Final Operating Committee and CFO Forum MINUTES August 30, 2018, 11 a.m. – 3:00 p.m. GMP Montpelier, VT

PARTICIPATING MEMBERS

Mike Burke (Green Mountain Power), Ellen Burt (Stowe Electric Department), Ken Couture (Green Mountain Power), Frank Ettori (VELCO), Stephen Fitzhugh (VT Public Power Supply Authority/Northfield Electric), James Gibbons (Burlington Electric Department), Jason Pew (VELCO), Patricia Richards (Washington Electric Cooperative), Chris Root (VELCO), Ken Tripp (Vermont Electric Cooperative)

Next Meeting October 18, 2018 11 a.m. – 3 p.m. GMP, Montpelier

1-866-720-4556 Code: 6027065

OTHER PARTICIPANTS

Chris Babb (VELCO), Dawn Bugbee (Green Mountain Power), Michael Bursell (Vermont Electric Cooperative), Brian Connaughton (VELCO) by phone, Mary Coombs (VELCO), Tom Dunn (VELCO), John Flynn (VELCO), Dave Haas (VELCO), Donna Kemnitzer (VELCO), Dan Nelson (VELCO), Michele Nelson (VELCO), Jim Reardon (Burlington Electric Department), Kris Smith (Vermont Electric Cooperative), Denise Sullivan (Stowe Electric Department), Colin Owyang (VELCO), and Cheryl Willette (Washington Electric Cooperative)

OPENING REMARKS

Mr. Root verified a quorum of Operating Committee Members and called the meeting to order at 11:05 a.m.

SAFETY TOPIC

Mr. Couture reported on GMP car-pole accident analysis that was conducted near the end of 2017. There was a noticeable decline in car-pole accidents from 2014 to 2015 and it was attributed to the new "no handheld devices" law. Since that initial decline, the forecasted number of accidents for 2017 was 191. This would have been the highest in the latest 5-year period. [Update since the meeting, 2017 ended with 195 accidents.]

On average, every 44 hours a vehicle contacts a GMP pole and causes power interruption to customers. Ken provided the slide deck for wider distribution.

CYBER TOPIC

Mr. Root discussed an event that occurred earlier in the summer. He reported a VELCO employee payroll check was diverted to a different account that was not requested by the employee. The investigation into the incident discovered that through thoughtful email exchanges with whom the VELCO payroll representative thought was with the employee, the routing number was changed.

Mr. Root reported that going forward, no payroll changes will happen electronically and that a verbal agreement with an employee will be necessary to make like changes in the future.

Mr. Dunn reported that this was not a result of a breach of any system, but rather an effective social engineering attack.

Ms. Bugbee reported that the use of "out of office" notifications to external entities essentially announces your absence and may assist attackers with identifying a potential target.

Mr. Root further reported on a recent NERC imposed penalty of roughly \$2.5M to a Transmission Operator (TOP) within the US. The TOP incurred the penalty due to an open Ethernet port on a router within a substation. While no malicious activity was identified, the need to secure the Bulk Power System from remote access to secure systems by various nation states is a top priority. This penalty highlights the need to secure our networks.

2019 PROPOSED OPERATING AND CAPITAL BUDGET

Ms. Nelson introduced Ms. Babb, VELCO's Controller, who provided an overview of the proposed 2019 Operating and Capital Budget. The budget overview presentation is available in the meeting materials and included the following highlights:

- Continuation of the flat nominal budget since 2014
- One exception is the increase to administrative overhead due to elimination of costs related to telecommunication services (radio, fiber, and microwave) that directly support transmission assets
- Tax reform in 2017 provided relief from the rising costs of transmission service by reducing income tax rates associated with the New England Open Access Transmission Tariff (OATT) and the 1991 Vermont Transmission Agreement (VTA) revenue requirement
- Net increase in transmission service will increase in 2019

Ms. Babb requested any feedback to her within the next few days as she is preparing for the VELCO Board of Directors meeting on September 14.

Mr. Reardon inquired if the increase in administration costs were due to less capital expenditures as had been reported at the last Joint CFO/OC forum meeting last year.

Ms. Nelson reported that was the case and further added that 2019 is likely the last year for significant increase in administration overhead projected for the next five years.

Non-utility revenue was discussed; the budget only includes non-utility revenues associated with the release of Utopus escrow funds. While VELCO is pursuing non-utility revenue in 2019, the 2019 budget does not include any new non-utility associated revenue.

Mr. Bursell commented that non-utility revenue is desired provided additional costs are not incurred. Mr. Dunn agreed and stated the focus of non-utility work is to reduce overall cost.

Mr. Reardon inquired about the non-controllable property tax within VT. Ms. Nelson discussed the valuation of property being inconsistent and that this does offer some challenges when it comes to budgeting. VELCO uses a consistent methodology that provides value to both VT towns and VELCO. This goal is consistent with VELCO's vision of a sustainable VT; however, some towns are pushing back due to variabilities in values.

Ms. Babb reported that the recent Highgate Converter refurbishments resulted in reduced downtime (scheduled and forced outages) and those cost savings are being carried forward to the 2019 budget.

Telecommunication services were discussed, as there was a significant reduction in the 2019 budget. Recent fiber build out is resulting in lower maintenance costs and reduced reliance on leased lines, resulting in long-term continuing savings.

