

**VELCO Operating Committee (OC)
Final MINUTES**

May 16, 2013, 11 a.m. – 3 p.m.
GMP Montpelier Office

Participating members: Ellen Burt (Stowe Electric Department), Ken Couture (Green Mountain Power), Tom Dunn (VELCO), Ken Mason (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), Mike Loucy (VELCO), Dan Nelson (VELCO), Thad Omand (VELCO), Karen O’Neill (VELCO), Allen Stamp by phone (VELCO).

<p>Next meeting</p> <p>June 20, 2013 11 a.m. – 3 p.m.</p> <p>GMP Montpelier</p>
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Meeting opening

- Mr. Dunn opened the meeting at approximately 11:05 am.

Safety topic

- Mr. Couture reminded everyone to use fresh sunscreen as older products lose their effectiveness. He also suggested waiting several minutes after applying sunscreen before swimming to allow the sunscreen become effective on the skin.

Minutes approval

- Mr. Dunn pointed out the need to redact CEII or otherwise sensitive information that may be captured in the OC minutes before they are posted for public access. The April minutes did not contain such materials
- Mr. Mason moved and Mr. Wright seconded approval of the minutes of April 18, 2013. Mr. Wright indicated that on page 3 no fines were imposed; rather KCW was curtailed due to the absence of a synchronous condenser at the time of start up.
- Ms. Burt suggested wording corrections to the Statewide Radio Project (SRP) section on page 2 within the eighth bullet, specifically that “convinced by GMP” should be revised to “encouraged by VELCO”.
- The minutes were approved unanimously with the changes incorporated.

Telecommunications

- **Telecommunications Operating Committee**
 - Mr. Nelson reported that the Telecommunications Subcommittee (TS) of the OC will meet monthly. Mr. Dunn asked when the Remote Network Management System (RNMS) will be operational for the distribution utilities (DUs) to view the network via a web portal or other type of visual presentation. Mr. Nelson responded that electronic access to view the network is under development and is expected to be available within six months. He further explained that the DUs can see the information now, but any interested party must call VELCO for access.
- **Fiber Project update**
 - Mr. Loucy and Mr. Stamp reviewed the fiber project update materials provided to the OC.

- Mr. Couture asked if a process has been developed for a DU to request VELCO to supply fiber and electronics to switches or other devices that are not subtransmission substations. Mr. Loucy responded that no process has yet been developed, and he proposed a process for DUs to request such connectivity from VELCO. VELCO's Operations team could then evaluate the benefit to bulk transmission system reliability and, if sufficient benefit exists, develop cost estimates and bring the proposal back to the OC for consideration. Mr. Couture stated that this process makes sense to GMP and is consistent with what they have been envisioning.
 - Mr. Nolan discussed the need to be consistent with the original scope of VELCO's fiber project whereby the fiber was to be installed to transmission and subtransmission substations only. Any future proposals to expand this scope should require specific justification for how they directly benefit the bulk transmission system. Mr. Loucy said this is consistent with previous OC discussions acknowledging that additions to the fiber network will be vetted with the OC.
- **Statewide Radio Project (SRP) update**
 - Mr. Nelson presented the SRP materials provided to the OC.
 - Mr. Wright said VEC may install new fiber between Island Pond and Canaan that would be available to serve SRP locations in the area. Mr. Nelson responded that he will take this information into consideration and work directly with the VEC team.
 - Ms. Burt asked which substations VELCO would be interested in using to improve coverage in Stowe's Route 108 area. Mr. Nelson said he would follow up with Ms. Burt as he only had the coordinates at this time.
 - Mr. Nolan asked if these would be additional sites. Mr. Nelson responded that providing the coverage will likely require additional sites. Mr. Nolan reminded the group that, much like the fiber discussion, any scope changes to the SRP should also be brought before the OC for consideration and, specifically, that VELCO must provide justification ensuring the additional sites are benefitting bulk transmission reliability versus specific DUs. The goal is to make sure DUs are not cross subsidizing work that benefits individual utilities. Mr. Nelson responded that VELCO will bring all proposed changes affecting the scope to the OC for consideration. Mr. Wright and Mr. Couture agreed with Mr. Nolan's comments that the requests should be brought before the OC prior to moving forward with changes in scope.
 - Mr. Dunn stated that the SRP is unique and that the current radio systems had to be upgraded as a result of changes in federal regulations. As VELCO has facilities across the state, one extended benefit of the SRP is that DUs may also realize benefit from the expanded coverage. Mr. Nelson added that obtaining coverage information from DUs will benefit VELCO by improving its understanding of the SRP's performance.
 - In response to a question from Mr. Dunn, Mr. Nelson stated that the project is within its original budget.
 - Mr. Loucy offered that the entire wireless industry faces the challenge of controlling radio frequency (RF) emissions at license boundaries and it is common for operators to work with adjacent license holders to allow for RF "spill over."
 - Mr. Wright asked how the data was gathered for the current coverage mapping. Mr. Nelson responded that VELCO uses drive test data to tune modeling, which improves the sensitivity and therefore accuracy of the mapping. Mr. Wright added that upon review of the mapping, it appears to be very accurate based upon reports of VEC personnel.

- Mr. Dutton asked if areas on the map that indicate no existing coverage will decrease over time. Mr. Nelson responded that, with the addition of the sites currently in development and continued network performance tweaks, the areas with no coverage will decrease but 100% coverage is not a practical expectation.
- Mr. Nelson agreed to send out an updated map to OC members.
- Mr. Loucy asked if BED would benefit from using the SRP to communicate with DUs when they are performing after-hours dispatch services. Mr. Nolan said that BED will not directly participate in the SRP, but will use radios provided by DUs for whom they offer dispatch services.

