

**VELCO Operating Committee 11 a.m.
MINUTES DRAFT**

October 18, 2012, 11 a.m. – 3 p.m.
GMP Colchester Office

Participating members: Ellen Burt (Town of Stowe Electric), Ken Couture (Green Mountain Power), Tom Dunn (VELCO), Ken Nolan (Burlington Electric Department), Kevin Perry (Vermont Electric Cooperative), Bill Powell by phone (Washington Electric Cooperative), Paul Renaud (VELCO), and Jeff Wright (Vermont Electric Cooperative)

Other participants: Bob Amelang by phone (GMP), Deena Frankel (VELCO), Kerrick Johnson (VELCO), Mike Loucy (VELCO), Craig Myotte (Morrisville Water & Light), Dan Nelson (VELCO), Thad Omand (VELCO), Karen O'Neill (VELCO), Kim Pritchard (VELCO), Allen Stamp (VELCO)

<p>Next meeting</p> <p>November 15, 2012 11 a.m. – 3 p.m.</p> <p>At VELCO Office Rutland</p>

Meeting Opening

- Mr. Dunn opened the meeting at approximately 11:10 am.

Safety Topic

- Mr. Dunn offered being prepared for black ice and changing road conditions as suggestions for winter safety.
- Mr. Wright mentioned that vandalism around substations is occurring and suggested reminding crews that they should not assume the station is safe in good working order.
- Mr. Dunn suggested utilities consider deploying automatic lighting and, where possible, video cameras for both vandalism and theft prevention and to improve security.

Minutes Approval

- Ms. Burt moved and Mr. Wright seconded approval of the minutes of the September 17, 2012, which were approved without dissent.

Telecommunications

Telecom Subcommittee Update:

- Mr. Nelson reported on two ongoing areas of focus: development of a triage procedure and routine business process. The telecommunications subcommittee would like to improve real time visibility of the bulk and distribution electrical systems. VELCO will evaluate integrating mapping systems over the next several months.
- Mr. Nelson said it is likely to take a year or so to develop an integrated mapping system primarily due to the differing levels of software capabilities across the Vermont utilities.
- Mr. Nelson also stated that the VELCO telecommunications team is evaluating a third-party network management system to afford the team time to enhance its knowledge of the new fiber network and network performance.

Fiber Project Update:

- Mr. Stamp presented the Fiber Project update slides. He discussed GMP's current position regarding fiber ownership that if a third party enters the fiber it should be moved to commercial space.
- Mr. Couture asked about Mr. Stamp's reference to 17 miles of connections to substations that are under evaluation. Mr. Stamp said several substations are off the third-party build routes and VELCO is determining the level of effort necessary to connect these substations.
- Mr. Couture asked how many miles the third parties will be able to access over VELCO's network. Mr. Loucy discussed the valuation methodology between VELCO and the third parties. Essentially a value was assigned to a build route and the companies exchanged equal value mileage.
- Mr. Loucy discussed VELCO continued work with the remaining Vermont utilities to help them better understand the fiber updates and cost structure.
- Mr. Wright asked if VELCO was funding metering at Vermont utilities. Mr. Loucy explained that VELCO's treatment across all Vermont utilities is consistent and does not include funding metering at substations under VELCO's fiber project.
- Mr. Loucy discussed the "Emergency Fiber Training – A Lineperson's Perspective" awareness presentation planned for the next VPPSA safety meeting and that VELCO would like to offer this to the rest of the utilities. Mr. Wright expressed interest in having VELCO come to VEC and present same.
- Mr. Nelson mentioned that VELCO's telecommunications teams will be receiving training over the next several weeks to better prepare for putting traffic over the new network.
- Mr. Wright asked about the splicing resources and if they are sufficient. Mr. Stamp reported that VELCO has up to three splicing crews, each of which must be accompanied by a VELCO representative; especially at substations. VELCO has a limited number of available, knowledgeable telecommunication resources, so adding more splicing crews isn't realistic.
- Mr. Wright stated that VEC has significant interest is getting its 2012 sites spliced. Mr. Loucy acknowledged that VELCO has the list of sites and provided it to VEC on October 17. The next step is to coordinate how to get VEC traffic on and off the VELCO network.

