DRAFT VELCO Operating Committee MINUTES

January 19, 2017, 11 a.m. – 3:00 p.m. GMP Montpelier Office

Participating members: Ken Couture (Green Mountain Power), Frank Ettori (VELCO), 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: Doug Best (VELCO), Deena Frankel (VELCO) by phone, Dave Kresock (Stowe Electric), Neale Lunderville (Burlington Electric Department), Dan Nelson (VELCO), and Colin Owyang (VELCO)

Next Meeting TENTATIVE

February 16, 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 11:03 a.m.

Safety Topic

- Mr. Best offered his observations of the fluctuating temperatures, near freezing, that has resulted in several icing conditions. Be aware of the temperatures and conditions in parking areas in addition to roadways.
- Mr. Couture provided an overview of the facility including the location of the local AED.

Minutes Approval

- Mr. Root presented the meeting minutes from November 17, 2016 for approval.
- Mr. Pew identified that Mr. Couture was absent from the Participating Members list.
 With that addition, Mr. Couture moved for approval of the minutes as amended, Mr.
 Myotte seconded, and the minutes were approved with the stated minor correction.

BED Cyber Incident Overview (This section was approved by BED (Gibbons/Lunderville) via email correspondence on 1/20/17).

- Mr. Lunderville provided a review of the events that occurred beginning December 30,
 2016 relating to the story published by the Washington Post.
- The Department of Homeland Security provided a list of IP addresses, via the Electricity Information Sharing and Analysis Center (EISAC) run by the North American Electric Reliability Corporation (NERC), that were believed to be associated with a malware campaign known as Grizzly Steppe. On Friday, BED detected traffic on its business network (non-grid systems) to one of the IP addresses supplied by EISAC. BED staff immediately removed the laptop from the network. BED reported the traffic to the IP address to EISAC, per their instructions. EISAC responded that they would follow-up accordingly, but that it was not an immediate issue as the laptop was secured. Additionally, BED chose to submit a Department of Energy (DOE) Emergency Incident and Disturbance Report (form OE-417) within the required 1 hour timeframe for

an initial report given the DHS warning. It was this OE-417 form that is believed to have triggered the un-confirmed Washington Post article on 12/30/2016. After further internal investigation, in cooperation with EISAC and others, it was determined that an OE-417 form was not required due to the fact that the event did not have the potential to impact electric power system reliability.

- Mr. Lunderville applauded the incident response, crediting the success to the
 accessibility and quality of the BED staff. He specifically noted the ability to monitor,
 correct, and inform the public during the event on multiple media fronts. The ability of
 social media to disseminate correct information was highlighted.
- Mr. Lunderville provided more detail on the evolution of the media coverage from its inception through to the corrected Washington Post article on January 2, 2017.
- Mr. Couture suggested using the OC to share specific best practices with regard to incident response in the future.

Priority Phone Services

- Mr. Nelson presented information on two priority phone services available to the utility sector: Government Emergency Telecommunications Service (GETS) and Wireless Priority Service (WPS).
- During an emergency event, an overwhelming amount of voice communication traffic
 can lead to the public communication networks, both landlines and wireless, becoming
 inaccessible. The GETS (landlines) and WPS (mobile/cellular) service elevates calls to
 the top of the priority queue allowing emergency communications from enabled
 accounts. In some cases, both programs may be needed in conjunction with each other
 to gain access to first the wireless tower, then secondly, to the landline communication
 network necessary to complete the path to the intended recipient.

DOE State Forum on DER

- Mrs. Frankel presented on an opportunity to participate in a DOE/VELCO co-sponsored series of state and regional meetings regarding the integration of intermittent resources.
 The meeting is scheduled for February 23, 2017 in Essex Junction, VT. A steering group was created for the purpose of developing a highly interactive and participatory agenda.
- Mr. Gibbons reported that he is scheduled to attend and had a potential topic for the meeting already identified.
- Mr. Root pointed out that the visit to VT is one of only three across the country and that any information that the DOE can glean from the discussion would be beneficial.

