

VELCO Operating Committee MINUTES

April 20, 2017, 11 a.m. – 3:00 p.m.

GMP Montpelier Office

Participating members

Ken Couture (Green Mountain Power), Frank Etori (VELCO), James Gibbons (Burlington Electric Department), Dave Kresock (Stowe Village Electric Department), Jason Pew (VELCO), Bill Powell (Washington Electric Cooperative), Chris Root (VELCO), Peter Rossi (Vermont Electric Cooperative), and Ken Tripp (Vermont Electric Cooperative)

Other participants

Brian Connaughton (VELCO), Mary Coombs (VELCO), Mike Loucy (VELCO), and Colin Owyang (VELCO)

Next Meeting

June 15, 2017

11 a.m. to 3 p.m.

GMP Montpelier

1-866-720-4556

Code: 6027065

Opening

Mr. Root called the Operating Committee (OC) meeting to order at 11:01 a.m. The agenda was reviewed and adjusted due to a duplicate topic; Independent Projects Update was removed.

Safety Topic

Mr. Couture provided an overview of the recent incident on the 69 kV line in Searsburg which resulted in a fatality to an employee working to construct a wind generation facility for Avangrid Renewables.

Mr. Couture reviewed the written notification to the Public Service Department required under VT State Statute 30 V.S.A §207.

Mr. Root requested Mr. Pew follow-up with VELCO's response with such an incident.

Mr. Powell requested a copy of the presentation; Mr. Couture will make it available after internal review to verify public content.

Minutes Approval

Mr. Root presented the meeting minutes from March 16, 2017 for approval.

Mr. Powell moved for approval of the minutes, Mr. Couture seconded, and the minutes were approved as presented.

VELCO's Risk Assessment Project

Mr. Root provided a presentation on VELCO's annual Risk Assessment submitted to the VELCO Board of Directors (BOD). Risks included:

- Changing business environment
- Human performance
- Business continuity
- Technology utilization
- Compliance
- Regulatory uncertainty

Corresponding mitigation plans and actions taken to address each of the risks individually were also discussed as presented to the BOD.

NERC Reliability Issues Steering Committee (RISC)

Mr. Root recently attended the 2017 Reliability Leadership Summit. He provided an overview of the Summit and summarized the purpose of RISC which includes the creation and submittal of a report [ERO Reliability Risk Priorities] on the significant risks to electric reliability in North America. Risks identified in last year's report included cyber-security, changing resource mix, Bulk Power System (BPS) planning, resource adequacy, loss of situational awareness, physical securities vulnerabilities, extreme natural events, asset management and maintenance, and Human Performance/skilled workforce.

Mr. Root reported that the next iteration of the report will be finalized by the RISC members and submitted to NERC early in 2018.

An example of Human Performance/skilled workforce as an identified risk was provided. The evolving communication mediums used for protection requires Relay Technicians to understand those mediums with respect to computer networking. Mr. Root reported VELCO is in the early stages of developing training for Relay Technicians on VELCO's networking infrastructure to mitigate this identified risk.

ISO-NE Update

Mr. Etori provided an ISO-NE update via a presentation in the following areas:

- New England Photovoltaic (PV)
 - Increase in PV from 2015 through 2016 was displayed geographically that indicated a large amount of new PV installations (approximately 600 MW_{ac}) in NE with the majority of growth in VT, CT, and MA.
 - 2017 PV Forecast was reviewed and indicated the trend would continue with forecasted NE nameplate capacity approaching 4,400 MW_{ac} by 2026.
- ISO-NE 90/10 Summer Peak Forecast
 - After net PV and efficiencies were factored in ISO-NE, for the first time, has essentially a flat load forecast through 2026 at approximately 29,000 MW.
- Reliability and planning highlights
 - Changes to long range planning studies due to lower load forecast, increased anticipated PV, no generation retirements in the Forward Capacity Market have resulted in ISO-NE pausing their long-term planning studies.
 - Beyond 2 & 3 years out need to be re-evaluated based on the changing

forecasted loads. It was noted that if the year of need is beyond 3 years, all reliability projects would be required to go to competitive bid due to FERC Order 1000.

- New England Transmission Reliability Projects through 2025 were reviewed
 - Since 2002, over \$8B in transmission investments have been realized throughout New England. The forecast for future investments indicates limited investments through 2021. The next largest investment into transmission assets throughout NE will likely be condition improvement projects.
- FERC 206 case reviewed. To have better cost transparency for consumers, a potential proposal in NE to submit Transmission Cost Allocations (TCA) for projects prior to start of major construction has been discussed.

Mr. Etori also provided the following not included in the presentation materials:

- VELCO has just submitted the TCA for Essex STATCOM upgrade.
- Integrating Markets and Public Policy (IMAPP) was discussed. Minimum Offer Price Rule (MOPR), Renewable Technology Resource (RTR), and the Forward Capacity Auction (FCA) will likely all be affected. Further impact may result for generators considering retirement may retire sooner than anticipated. As IMAPP evolves, Mr. Etori will report further.

ISO-NE Metering Requirements

Mr. Etori provided an overview of ISO-NE OP18's metering requirement to have MWH metering on tie-lines between TOs and MPs. Specifically, a tie-line in Burlington, VT near the McNeil 34.5 kV bus was discussed.

