk about moving to more reliance on electricity for heating and transportation. Mr. Dunn acknowledged VELCO's need to understand a trend like this to plan for the viability of the approach.
- Mr. Nolan addressed the language in the 2013 strategic plan related to "merger opportunities." He cited negative budgetary impacts on small utilities from the efficiency review associated with the WAAS study. He expressed his concern that savings to the large companies in that case meant increased costs for the small companies. He asked that VELCO increase its sensitivity to addressing efficiencies for all DUs, not for "GMP and the other DUs," language that suggests an inherent disadvantage. Mr. Nolan asked what had happened to the discussion from the March OC meeting about expanding the discussion of efficiencies to all DUs. Mr. Dunn replied that only piece vegetation management had been addressed thus far. VELCO will bring an update to every other OC meeting. The standard VELCO will use in evaluating opportunities is whether we are truly reducing customer costs across the board; not for any particular company.
- Mr. Wright raised the issue of severe weather events, and suggested the need to prepare for major transmission disaster, such as the loss of 400 miles of transmission line in an ice storm. Mr. Dunn said VELCO has taken a number of steps in this regard: adopted the federal model for emergency event management; conducting condition assessment of facilities; and looking closely at inventory for rebuilding in event of emergency. Mr. Dunn pointed out the relevance of IBM's Deep Thunder weather prediction system, which Vermont may utilize in the future, to dealing with more unpredictable and extreme weather.

Other business

- Mr. Dunn described the continuing interest of Anbaric Transmission, an independent transmission developer, in developing the Grand Isle Intertie to connect New England and New York across the PV-20

corridor with a 400 MW capacity. The focus of the project would be to take advantage of the price differential between the two regions. Demand in southern New England, such as the recent Massachusetts RFP for new renewable power, is a major driver. Responses to the MA RFP are due in May, and Anbaric may respond. This project would involve a 230 kV connection from Plattsburgh to a connection near IBM in Chittenden County. For this project to receive positive regulatory action in Vermont, it will likely need significant participation on the part of VT DUs. VELCO will evaluate the project costs to advise the DUs on whether the costs are reasonable. Right now, project is mostly underground, transitioning to buried cable. Whether this makes sense financially we are not in a position to judge except to evaluate the cost estimates. Anbaric has met with all the DUs.

- Mr. Nolan said that they have heard conflicting messages from Anbaric and the project developer. So far the project does not sound materially different from what was proposed for Champlain Wind Link five years ago. Mr. Dutton observed that the difference is MA RFP, but that it is not relevant to Vermont. Mr. Dunn pointed out that the infrastructure was previously proposed to be overhead and is now underground.
- Ms. Burt said there is little interest among the DUs. If VELCO analysis is predicated on interest by the DUs, VELCO should not spend a lot of time on the analysis. Mr. Dutton said FERC has been signaling that an economic project with interest at the receiving end may not be able to be impeded by the local authority. Anbaric may not go away just because of lack of VT interest, but path will be more challenging without Vermont interest/support.
- Mr. Nolan asked VELCO's position on use of its right-of-way. Mr. Dutton said it is a delicate balancing act.

Adjournment

Mr. Mason moved and Ms. Burt seconded adjournment at 2:04 p.m. The motion was agreed without dissent.