Mr. Gibbons questioned the reduction of the Emergency Response and Training budgets. Ms. Babb reported that the training and Emergency Response budgets are more reflective of what the actual expenditures had been, not a reduction in overall preparedness and training.

Mr. Reardon expressed his appreciation for the work done to complete the budget and corresponding report and presentation. He additionally inquired about any possible risks in the budget beyond catastrophic items.

Ms. Babb reported that the highest risk was medical and pension expenditures. Mr. Dunn reported that VELCO uses conservative numbers for healthcare and VELCO Human Resources uses annuity experts to assist with the determination of pension costs. Mr. Dunn noted that both actions reduce potential budgeting risks.

Ms. Nelson further provided that VELCO has medical stop-loss insurance and other items to mitigate those types of risks. She added that the New England coincident peak also plays a role and introduces another potential budge risk.

Mr. Dunn provided that the effort to reduce peaks is happening throughout the year and that this effort has been successful.

Mr. Gibbons offered if a non-VT utility reduces its peak, the remainder of the utilities will absorb those costs, a portion being shared among the VT utilities per the 91 agreement.

Mr. Dunn requested any feedback on the VELCO budget to be provided within the next few days.

Mr. Root announced a break for lunch and following its completion and the departure of the CFO participants, the remainder of the Operating Committee agenda would resume.

OPERATING COMMITTEE

Mr. Root reconvened the Operating Committee members following the exit of the CFO participants.

MINUTES APPROVAL

Mr. Root presented the meeting minutes from June 21, 2018.

Mr. Gibbons moved for approval, Mr. Burke seconded, and the minutes were approved without objection.

STATEWIDE WEBSITE FOR SOLAR PROJECTS DISCUSSION

Mr. Root introduced the topic by discussing how the VELCO Energy Management System (EMS) system model uses load and generation data to help secure the transmission system.

Currently the EMS does not have visibility into the amount of behind the meter solar and only uses the load data at each sub-transmission substation. The reality is that the load is only representative of the power delivery to each substation and does account for the behind the meter solar production.

A significant system disturbance could result on the loss of substantial amounts of solar production. The VELCO system models do not have the information available to model such contingencies.

Mr. Fitzhugh inquired about the use of the Utopus Insights (UI) solar forecasting software. Mr. Root reported that not all of the solar information is available to UI for that model and as such, forecasts are provided for only those representative areas who supply data.

Ms. Richards reported that each of the Distribution Utilities are required to report their respective solar installations to the state. She further suggested that periodic updates to a single data repository could assist in maintaining an inventory of installations.

Mr. Root reported that he would make a formal request for solar information in the future.

HYDE PARK UPDATE

Mr. Ettori reported on the proposal to register Hyde Park Village Water & Light (HP), as discussed in June, as a settlement only generator. That proposal was reviewed further and was determined not to be a viable solution. In its place, the resolution agreed to between ISO, VELCO, and HP, was to make HP a single Settlement Domain.

This was accomplished by some minor reprogramming of the VELCO settlement software that was charged to HP.

A discussion ensued regarding HP having specific representation at the Operating Committee took place. Currently, VT Public Power Supply Authority (VPPSA) represents HP at the Operating Committee. Mr. Gibbons recommended contacting HP and VPSSA to discuss the relationship between the two entities as it pertains to the Operating Committee.

UTOPUS INSIGHTS UPDATE

Ms. Coombs covered the closeout of the Joint Development Agreement (JDA) as provided in the meeting materials. Included in the presentation were the following highlights:

- 7-10 day forecast development on the VELCO HPCC has been completed and is now available
- Lightning prediction now included in the VELCO WRF model
- Next steps include:
 - Continuing development of Weather Insights visualization to include additional infrastructure data, observations, alerting, and the increase forecast length to 10 days
 - Evaluate ensemble forecasting using Nostradamus, VELCO WRF, and Deep Thunder

Mr. Root reported that the potential to develop an ice model could be a jointly funded project between VDUs and VELCO; however, the any distribution outage model would need to be solely a VDU funded project.

SUBSTATION INSPECTIONS FOLLOWING TEMPORARY LINE TRIP

Mr. Haas discussed the dispatching of crews to VELCO substations following a temporary line fault. He noted that the practice of sending crews for permanent faults is not going change; crews will continue to be dispatched for any permanent fault condition.

The field inspections are a legacy practice and not revisited since different technologies have been implemented throughout the VELCO system, e.g. enhanced monitoring and automatic retrieval of protection relay fault information.

Specific improvements to the VELCO SCADA were identified that included:

- Fault relay data (Distance, phase, type of protection, etc.) availability
- Three phase amps and voltage availability

Additionally, Mr. Haas reported that the majority of call-outs are related to subtransmission systems and of those; the majority are not investigated until daylight hours.

Substations without remote interrogation will continue to be dispatched consistent with the current practice.

There were no objections from the group.

Mr. Haas reported that before proceeding, VELCO would need to make changes to the callout procedure; expected within the next few months.

OTHER BUSINESS

Next meeting

September 20, 2018 at GMP Montpelier Potential agenda items:

- o Weather Model data validation
- o Utopus Insights Strategic Partnership Agreement review
- Non-utility work offsetting the reduction of capital projects

Open discussion

None

MOTION TO ADJOURN

Mr. Gibbons moved to adjourn, Mr. Burke seconded, and the meeting was adjourned at 2:44pm.

Respectfully submitted,

Jason Pew VELCO OC Secretary