

**FINAL VELCO Operating Committee
MINUTES**

February 16, 2017, 11 a.m. – 3:00 p.m.
GMP Montpelier Office

Participating members: Ellen Burt (Stowe Electric Department) by phone, Ken Couture (Green Mountain Power), Frank Etori (VELCO), Stephen Fitzhugh (VT Public Power Supply Authority), James Gibbons (Burlington Electric Department), Craig Myotte (VT Public Power Supply Authority/ Morrisville Power & Light), Jason Pew (VELCO), Bill Powell (Washington Electric Cooperative), Chris Root (VELCO), and Ken Tripp (Vermont Electric Cooperative)

Other participants: Mike Burke (Green Mountain Power), Mike Fiske (VELCO), and Jose Sebastiao (VELCO)

Opening

- Mr. Root called the Operating Committee (OC) meeting to order at 11:01 a.m. Introductions were made around the table to accommodate a member on the phone.

Safety Topic

- Mr. Root reported that due to the overnight snowfall, he anticipated that the roads would be wet and would require the use of his windshield washer fluid. As such, he filled the reservoir prior to traveling and used it heavily to maintain safe visibility for the commute.

Minutes Approval

- Mr. Root presented the meeting minutes from January 19, 2017 for approval.
- Mr. Myotte moved for approval of the minutes, Mr. Couture seconded, and the minutes were approved as presented.

VELCO Transformer Fleet

- Mr. Fiske provided a presentation on VELCO's current inventory of transformers consisting of operating voltages of 3.2kV–345kV that includes power transformers, phase shifting transformers (PST), and reactor transformers.
- He further provided the inventory's age and the replacement program that began approximately five years ago. The program has resulted in three transformer replacements and four obsolete spare transformers being removed from inventory.
- He reported the ability to provide emergent transformer replacement for secondary voltages ranging from 12.47kV–46kV can be attained in two ways:
 - A spare portable 115/12.47 kV transformer (does not require oil processing)
 - A spare transportable dual winding 115kV/46kV/34.5kV transformer (does not require oil processing)

For extended outages that cannot be supported via the temporary options above, VELCO will install a permanent spare transformer from inventory.

Next Meeting TENTATIVE

March 16, 2017

11 a.m. to 3 p.m.

GMP Montpelier

1-866-720-4556

Code: 6027065

- As part of the St. Albans upgrade project, as presented last month, the current spare 115/34.5 kV transformer will be installed in St. Albans and without replacement. This will result in no permanent spare at that voltage. As such, VELCO will need to purchase a new spare to ensure continued reliability. There were no objections to VELCO purchasing a new spare 115/34.5 kV transformer.
- Mr. Fiske discussed the addition of Dissolved Gas Monitoring (DGM) on some VELCO transformers being used to provide early transformer failure indication and may extend transformer life. DGM information is utilized by the VELCO Asset Maintenance Engineer to retrieve data for assessment and trending.
- Mr. Burke recognized that the current 115/69kV spare transformer may not be sized adequately for a permanent replacement as there is a potential for additional generation in southern VT.
- Mr. Etori asked GMP what their plans are for a failure of the Vernon Road 115/69kV transformer. VELCO's spare 69kV transformer may not be adequate for Vernon Road if GMP intends to use it.

ISO-New England Update

- Mr. Etori presented four topics generated from ISO-NE:
 - Forward Capacity Auction (FCA) #11, valid for 2020-2021, has closed with a reduction of overall capacity cost. Four years ago the auction closed with a value near \$4B, this year it closed near \$2.4B.
 - Do Not Exceed (DNE) generation dispatch is causing negative Locational Marginal Pricing (LMP) in VT; meaning that units must pay to stay online during a negative LMP. This can be done by units with no cost fuel, such as wind generation, as they are benefiting financially in other areas such as production tax and/or renewable energy certificates. DNE results in market-driven generation dispatch producing reductions in traditional fueled generation as fueled generation operates with a baseline cost of fuel and does not benefit from the same financial incentives.
 - ISO is addressing FERC Order 1000 Public Policy Process. ISO is required to determine if transmission assets are need to support public policy projects (those projects needed to support local energy goals such as VT's 90% renewable by 2050). ISO-NE is seeking input by 2/27/17 on any such projects. If such a project is proposed and approved by ISO, ISO will impose a 70/30 split of costs where 70% is paid regionally and 30% by the requesting state.
 - The ISO-NE Reliability Committee has approved the costs associated with the Connecticut River Valley project, which includes the future work at Chelsea, Hartford, Ascutney, and the K31 line rebuild.

