VELCO Operating Committee MINUTES June 15, 2017, 11 a.m. – 3:00 p.m. GMP Montpelier Office

Participating members

Mike Burke (Green Mountain Power), Ken Couture (Green Mountain Power), Frank Ettori (VELCO), James Gibbons (Burlington Electric Department), Dave Kresock (Stowe Village Electric Department), Craig Myotte (VT Public Power Supply Authority/Morrisville Water and Light Department) by phone, Jason Pew (VELCO), Chris Root (VELCO), Peter Rossi (Vermont Electric Cooperative), and Ken Tripp (Vermont Electric Cooperative)



Other participants

Mary Coombs (VELCO), Deena Frankel (VELCO), Dave Haas (VELCO), Colin Owyang (VELCO), Hantz Présumé (VELCO), and Ron Welch (VELCO)

Opening Remarks

Mr. Root called the Operating Committee (OC) meeting to order at 11:13 a.m., verified a quorum, and reviewed the agenda.

Safety Topic

Mr. Pew reported that he received information from his doctor regarding the recall of Epinephrine Auto-Injectors (EpiPen). It has been reported that some EpiPens in circulation had malfunctioned when needed and had not administered the expected dose. As a result, they have recalled certain batch numbers. If you know of anyone that has an EpiPen, check with them to verify they have investigated the batch number and have compared it to those involved in the recall.

Mr. Coombs followed-up noting that the effectiveness of an Epinephrine dose is approximately 30 minutes; if you are any distance from medical treatment, you should consider carrying two pens to allow travel time to professional medical assistance.

Minutes Approval

Mr. Root presented the meeting minutes from April 20, 2017, for approval.

Mr. Tripp moved for approval, Mr. Burke seconded, and the minutes were approved as presented.

Recent Weather Events in VWAC

Ms. Coombs presented three weather events and their respective Deep Thunder (DT) validations.

- 5/05/17, high wind event, was forecasted (within 5mph) by DT
- 5/25/17, high wind event, was forecasted (within 5mph) by DT

• 5/31/17, high wind and hail, high wind was forecasted (within 5-10 mph peak gusts) by DT, hail was forecast (via the Storm Intensity dBZ forecast) by DT

Ms. Coombs reported some lessons learned with regard to those specific events:

- Weather forecast is showing improvement in wind gust, but still requires additional verification and tuning to support continuous improvement. The addition of new weather stations and the implementation of upgraded gust algorithm within the VELCO WRF model will likely improve the wind modeling. Additionally, once DT is installed on the VELCO HPCC other forecasting techniques (probabilistic and ensemble forecasts) will also be tested for enhanced prediction capability.
- Impact and outage forecasts could be improved by coupling DT weather model with other variables (soil moisture, foliage, asset health, etc.). The outage prediction model is being developed by Lyndon State College (LSC) in phase 2 of its VLITE research grant.
- Communicating the forecasted weather events could be improved to provide sufficient lead time. This can be achieved by creating customized email alerts for stakeholders with respect to specific weather thresholds.

Mr. Burke reported he wished to see an analysis of the high wind event on 5/18; Mr. D'Arienzo has taken this as an action item.

Non-Consequential Load Shedding

Mr. Présumé presented on non-consequential load, its significance to Pool Transmission Facility (PTF) assets, and ultimately how transmission projects are funded throughout New England. As a result, areas within VT are susceptible to single and multi-element N-1 and N-1-1 contingencies that would result in loss of load that, per planning criteria, is acceptable.

Mr. Présumé provided a brief review of TPL-001-4, Table 1 that included what is considered acceptable per NERC and mapped to ISO-NE thresholds (see meeting materials for specifics).

The end result is that contingencies within VT resulting in loss of load \geq 300 MW are eligible for PTF funding; <300 MW load loss is acceptable and will not be addressed via ISO-NE and PTF funded projects. If the <300 MW of potential load loss is mitigated, those project costs will be funded through VT ratepayers.

Mr. Gibbons made the observation that southern NE may be able to receive approval for regional cost sharing due to higher loads, but VT will likely never see the same benefit.

Mr. Rossi requested the list of contingencies and the areas susceptible to load loss; it was discussed and decided that a modified list could be provided in the 2018 update of the Vermont Long-Range Transmission Plan. Additionally, posting the list as CEII for Operating Committee members is a potential option for disseminating that information.

