

## VSPC Generation Constraint Meeting

July 3, 2019 | 9:30am-12:30pm | Green Mountain Power Montpelier Office

Participants: Dan Kopin (Utility Services), Kim Jones (GMP), Steve Fitzhugh (NED), Ed McNamara (DPS), TJ Poor (DPS), Jeff Forward (commercial rep), Melissa Bailey (VPPSA), Dave Westman (VEIC), Jay Pilliod (VEIC), Derek Moretz (Encore), Lou Cecere (VELCO), Shana Louiselle (VELCO)

By Phone: Molly Connors (ISO-NE), Tim Duggan (Residential alt), Eric Harrold (VELCO), Hantz Pr sum  (VELCO), Morgan Casella, Dynamic?

### Meeting Minutes:

The subcommittee discussed and revised the draft charter. The final version of the charter will be circulated to subcommittee members. Voting to approve the charter will take place by omission, via email. A summary of the discussion is below.

- "Demand Resource Plan" to be added in Background section, so as to include Efficiency Vermont's resource planning process
- Add language to background stating that work is to develop methodologies for evaluating measures, not developing solutions for constraints
- Line 2.a. of the charter refers to active management of the devices listed
- Line 2.b. of the charter refers to implementation of time and locational price signals for the devices listed in 2.a.
- "Magnitude" will be appended to line 3.h.
- Line 3.i. will be changed to "Carbon Impacts"
- Expect that there will not be consensus on all issues, and that any lack of consensus will be noted and recorded in minutes and final report
- Group does not intend to perform detailed analysis of carbon lifecycle for measures under consideration
- Must have draft report on findings by 2020 VSPC October quarterly meeting
- Charter will be reviewed to ensure consistent language with regard to terms such as "measures," "policies," "tools," etc.

The subcommittee began to prioritize potential work items, such as analysis of: distributed energy resources, time and locational value, T&D investments, and curtailment.

- Need to create definition of a generation constraint
- Definition should include reference to frequency with which area is constrained
- Constraints can be categorized as "no new generation" or "curtailment of existing generation"
- Need to identify limiting factors of a generation constraint (thermal criteria, voltage criteria, TGFOV)
- Need to identify characteristics of a generation constraint
- Difficult to evaluate any one measure individually, as they interact at various times
- Group previously agreed to not address the SHEI specifically
- Subtransmission could be limiting element in a constraint before distribution becomes constraining
- Concern that looking at an area with only one type of constraint characteristic (radial as opposed to networked, thermal as opposed to voltage or TGFOV) and one type of constraint profile (solar as opposed to wind or hydro) doesn't give enough information
- Solving a radial distribution constraint could be straightforward, but applying same solution steps to another type of constraint may not help at all; so, need to be able to apply tools or

- methodologies developed from Vergennes work to all other areas
- Group agreed to focus first on DERs (as in 2.a. of the charter)
  - Don't assign priority to other issues; at each meeting, reconsider prioritization based on available information

The group also discussed data collection needs:

- Obtaining load profile may be difficult in some areas
- Concerns about relying on overly specific or painstakingly-obtained data, for fear of not being able to replicate the effort for a given area in the state
- Data only needs to be geographical granular to about the county level, and temporally granular to the hour
- Goal is to separate out individual loads and generation from the net load shapes
- Interest in GMP heat pump and EV charging control curves, and how much "effort" is required to effectively shift demand

Finally, there was a brief discussion on work items:

- Potential to have presenters in from places such as Hawaii
- Share reading material on time and location price signals, curtailment, other items (e.g. NREL papers, other publications)

**Next steps:**

- DPS to work with any interested parties to develop draft language for definition of a generation constraint
- Members to provide wish list for data (and desired granularity) by end of July
- Members to provide suggested reading materials