

**FINAL VELCO Operating Committee
MINUTES**

January 21, 2016, 11 a.m. – 3:00 p.m.
GMP Montpelier Office

Participating members: Frank Etori (VELCO), Ken Couture (Green Mountain Power), Ken Mason (Vermont Public Power Supply Authority), Ken Nolan (Burlington Electric Department), Kevin Perry by phone (Vermont Electric Cooperative), Bill Powell (Washington Electric Cooperative), Chris Root (VELCO).

Other participants: Brian Connaughton (VELCO), Phil Kearney (VELCO), Nicholas Lisai (VELCO), Mike Loucy (VELCO), Dan Nelson by phone (VELCO).

<p>Next Meeting February 18, 2016 11 a.m. to 3 p.m. GMP Montpelier: 1-866-720-4556 Code: 6027065</p>
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Opening

- Mr. Root called the Operating Committee (OC) meeting to order at 11:08 a.m.

Safety topic

- Mr. Kearney discussed two VELCO employees who recently provided assistance in two separate traffic accidents. They stayed with the accident victims until professional emergency responders arrived greatly enhancing their safety. Since then VELCO has upgraded their vehicle emergency kits to include trauma supplies for these types of unfortunate, yet heroic events.
- Mr. Root mentioned that VELCO has adopted a reflective tape and safety lights practice to be placed on its vehicles to improve road safety.

Minutes approval

- Mr. Mason moved, Mr. Couture seconded and the December minutes as posted were approved without objection.

Statewide Radio Project (SRP) update

- Mr. Nelson summarized the 2015 improvements made to the SRP. Eleven sites were added increasing coverage from 93% to 97%+. Additionally, eleven sites received channel upgrades resulting in a 66% capacity increase.
- Mr. Nelson discussed the internal, network wide test conducted in December summarizing that the intent was to identify issues with the network under highly loaded conditions. The result of testing under these conditions showed the network would hold onto calls, even if cancelled, and create an appearance it was at capacity. When this occurred the network would not allow other users to get a channel to place a call. That situation is referred to as jamming. The VELCO team and manufacturer worked through this situation and it was determined that a coding issue was responsible. After implementing a coding configuration change to alleviate the jamming, a network test was conducted that showed the network did not experience this jamming effect and

calls were processing as expected. The next step is for VELCO to conduct another network loading test involving more distribution utility customers to create a broad test scenario. This test will be designed to more rigorously test the configuration change.

- Mr. Nelson provided a high level summary of the 2016 initiatives for the SRP. Of note is the planned relocation of the Jay Peak site to the Kingdom Community Wind (KCW) Lowell facility. As a result of the existing radio frequency signal levels at the Jay Peak site, VELCO's radios must operate at a high power output level to overcome this challenge. Given this site's elevation, location, and high power level the site's signal propagates so far that it's creating interference issues with neighboring SRP sites. This all leads to a SRP performance degradation challenge. Other initiatives including continuing to tune the SRP performance leading to improved reliability and cost reduction. These efforts are focused on replacing leased lines from third party providers with VELCO's fiber or microwave networks.

ISO-New England update

- Mr. Ettori presented the materials provided to the OC summarizing that the presentation is set up with three highlight sections; markets, reliability and ad-hoc discussion points.
- Mr. Ettori summarized the markets changes for Independent System Operators' of New England (ISO-NE) initiative for the creation of zonal demand curves. The new zonal demand curves will determine capacity prices for the zones and may send price signals where capacity is most needed. Mr. Powell asked if the zones will impact Vermont's pricing. Mr. Ettori responded that he doesn't believe Vermont will become its own zone and no capacity price effect should be seen.
- Mr. Ettori explained the ISO-NE plan to enhance the dispatchability of generation within the New England control area. Their intention is to change the bidding process for dispatchable generation to ensure units are price sensitive. The price/quantity pair thought is that all bids must include a price for a qualified amount of generation so units will be curtailed based on their price tolerance.
- Mr. Ettori discussed that due to Order 1000, New England will be promulgating new rules to locally fund transmission projects that would have been historically funded regionally.
- Mr. Root discussed that ISO-NE is also implementing a load shedding criteria that would allow for up to 300MW of load to be shed for planning purposes. He continued that for Vermont this equates to approximately losing one-third of the State's transmission under a N1-1 scenario.
- Mr. Couture asked if end of use and replacement work on Pooled Transmission Facilities (PTF) would be treated under the new rules as well. Mr. Root responded that like for like replacements would be exempt from competition unless the replacement results in an upgrade. He also mentioned that once a PTF project is accepted as a regional benefit, it must be put out to bid; effectively removing a Transmission Owner's (TO) first right of refusal option.
- Mr. Powell asked if we had any indication what may be the first project in New England under the new rules. Mr. Ettori responded that he thought needs in the Southeast Mass/RI area may drive the requirement for a competitive solicitation.