Review of VELCO Corporate KPI's

- Mr. Root presented VELCO's Key Performance Indicators (KPI) that will be proposed to the VELCO Board of Directors (BOD). He noted a new KPI that will be presented to operationalize Vermont Weather Analytics Center (VWAC). He provided the examples of VELCO Operations Department's project to improve Short-Term Load Forecast (STLF) by utilizing VWAC weather data and incorporating VWAC's residual demand data into day-ahead studies.

GMP Johnson 34.5 kV Bus Fault Event

- Mr. Etori provided a presentation on a Johnson 34.5 kV bus fault on 1/11/17. The fault was initiated on a radial line to Hyde Park Village that is tapped directly off the GMP Johnson bus and is essentially an extension of the bus. The Johnson 34.5 kV bus is not equipped with bus fault protection and any fault associated with it, including on the line to Hyde Park Village, is cleared by remote terminals that affect additional customer load beyond Hyde Park village.
- Mr. Burke reported GMP has reviewed the protection scheme in the area that has been in place for nearly 40 years. Several options have been discussed that would decrease the exposure to other customers and improve the protection deficiency identified. A first step could be the installation of fused disconnects on the line that would provide time to resolve the issue in a more permanent manner in the future.
- Mr. Tripp reported that he would like to resolve the issue in the most cost effective way for all parties.
- Mr. Couture suggested a future discussion be scheduled with all parties involved (GMP, Hyde Park, Morrisville, and VEC) so each could discuss internally with their respective organizations. Mr. Couture and Mr. Burke reported they would coordinate that effort.

Standards of Conduct Review

- Mr. Root presented on the FERC Standards of Conduct (SOC) to ensure that each OC member or other participants who are privy to information provided at the monthly meetings treat the information appropriately.
- Mr. Gibbons suggested that there may be a waiver on the size of an organization. Mr. Etori responded that even if a waiver was provided to smaller organizations, VELCO is still bound by the SOC.

Essex STATCOM Project Review

- Mr. Sebastiao provided a presentation on the Essex STATCOM refurbishment project. The information consisted of confidential and Critical Energy Infrastructure Information (CEII) and as such is not public information.

Board of Directors Update

- Mr. Root provided an update on the latest BOD meeting that included: merchant (non-reliability) project updates within and external to VT, a second RFP for renewable energy in NE, a discussion on future capital projects with regard to merchant projects, and VELCO's continued desire to purchase the Highgate HVDC converter as a cost savings measure to the VT utilities who currently own the facility.

Other Business

- Potential meeting topics for next month: VELCO's High Powered Computing Cluster (HPCC) supporting VWAC, the CRV project, OC membership changes (GMP representatives pending written notification), VELCO's Risk Assessment Report, and VELCO's Station Service overview.

Open Discussion

- Mr. Root reported he has been named a member of the NERC Reliability Issues

Steering Committee (RISC). As such, he will be attending a Committee meeting mid-March prior to the next OC meeting and can provide an overview of topics of interest.

- Mr. Tripp reported VEC will be announcing a new COO shortly and that he will likely be in attendance at next month's OC meeting.
- Mr. Root reported that next Tuesday 2/21/17 is the IEEE Green Mountain Section PES Chapter's sponsored introduction to the revised IEEE 1547 standard. He encouraged participation from the group and engineers in their organizations.
- Mr. Pew reported that next Thursday is the "DOE Voices of Experience" Workshop in Essex and referenced Ms. Deena Frankel's recent email with a link to the registration. Mr. Root encouraged participation in that workshop as well as an opportunity to discuss the challenges of interconnecting renewable energy with the Department of Energy.

Motion to adjourn

- Mr. Myotte moved to adjourn, Mr. Gibbons seconded, and the meeting was adjourned at 2:17 pm.