Statewide Radio Project (SRP)

- Mr. Nelson presented the SRP materials provided to the Operating Committee (OC), reporting that 100% of sites are permitted and all but one site is commissioned.
- Mr. Couture asked about coverage in Waterbury. Mr. Nelson said the team is evaluating "fill in" sites to bolster the downtown Waterbury area. Mr. Dunn asked what kind of schedule is anticipated. Mr. Nelson said VELCO is aggressively pursuing a site that could possibly be available by 1Q2013.
- Mr. Couture asked how the network will work in areas where several utilities are collocated and may need the SRP at the same time. Mr. Nelson said VELCO has used industry standard tools to develop the bandwidth usage assumptions that underlie the design. Once the SRP is in full use by the utilities VELCO will monitor congestion and evaluate the need for enhancements. Mr. Nelson further explained that the SRP manages the calls statistically and the system is designed to know how to find the radios that are on the network. Essentially the talk groups can be broken down to smaller groups which allows for more efficient use of bandwidth. Mr. Couture asked about delays in coordinating with Canada or Act 250. Mr. Nelson mentioned that the 220 MHz spectrum does not require coordination with Industry Canada and moving antennas around is allowed expedited, 30-day review under Act 250.
- Mr. Nelson further explained that the system has an emergency feature to override congested channels in the event a crew needs to get a call through. VELCO would need to secure more spectrum to increase bandwidth, which may be a big challenge as spectrum is not readily available and is expensive. In the interim VELCO has

leased spectrum from National Rural Telecommunications Cooperative (NRTC) to backup the 1 MHz of spectrum VELCO currently owns

VELCO and VT Transco Transmission Administration Manual (VTAM)

- Ms. O’Neill presented the VTAM slides covering background, purpose, and governance of the VTAM.
- Mr. Couture asked whether any changes have been made to the VTAM in light of the GMP-CVPS merger. Ms. O’Neill stated that no changes have yet been made, but that proposals for changes would originate with the VELCO OC. The process would be for GMP to propose to the OC changes to comply with merger conditions. If the OC accepts the proposed changes, VELCO would then take the proposal to its Board of Directors for review and consideration. Once approved by VELCO’s Board, the proposed modifications to the VTAM would be implemented.
- Ms. Burt asked if GMP has advanced any plans to incorporate representatives of distribution utilities not currently represented into the OC. Mr. Couture replied that he was not aware of any proposals but would take the action item to follow up with Mr. Rendall and report back to the OC.
- Ms. O’Neill stated that the majority of the OC voting members must be present to take a vote and that the group should look closely at the processes established in the VTAM.

Critical Energy Infrastructure Information (CEII) and Federal Energy Regulatory Commission (FERC) Standards of Conduct