- Mr. Root discussed he does not believe the new rules contain a requirement for the TO to provide access to their rights of way so the successful bidder will need to include these costs within their bid.
- Mr. Couture asked if a TO could offset their bid price by proposing to use a blend of local and regional cost allocations. This may allow the TO to offer a more competitive price and win right to complete the construction within its territory; especially if they believe a more robust solution is beneficial to reliability. Mr. Root responded that this approach is plausible but untested given that the new rules haven't been exercised. He stated VELCO will keep this concept in mind if the situation presents itself.

2015 Highlights

- Mr. Kearney presented the materials provided to the OC summarizing that VELCO's safety statistics for 2015 were very good and likely the result of heightened awareness and training initiatives. Mr. Mason asked if there were any lost time injuries associated with VELCO. Mr. Kearney responded that VELCO had no lost time incidents for any of the approximately 50 field personnel in 2015.
- Mr. Couture offered that GMP has been utilizing an external consultant to provide stretching and strengthening concepts to their employees. This approach has been beneficial and potentially decreasing work related injuries by bringing awareness to and promoting good physical conditioning in preparation for field work.
- Mr. Root mentioned that VELCO's focus in 2016 will be to continue to push this culture out to our contractors and work with them to support their safety program improvements.
- Mr. Root presented the operational performance metrics for 2015 summarizing that VELCO's results were strong. Mr. Couture asked if VELCO had any customer outages in 2015. Mr. Root responded that in Stowe approximately 1,000 customers lost service for eight minutes as a result of a switching incident and in East Fairfax a backhoe line contact incident resulted in approximately 12 customers being impacted for a short period of time
- Mr. Connaughton discussed the capital projects performance metrics summarizing that the project process is providing improved forecasting. This has led to better clarity around progress throughout the year facilitating timely project adjustments towards capital goals. This ultimately helps our owners with their financial commitments by increasing the accuracy of VELCO's budgetary forecasts.

First Quartile Consulting 2015 Transmission Benchmark & NATF Reliability

- Mr. Lisai summarized the quartile benchmarking effort stating that even though VELCO is relatively small in size compared to the benchmarked companies, VELCO's results are very good and improvements have been made over 2014. VELCO's overall performance consistently ranks in the top when compared to other New England transmission companies where similar weather, terrain, and vegetation are experienced.
- Mr. Mason asked if VELCO is required to file its SADI numbers with the State. Mr. Root responded no.

Large Renewables Update

- Mr. Root discussed that some movement by independent development companies continues to be seen in the marketplace but nothing appears to be in the near term. The common industry belief is that ISO-NE will be challenged with completing the necessary impact studies associated with the various potential projects. As such, any study will not likely be completed until the middle of 2016.

Independent Transmission Update

- Mr. Root discussed that VELCO continues to be engaged with the independent transmission developer activities and is trying to stay informed of potential projects and their potential impacts on Vermont. At this time significant, complex planning studies need to be performed prior to any regulatory decisions so no defined timeline can be established. When additional information regarding the study process becomes available a better schedule may be forecasted.

Vermont Weather Analytics

- Mr. Stamp presented the materials provide to the OC summarizing that both VELCO and its owners are seeing or will be able to see benefits in reliability, operations, maintenance, planning and demand management.
- Mr. Stamp discussed that Phase 1 is scheduled to complete towards the end of February, 2016 and VELCO is planning to propose to its Board of Directors to move forward with Phase 2 to further develop the integration of the predictive modeling capabilities (known as R2). This would enhance both VELCO and its owners' ability to predict solar and wind events leading to improved operational benefits, renewables integration, etc. potentially improving peak shaving, storage usage, etc. Mr. Root mentioned that this product is gaining ground with ISO-NE to the point where discussion have begun for ISO-NE to evaluate moving to this platform for their weather prediction requirements.
- Mr. Powell asked what the lightning potential index presented represents. Mr. Stamp responded that in the predictive model it shows as an X and in the observed mapping it shows as a lightning bolt.
- Mr. Stamp discussed that International Business Machines (IBM) has proposed a couple different options to continue to make progress of which VELCO is considering internally. Depending upon VELCO's decision VELCO Board of Director approval may be required.

Other business

- Mr. Root proposed revising the meetings to include an open discussion session to provide an opportunity to bring up group matters or strategies for forthcoming events. This would occur following the meeting adjournment. All agreed with this approach.

Proposed agenda items

- Storage study update
- Statewide Radio Project update (high level, remote)
- Net metering and siting rules update
- DU to consider VELCO performance focus for 2016

Motion to adjourn

- Mr. Mason moved and Mr. Powell seconded adjournment, which was agreed without objection at 2:10 p.m.