St. Albans Project

• Mr. Best presented a project to upgrade the St. Albans Substation that was identified through the Substation Condition Assessment Project (SCAP). The current substation employs two non-standard sized transformers. As part of the upgrade, they will be replaced with a single standard sized transformer (33.6/44.8/56 MVA) used throughout the VELCO 34.5/115 kV substations. The two non-standard transformers will be repurposed and used to replace vintage transformers (manufactured in 1957 and 1963) installed in other VELCO substations. The use of the standard size transformer allows for a timely recovery should the need arise as similar transformers are maintained as spares. Other project details were highlighted: Structures to the substation will re-sight and replaced, several structures will be removed entirely, the control building will be replaced, new protection and controls will be installed, and transformer oil containment

- will be added. Additional project details are contained within the presentation.
- Mr. Gibbons asked for clarification on the St. Albans substation as being classified as a Common Facility (CF). Mr. Best provided that the facility meets the CF definition [Reference to the VT Transco Transmission Administration Manual (VTAM)] due to the fact that the facility has been in service for more than 10 years.
- Mr. Gibbons asked if the load growth identified in the St. Albans area does not come to fruition, would the upgrade of the 30/40/50 MVA transformer still be necessary. The use of the standard size transformer allows for a more timely restoration should a replacement be needed in the future as well as the fact that the two transformers being removed shall be replacing vintage transformers, both in need of replacement, providing enhanced reliability for those locations. As both of the vintage transformers need replacing, purchasing one new transformer for St. Albans replaces the need to purchase two new transformers.
- Mr. Tripp asked about the potential need for any state 248 permitting with respect to the moving & repurposing of the two transformers currently in service at St. Albans. Mr. Best reported that the transformer replacement does not meet the criteria for a 248 filing.

FERC Notification of Proposed Rulemaking (NOPR) on Distributed Energy Resources (DER)

- Mr. Ettori spoke to a FERC NOPR (Docket No. RM16-23-000 released in November 2016) addressing the ability of DER owners' ability to participate in wholesale electric markets.
 ISO-NE has proposed changes that would allow DER in aggregate of 100kW or greater to participate in the NE wholesale market.
- Mr. Ettori reported that the use of DERs to reduce load, rather than as a source/generator, should be investigated more. Using DERs to reduce load during peak load hours might be more beneficial to the state utilities than biding those resources into the market.
- Mr. Gibbons identified the likely complication settlements if various DERs were to participate in wholesale market.

2016 Operational Highlights

- Mr. Root presented on VELCO's 2016 operational highlights. Safety statics, outage summary, maintenance and construction work, "independent" and VT-utility projects, various Planning studies, and 2017 high level of initiatives were reviewed.
- Mr. Gibbons reported that he was appreciative of the work VELCO has done in evaluating projects and assisting in potential projects' effect on VT facilities.

Board of Directors Update

Mr. Root spoke to the highlights from the last BOD meeting.

Radio Project Update

- Mr. Nelson reviewed work completed in 2016
 - Continued backhaul reliability improvements which also eliminate costly leased lines
 - Power system upgrades improving reliability completed
 - System wide remote monitoring & control improvement (including generator & fuel level) - near completed

- Minor coverage improvement (.91% coverage)
- Overall continued transition from construction to maintenance/operation of the network facilities
- Working with customers to help improve DU owned equipment
- He further reported on items that will be addressed in 2017:
 - Continued microwave backhaul improvements at ten sites
 - Evaluating short fiber deployments for backhaul improvements at seven sites
 - Reconfiguration of site locations for improved network coverage effectiveness
 - Tower replacements at four sites
 - Engaging with State of Vermont for strategic wireless network opportunities i.e.
 Nationwide FirstNet deployment
- Mr. Tripp asked specific radio questions with regard to tower replacements in the VEC area as well as a specific question regarding emergency operations. Mr. Nelson addressed each item as requested.

Other Business

- Mr. Myotte addressed the written correspondence from Crystal Currier, Secretary VPPSA
 Board of Directors, addressed to Tom Dunn, VELCO President & CEO, regarding the
 nomination of Craig Myotte for Primary VPPSA representative and Stephen Fitzhugh for
 Alternate VPPSA representative on the VELCO Operating Committee pursuant to Section
 2.8 of the Vermont Transmission Administration Manual.
- The appointments were accepted as written.

Open Discussion

- Mr. Root provided an update on the IEEE Green Mountain Section Power and Energy Society meeting being organized to address the next revision of IEE-1547. Due to inclement weather, the meeting originally scheduled for January 17, 2017 was cancelled. It is currently being rescheduled for either 2/21/17 or 2/22/17 as of yet undetermined.
- Next meeting agenda items
 - o ISO-NE update
 - Consideration given to addressing the Essex STATCOM upgrade project
 - Review of VELCO corporate KPIs
 - Standards of Conduct review

Motion to adjourn

Mr. Myotte moved and Mr. Couture seconded a motion to adjourn at 2:26 pm.