Upcoming Vermont System Planning Committee (VSPC) Discussion

Mr. Root reported that a public discussion on the Sheffield Highgate Export Interface (SHEI) will take place at the next VSPC meeting in Burlington on July 12, 2017. The major objective of this meeting is to disseminate the SHEI information in a public forum so any interested parties have access to the same information at the same time. The meeting is open to the

public and is expected to draw a wide range of attendees from both within and external to VT.

1547 Update

Mr. Root reviewed a slide deck provided by ISO-NE concerning the IEEE 1547 update. Of note:

- "Smart" inverters have the ability to control voltage; however, this ability is not the default control. To utilize the voltage control, and other features, smart inverters must have this feature enabled and set to the specifications of the system protection engineer of the interconnected utility.
- This revised standard is not limited to PV solar; it includes synchronous generators as well.

VT chapter of IEEE will be providing a tutorial covering the changes upon the IEEE approval. When the standard is adopted by IEEE they will be adopted in VT, per recently revised VT regulation that references the current IEEE 1547 standard. Individual distribution utilities have to make decisions on how to incorporate the new standards into their interconnection policies.

ISO has implemented these new regulations, with FERC approval, on all new large instillations prior to IEEE approval (similar to what California has done). The standard may be approved as early as September 2017, but likely before January 2018.

VELCO June Board of Directors (BOD) Update

Mr. Root provided a high level review of the June BOD meeting that included discussions on the following:

- June Tierney, Commissioner of the DPS attended and discussed her thoughts on her new role.
- Sheffield Highgate Export Interface (SHEI); a white paper on the interface area and its restrictions was requested. One is being developed for review at the next VSPC meeting.
- Various "Merchant" projects and what role, if any, VELCO would have in their respective operations.
- VELCO's Strategic Plan includes level funded budget, as it has been for the past three years.
- Approaches to achieve more revenue: utilize the full power of the new HPCC, expanded use of VELCO's telecommunication infrastructure, various back-up services, renting out VELCO assets, etc.

Regional Utility Group (RUG) Discussion

Mr. Ettori presented the background of the RUG; which essentially was a "Team VT" approach to discuss regional issues surrounding market rules. Meetings were coordinated by the VT Department of Public Service (DPS) and provided opportunity to bring unified Team VT ideas and concerns to the NE level. Ed McNamara of DPS, who coordinated the RUG, was recently named Planning Director, and DPS has requested VELCO take the lead in coordinating future meetings.

VELCO suggested a quarterly face-to-face meeting aligned with the monthly VELCO Operating Committee meetings in the respective months. The inaugural session was proposed for July 20 and take place in VELCO's Montpelier office from 09:00 to 10:30. The group briefly discussed meeting at the same location as the Operating Committee; it was decided that maintaining separate meeting locations was desired due to the differing group compositions.

Mr. Gibbons questioned the role of VELCO as facilitator, given the FERC Standards of Conduct and the potential for information exchange. Mr. Owyang responded that as long as all of the utilities and the DPS are present there is likely no issue in discussing regional issues of common concern to all of the Vermont utility customers. However, if collaboration is taking place among utilities regarding regulatory or litigation strategy pursuant to joint defense agreements, VELCO representatives would leave during those discussions; VELCO will not be able to sign similar agreements.

2018-19 VELCO Budget Requests

Mr. Root reported that the budgeting process has begun at VELCO and requested any budget items involving capital requests to be brought forward for inclusion. The 2018/19 VELCO Budget Request form was provided in the meeting materials. Mr. Tripp reported that a proposed VEC Cambridge substation will result in the need for relay setting changes at the interconnected VELCO substation. The proposed substation will include new breakers and is currently awaiting a Certificate of Public Good (CPG). Mr. Root requested similar items be brought to his attention in the near future for inclusion.

Other Business

Appointments to the VELCO Operating Committee were acknowledged as follows:

• GMP represented by Mr. Mike Burke (Primary) and Mr. Ken Couture (Alternate)

Open Discussion

Suggested agenda items for the July meeting:

- Discuss the new STATCOM performance; possibly the Project Manager can present.
- Review and discuss any follow-up resulting from the next VSPC meeting.
- N-1 & N-1-1 contingencies and their respective loss of load areas, as identified by VELCO Planning, could be provided to the group.

Motion to adjourn

Mr. Gibbons moved to adjourn, Mr. Couture seconded, and the meeting was adjourned at 1:54pm.