- Ms. Pritchard presented the materials provided in the OC meeting package. She explained VELCO is subject to stringent restrictions on the release of information about its electrical system and that this information is exempt from the Freedom of Information Act (FOIA).
- Ms. Pritchard distributed a Non-Disclosure Agreement (NDA) to the OC members present for execution. This document allows CEII information to be shared with OC members and presented at OC meetings.
- Ms. Pritchard mentioned that if anyone had a need to publically share any VELCO materials that contain CEII they could request VELCO to evaluate redacting the protected information, thereby permitting public disclosure of the redacted materials. Mr. Wright asked how to obtain a VELCO map that would be acceptable to use. Ms. Pritchard said VELCO’s GIS department has and can generate non-CEII maps for display use. Ms. Burt asked to have a non-CEII map distributed to the utilities. Ms. Pritchard will work to get both a hard copy and electronic versions of an acceptable VELCO map.
- Ms. Pritchard mentioned that sharing of information related to the “black start” program would be considered CEII, even to user groups.
- Ms. O’Neill expressed VELCO’s need to comply and that anyone who uses/obtains VELCO CEII needs to be aware of the requirements.
- Mr. Loucy asked how the OC meetings should be handled going forward for non-OC members who attend a meeting where CEII will be disclosed. Ms. O’Neill replied that everyone who has not executed a NDA would either need to execute one or leave the meeting while the CEII is displayed.
- Mr. Couture asked if any of the utilities mark any of their information. Ms. Pritchard mentioned that typically the CEII only applies to 100KV and higher, but that certain information from utilities may expose vulnerabilities of VELCO’s system.
- Ms. Pritchard covered the FERC standards of conduct.
- Mr. Nolan expressed that small utilities are exempt from the restrictions. Ms. O’Neill mentioned that, in accordance with the standards of conduct, VELCO must avoid a situation in which information is passed on by any utility to “marketing” type functions that could be used to advantage that utility when purchasing power

contracts. Mr. Nolan asked what the utilities could be doing to ensure compliance when they have access to transmission information. Ms. O'Neill replied that VELCO can share its own CEII with utility representatives who have signed an NDA, but cannot share ISO-NE's CEII. Further, personnel engaged in the day-to-day marketing functions cannot have access to the information; however a transmission function employee can have access.

- Ms. O'Neill will report back to the OC regarding what the members can do to remain compliant and have access to the transmission information.

Power Accounting

- Mr. Omand presented the materials provided to the OC for five items.
- GMP alternative transmission billings
 - Mr. Omand informed the committee that in 2005 VELCO commissioned its Highgate substation. During the substation planning process a decision was made to connect a portion of the block load, served directly from Canada, to the Highgate substation rather than serve it from the Converter north bus. The decision was based on the need to invest approximately \$5 million to install a synchrophaser condenser (SC), with estimated annual carrying cost of \$1 million for 30 years to continue serving the load from Canada
 - Mr. Omand further explained the Vermont utilities agreed to compensate VEC and its transmission customers for the increased cost of meeting its load by delivering power through the Converter or Phase II rather than straight from Canada. The annual alternative transmission cost has averaged approximately \$500 thousand and will terminate in 2015 rather than 2035 if the synchrophaser had been installed. The Jay substation has resulted in a further decrease in block load capabilities, increasing GMP's alternative transmission costs. Per the agreement, GMP will begin billing VELCO for these costs in October and continue through the end of the block load contracts, October 31, 2015.
- HQ contract schedule C4(b) IGAP credit
 - Mr. Omand stated VELCO has historically provided IGAP credit for Hydro Quebec (HQ) contract schedules B, C1, C2, C3, and C4(a) delivered on the block load. It was determined in 2000 that schedule C4(b) would not receive IGAP credit because it was expected, based on area loads and other contract schedules, to be delivered over Phase II.
 - Mr. Omand explained that on November 1, 2012, schedules C1 and C2 will expire providing an opportunity for C4(b) to be scheduled on the block load. As a result VEC has requested that C4(b) received IGAP credit. VELCO performed an IGAP analysis of the principles agreed to by the OC and has confirmed that schedule C4(b) should receive IGAP credit.
- Kingdom Community Wind (KWC) Losses
 - Mr. Omand informed the OC that GMP, VEC and VELCO have reached an agreement in principle on metering and allocating the losses created by KCW generation.
 - Mr. Omand stated that the agreement is unique and incorporates the exponential nature of losses resulting from an increase in power flow across the system. This is an enhancement over historical loss calculations that simply allocated a flat percentage correction factor.
 - Mr. Omand further explained the losses will be allocated when KCW generation exceeds the local load. The formula calculates the local load as a percentage of the net generation then squares this percentage and subtracts it from one to determine the percent of losses that should be allocated to the generation. The losses are calculated by subtracting the compensated generation from the uncompensated generation programmed as two channels in the meter. The

losses are then multiplied by the generation percent to determine the amount of power to be allocated to GMP.