This location has no distinct revenue meter and relies on the use of GMP and BED SCADA meters. This in itself is not an issue; problems arise when these independent meter values differ. VELCO's Power Accounting group has to reach out to both BED and GMP Control Centers and manually reconcile the different MWH values.

Mr. Gibbons does not believe the issue violated ISO-NE metering requirements but did acknowledge the manual task of reconciling data was an unnecessary burden and inaccurate billings. He will take an action item to address this issue with appropriate representatives from BED and GMP.

Utopus Status

Ms. Coombs provided an overview of the Vermont Weather Analytics Center (VWAC) that included Phase I data sources, initiatives, and outcomes as well as the following elements of Phase II: Weather (Ice accretion forecasting and Weather InSights Environment – WISE), Platform enhancements (High Performance Computing Cluster – HPCC), Peak Energy Management (VT monthly and NE Annual), and Short & Long Range Planning that includes Solar Prospecting.

VELCO pre-purchased software from Utopus Insights (UI) that is considered Phase III of the VWAC project. The software purchase includes the following: MaestrOS (energy

analytics platform), HyperCast (hyper-local renewable energy forecasting), and GridXplore (network-wide asset analytics customizable application).

VELCO's strategic partnership with UI was reviewed. VELCO provides UI with a reference site from which to develop and demonstrate software while providing the industry with value metrics and external advocacy. VELCO receives software and preferred equity in UI.

Mr. Gibbons inquired about the details of the strategic partnership with regard to ownership. Mr. Owyang provided additional details of the Agreement. Specifically, VELCO made a capital investment in the development and delivery of software products. In addition, in return for equity, VELCO will provide UI with certain strategic services.

Mr. Couture asked if there is revenue gained, how that would be brought back to VT. Mr. Owyang described that subject to receiving a regulatory accounting order; any gain realized from VELCO's equity position in UI would be expected to be returned to VT through the Tariff as a credit.

RFP Update

Mr. Connaughton provided a presentation on the Massachusetts Clean Energy Request for Proposal (RFP). The presentation included a brief history (carbon reduction goals), Potential Solutions received, noteworthy RFP items, cost recovery models, project updates, VELCO's guiding principles, and potential next steps. Proposals are due 7/27/17, with a selection of bidders to enter negotiation January of 2018, Contract to MA DPU for approval in April of 2018.

Projects that may affect VT were highlighted: VT Green Line NGRID (400 MW Plattsburgh, NY to New haven, VT), Northern Pass (1,090 MW Canada to a proposed substation near Deerfield, NH), and new to the list is the Granite State Power Link (1,200 MW from Canada to Monroe, NH).

Mr. Gibbons reported that the NE system impact study does not account for the impact to local, existing, generation. Any new project that imports power may result in the curtailment of local generation and negatively impact local power production.

VELCO's Board of Directors (BOD) Update

Mr. Root provided a brief review of the last BOD meeting. Highlights included a review of VELCO's Cyber Protection, VELCO's Risk Assessment, and the excellent results from VELCO's CIP audit.

Mr. Powell reported on the re-opening of the VT Department of Public Service Docket concerning Cyber Security and Personal Privacy. His interpretation is that the Department is looking for a protocol, by way of this re-opened docket, for a response should an actual cyber event take place within VT.

Other Business

- Appointments to the VELCO Operating Committee were accepted as follows:
 - VEC represented by Mr. Peter Rossi (Primary) and Ken Tripp (Alternate).
 - Stowe Electric Department represented by Ellen Burt (Primary) and David Kresock (Alternate).

Open Discussion

- Mr. Root proposed May's Operating Committee meeting be cancelled, or rescheduled, due to a scheduling conflict.
 - Members agreed that the May Operating Committee Meeting could be cancelled. The next meeting will be June 15th, 2017.

- Mr. Pew discussed the upcoming VELCO System Operator Cycle III Training. VELCO System Operators are required to maintain NERC Transmission Operator (TO) level certificates. TO certificates require 140 CEHs every three years. Cycle III training takes place in the fall; every other year VELCO provides a joint training that includes the Vermont Distribution Utility (VDU) System Operators. The last joint training was October of 2015.

He reported that VELCO is looking for input from the VDUs on training topics. Initial suggestions for joint training include the following: VELCO Emergency Procedures, Communication Protocols, FERC Standards of Conduct, Generation protection and Control, Total Failure of Energy Management System (EMS), ISO-NE expectations with regard to rolling black-outs, Capital projects, and a tailored focus for all VT Control Centers with regard to VWAC.

Mr. Tripp inquired about how the Hydro Quebec source through Newport could assist with restoration of local areas should the NE source(s) be unavailable.

Mr. Pew requested further suggestions be provided as the joint training topics are in the process of being developed.

- Mr. Owyang reported that the purchase of the Highgate Converter by VELCO from the Joint Owners is on-track.
- Mr. Root reported on the recent change to the VELCO BOD. Michael Solimano, President & General Manager, Killington/Pico Ski Resort Partners, LLC has assumed the position formerly held by Dayne Canney.
- Potential topics for the June Operating Committee Meeting:
 - VELCO's Strategic Planning outcomes resulting from the upcoming two-day collaboration.
 - Cyber protection overview as provided to the VELCO BOD.

Motion to adjourn

Mr. Gibbons moved to adjourn, Mr. Couture seconded, and the meeting was adjourned at 1:59 pm.