Operating Committee Membership

- Ms. O'Neill presented the materials provided to the OC.
- Ms. O'Neill discussed the process to obtain revisions to the Vermont Transco Transmission Administration Manual (V-TAM), which begins with posting the proposed revisions for 30 days to provide the DUs an opportunity to review and comment. VELCO would consider these comments and incorporate them into the process and the document and bring the final proposed V-TAM revision back to the OC for consideration and approval.
- Mr. Nolan asked whether in Section 2.1.10 covering proxies Vermont Public Power Supply Authority (VPPSA) should have one seat or whether each member DU should have an independent vote to avoid the potential for double voting if a VPPSA member wants to participate independently yet VPPSA still maintains its vote. Ms. O'Neill responded that the members can attend the OC meetings, but the current proposal is that VPPSA members will maintain one collective vote.
- Mr. Nolan asked if the quorum language should be modified as it is tied to majority of voting members. Ms. O'Neill responded that the utility needs to appoint an active member and participate on a regular basis to be considered a voting member. Ms. Burt asked how this should be monitored. Ms. O'Neill responded that the V-TAM does not discuss a formal monitoring practice but the OC could propose a method.
- Mr. Mason suggested attendance requirements be defined to ensure consistency across voting members and avoid ambiguity. Ms. O'Neill responded that Section 2.150 states voting members must attend 75% of the meetings in order to remain on the OC as a voting member. Mr. Mason asked if Ms. O'Neill could forward a summary of the requirements for him to discuss at the next VPPSA Board of Directors meeting.

System Assessment Project Update

- Mr. Dunn presented the materials provided to the OC.
- Mr. Couture asked how much of the project could VELCO treat as capital versus expense. Mr. Dunn responded that approximately 75% was capitalized.

Power Accounting Update

- Mr. Omand presented the materials provided to the OC.
- Mr. Omand said VELCO is working with ISO-NE to resolve issues with the hourly estimated loss process, which, based on VELCO's analysis, should provide significant annual savings to Vermont. ISO-NE is reviewing VELCO's analysis. ISO-NE and VELCO have discussed transitioning from an ISO-estimated loss calculation to actual metered losses to minimize future errors. This process will require additional meters to divide the state into load pockets.

- Mr. Omand updated the group regarding loss allocation for the Sheldon Springs and Coventry solar SPEED projects. The forum agreed SPEED program does not allow allocation of losses to the generator and consequently the losses will be allocated to the VT DUs. The forum is evaluating methods for calculating and allocating the loss. Mr. Couture asked Mr. Powell if Washington Electric Cooperative (WEC) had any updates regarding this topic. Mr. Powell responded that WEC is planning to file its open access tariff shortly.
- Mr. Omand requested assistance in resolving interconnection metering points that are read via SCADA. The metering forum participants are unable to obtain support to convert these points to remote read via MV90. The specific points involved are the interconnections between GMP and BED in the McNeil substation and between GMP and VEC at the Sheldon substation. Mr. Couture will speak with GMP's metering group to push for resolution and report back to VELCO. Mr. Nolan will also review within BED's organization. Mr. Wright indicated VEC is in the process of implementing MV90 in the near future and will evaluate implementing this interconnection point as one of the first meters.
- Mr. Couture asked if a process could be developed within the Metering Forum to provide checks and balances to minimize compounding errors. Mr. Omand responded that many processes are in place to identify anomalies, including full quarterly audits, hourly loss analysis, and unmetered load checks. Anomalies are discoverable through different methods including hourly audits and improvements to the specific challenges already discussed (i.e., multiple DUs at metering locations) will reduce the anomalies. Additionally improved automation throughout the metering system will improve accuracy. Mr. Couture asked if a communications plan to share proposed meter changes, modifications or revisions would further minimize errors. Mr. Omand agreed and will coordinate a meeting with Mr. Couture and GMP's metering department to discuss and implement a process.

Other business

- Mr. Nolan asked if VELCO knows whether any other billings are forthcoming for the Highgate project. Mr. Renaud agreed to check the status and report what he learns to the Highgate Joint Owners (HJO) at the May 20 meeting.
- Mr. Nolan requested that when future Metering Forum agenda items require direct input from DU representatives, early communications occur to allow for sufficient preparation time. Mr. Omand responded that, in the future, he will communicate earlier in the development process.
- Mr. Mason reported that Mr. Dutton and Mr. Dunn came to a recent VPPSA Board of Directors meeting and that the VPPSA Board appreciated their attendance as they were able to provide first hand response to questions regarding proposed generation sites and potential impacts on bulk transmission reliability in Vermont.
- Mr. Dunn discussed that the synchronous condensers will provide some operations benefit but the greater northern Vermont area will still not have unconstrained access to transmission and each generator will have some curtailments depending upon market rules. Mr. Renaud further explained that the process takes into account such parameters as price and impact by individual generators. Mr. Dutton discussed that increasing the number of synchronous condensers will likely drive up interconnection costs potentially creating an unfavorable business case scenario.
- Mr. Dunn discussed the recent meeting with NYPA regarding the underwater cables between Vermont and New York. VELCO's position is that the proposed replacement cables should have a 230 KV rating to provide for potential future capacity needs given their lifespan exceeding 50 years. He stated that NYPA is reviewing this proposal but they likely are in agreement with this strategy. Ms. Burt asked if there any

estimates of the cost to replace the cables. Mr. Dunn responded that the high level estimate is \$37M of which Vermont's portion would be 50% and which would be treated as pool transmission facilities (PTF).

Proposed agenda topics

- Policy regarding the scope for future fiber requirements by DUs— Mr. Nelson
- Highgate project billing status update— Mr. Dunn

Adjournment

- Mr. Couture moved and Mr. Wright seconded adjournment, which was agreed to without objection at approximately 1:55 pm.