- Mr. Perry pointed out that Mr. Amelang has included in his calculations the impedance losses across the line as one parameter in the determination of excess generation losses.
- **KCW IGAP**
 - Mr. Omand reported that the OC had previously agreed to 16 load zones in Vermont. With the addition of the Jay substation to load zone A, adding the Lowell load, and KCW generation, VELCO had to evaluate the historical load impacts.
 - Mr. Omand explained to accomplish this; the first step was to identify the historical peak load in the zone. The peak was then compared to the generation in the zone that currently received IGAP credit including HQ contract schedule C4(b). The difference between these numbers is 13 MW which KCW would qualify to receive as IGAP credit.
 - Mr. Perry mentioned the block load contracts receiving IGAP in the analysis are higher than he expected and data needs further review. Mr. Omand stated he would review the data in the analysis and report back to the OC.
 - Mr. Dunn asked if the timing of a unit impacts the IGAP availability. Mr. Omand stated that timing is not a factor in the credit allocation as “historical peak” is the amount available for IGAP, even if loads have fallen in recent years.
 - Mr. Perry mentioned the KCW PPA provided VEC with some IGAP credit. Mr. Perry further stated that the agreement was structured so the relationship resembles ownership while minimizing financial risks associated with development costs.
 - Mr. Nolan suggested the group review how the allocations will work regarding PPA as this does not match historical practice where IGAP is based on ownership, not entitlement. If IGAP is provided for entitlement this would have impacts on Sheffield and Georgia Mountain. Mr. Omand stated he would take the action item to review this topic and report back to the OC.
- **GMP South Exports to VELCO System**
 - Mr. Omand discussed that while researching a recent issue, it was discovered GMP South was incorporating the meter-in channels from VELCO’s system but not the meter-out channels resulting in higher reported load. The preliminary analysis of this load reporting error over the past 6 years yielded the need for a true up of approximately \$12,000. The schedule is to get the analysis approved and the true-up completed up by December 2012.
- **Combined GMP/CVPS Load Calculation**
 - Mr. Omand reported VELCO has completed its merging of the GMP and CVPS scheduling, metering, and settlement processes. The next step is to complete the billing process consolidation at the end of October. An audit of the merged calculation has been scheduled and will be reviewed at the next metering forum on November 9.
 - Mr. Couture asked if a change-control process for metering has been established. Mr. Omand stated that VELCO is utilizing a change to minimize inaccuracies and will provide it to other utilities to complete when they complete a meter change.

Other Business

- Mr. Renaud reported that VELCO received three OSHA citations regarding the Jay incident.
 - “General Duty Clause” for not protecting workers for overhead hazards concerning the procedures followed to dismantle the structure.
 - “Failure to determine existing conditions” as part of the job hazards analysis.

- Failure to inspect the condition of the structure prior to climbing and performing the work.
- Mr. Couture asked if VELCO had received any guidance on how these items should have been performed. Mr. Renaud stated we are planning to follow up with OSHA to better understand how VELCO could have improved the safety of the project meeting the goals of OSHA's compliance program.
- Mr. Wright summarized that VEC's citation cited lack of training documentation under General Duty Clause as the primary action.
- Mr. Dunn summarized progress for both Georgia substation cutover and Highgate Converter outage.

November OC Meeting:

- The November OC meeting will be held on Thursday, November 15, 11 a.m. to 3 p.m. at VELCO in Rutland.

Agenda Topics:

- Report of the NTA study group for the Central Vermont deficiency.
- Setting OC schedule for 2013.

Adjournment

- Mr. Couture moved and Mr. Wright seconded adjournment, which was agreed to without objection. The meeting adjourned at approximately 2:15 pm.