FINAL VELCO Operating Committee MINUTES

April 21, 2016, 11 a.m. – 3:00 p.m. GMP Montpelier Office

Participating members: Ken Couture (Green Mountain Power), Frank Ettori (VELCO), Ken Mason (Vermont Public Power Supply Authority) by phone, Ken Nolan (BED), Bill Powell (WEC), Chris Root (VELCO), Jeff Wright (Vermont Electric Cooperative).

Other participants: Deena Frankel (VELCO) by phone, Dave Haas (VELCO), Mike Loucy (VELCO), Colin Owyang (VELCO) by phone, Hantz Presume (VELCO), Kirk Shields (GMP), Rick Twig (Rick Twigg Associates, LLC).

Next Meeting

May 19, 2016

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 11:07 a.m.

Safety Topic

Mr. Root discussed that the tick season is projected to be very high this year given the
relatively mild winter and VELCO field personnel have been reporting significant activity
already. He offered that it's a good idea to remind anyone spending time in the
outdoors to be vigilant about checking for ticks.

Minutes Approval

• Mr. Powell moved approval, Mr. Wright seconded and the March minutes as posted were approved without objection.

Statewide Radio Project (SRP) Update

 Mr. Root provided a SRP update summarizing the progress and stating VELCO is continuing with its 2016 plan. Mr. Root suggested that Mr. Nelson provide the OC with the last routine update at the next OC meeting and prepare future updates as requested. All agreed with this approach.

Critical Infrastructure Protection (CIP) 6 Compliance Responsibility of Distribution Utilities (DU)

- Mr. Twigg presented the materials provided to the OC summarizing that the CIP framework continues to change whereby additional facilities will be added to CIP requirements impacting distribution utility (DU) switchmen. These include personnel background checks, access controls, training and notification of inactive personnel for those switchmen needing access to the CIP regulated facilities.
- Mr. Twigg discussed that VELCO has been working with GMP whereby the existing GMP electronic access scanning devices can be used at VELCO CIP regulated facilities. The

- added benefit of this approach is that automatic notification occurs in the event GMP changes the person's access status (e.g., job responsibilities and termination).
- Mr. Wright asked what substations these changes apply to. Mr. Root responded that
 the current facilities include two high and eight medium classified locations. He further
 stated that it's anticipated all VELCO substations will eventually fall under these
 regulations.
- Mr. Nolan asked for an update on black-start program. Mr. Root responded that VELCO can provide an update at the next OC meeting.
- Mr. Couture asked that the communication continue about the new switchmen requirements and how to obtain support when going through the process. Mr. Root responded that VELCO will provide information at the next OC meeting.

ISO-New England Update

- Mr. Ettori presented the materials provided to the OC summarizing market, reliability, and other regional highlights.
- Mr. Ettori discussed that that the Planning Advisory Committee (PAC) requested that Independent Service Operators – New England (ISO-NE) provide guidance on the requirements for what types of maintenance projects are subject to Transmission Cost Allocation (TCA) filings.
- Mr. Wright asked for an explanation of the meaning of PDR. Mr. Ettori responded that it stands for Passive Demand Response and essentially includes loads that are not actively controlled other than by improving their efficiency like changing out light bulbs or replacing dated appliances. These are different from active demand response in that these sources can be called upon to reduce load.
- Mr. Ettori explained that there is a purported economic project in Northern Maine that has the potential to unlock wind generation sources. This may be the first project that would qualify as a market efficiency transmission upgrade (METU). METUs are funded by regional network service and are justified by the production cost benefits outweighing the carrying cost of the transmission investment. He also stated that METUs are exempt from the three year exclusion under the Federal Energy Regulatory Commission (FERC) Order 1000. Therefore, this project would likely be the first project to be competitively bid under FERC Order 1000.

VELCO Board of Directors Update

 Mr. Root provided an update for the April 7, 2016 VELCO Board of Directors meeting summarizing that all of the existing Directors were approved by the DU representatives with no changes. He also mentioned that the Board was provided an update on proposed third party projects and storage solutions for northwest Vermont.

State of the Grid/Storage Analysis Update

- Mr. Root discussed the materials provided to the OC summarizing that the peak load hour has been getting later in the day, often outside the potential solar window whereby the majority of generation is coming from outside the state.
- Mr. Root discussed that a recent VELCO study shows that the most productive wind and solar outputs are not coincident. This knowledge is helpful when examining mandatory generation curtailment events and how might this be better managed.

- Mr. Root explained that the recent VELCO battery study indicates that the economics don't support this technology as commercially viable to assist in solving the curtailment requirements.
- Mr. Presume discussed that the focus of current studies is to evaluate what could be done in Vermont to optimize the generation which include: changing voltage schemes, major line upgrades, removing under-voltage load-shed scheme at Highgate, balancing various system parameters concurrently, etc.

Ratings Issue on Subtransmission System

- Mr. Haas and Mr. Presume provided a coordinated presentation of the materials provided to the OC summarizing that VELCO needs to include subtransmission within its Vermont contingency analyses and having better rating data is key to grid reliability. To ensure that the most current system model is used in Planning and Operations, VELCO requested that the DUs provide updated line and load data (e.g., line reconductoring, new installations, etc.) as soon as the data are available, preferably weeks before the scheduled date of the change. The members agreed to provide VELCO updated system data in a timely manner. VELCO will send the current system model for DU review.
- Mr. Root explained that it is beneficial to the analyses and ongoing operations to obtain the rating data by circuit as this level of detail helps improve the model results and performance during various operating events.

Massachusetts Transmission Security Issue

- Mr. Root presented the materials provided to the OC summarizing that the situation
 was not a terror attack but the result of a mentally ill person but this is a good example
 of everyone's need to be diligent around physical security.
- Mr. Root discussed that with the new physical security concern we have procured the services of a retired law enforcement professional to assist with bolstering our internal plans.

GMP Solar Program Update

- Mr. Shields summarized the materials provided to the OC.
- Mr. Ettori asked if GMP has other similar projects in their planning forecast. Mr. Shields
 responded that there are other projects slated for future years but many factors can
 affect these forecasting plans.

Other business

 Ms. Frankel updated the OC on the status of Vermont System Planning Committee (VSPC) discussions on the evolution of the VSPC to adapt to changes underway on the electric grid. She stated that the VSPC will meet April 27, 2016, to discuss the draft charter being drafted through discussion with the Forecasting and Geotargeting subcommittees. Ms. Frankel offered to provide a substantive update on the charter to the OC at its May meeting.

Proposed agenda items

- SRP Update
- VSPC Charter Update
- Black-start Program Update What's the Current Process
- CIP Communication & Support Plan Training, Background Check, etc. Requirements
- VEC Renewable Projects Update

Motion to adjourn

• Mr. Couture moved and Mr. Ettori seconded adjournment, which was agreed without objection at 2:25 p.m.