DPS Report on “Identifying and Addressing Electric Generation Constraints in VT:

* <https://www.vermontspc.com/library/document/download/6439/Act%20139%20Generation%20Constraints%20Report%20final.pdf>
* The report was issued to the Senate Committees on Finance, Natural Resources, and Energy, and the House Committee on Energy and Technology. I highly recommend reading this report. I think regional planners will find it as a very useful resource to better understand grid issues in Vermont and how it will effect municipal/regional energy planning and development of new renewable facilities in Vermont.
* The report clearly explains VT’s various energy policies, goals, and requirements in a very digestible manner.  It also provides the best explanation of RECs that I’ve seen. The report then goes on to explaining the circumstances that have led to “generation constraints” in Vermont with a focus on the area affected by the Sheffield-Highgate Export Interface (SHEI). The culprits being increased energy efficiency (so less electricity demand) and increased distributed generation (so more electricity on the grid…..most of which cannot be curtailed/controlled by ISO-NE).
* Lastly, it provides basic recommendations to deal with any generation constrained areas in the future (not just SHEI).  Recommendations include: grouping grid upgrade costs, having “locational value” influence the location of future generation facilities (so rates based on facility location), load building (so building electricity demand during the right season and time of day), storage, curtailment (including curtailment of generation facilities beyond the reach of ISO-NE…..which doesn’t happen right now), and “creating a statutory rebuttable presumption against uneconomic development in constrained area” (no more new generation in certain geographic areas).

Ad Hoc Committee to “Unlock” Generation Constrained Areas

* VSPC voted to create a new ad hoc committee that would help “inform” utility planning efforts to unlock generation constrained areas by reviewing “potential least-cost policies that could be used.” This is new territory for VSPC since the group’s charge is on reliability-related issues (which isn’t an issue in generation-constrained areas necessarily) whereas this Committee would be stepping into more energy policy related turf.  It was made clear that the committee wouldn’t study any particular geographic areas and discuss cost allocation for “fixes.”  But VSPC member see this as an opportunity to kick around ideas in an informal manner and without politics…

Tier III Reporting

* The big distributing utilities (DUs) all presented their Tier III report summaries to the VSPC.  This included GMP, BED, WEC, VEC, and VPPSA.  All taking different approaches catered to their geographic areas and ratepayers. WEC has focused on weatherization b/c their 98% residential users. VEC has focused on pellet stoves and their “clean air” program to get some users off diesel generators and on electric. BED has focused on EVs.  GMP has done a bunch of custom work with C/I users and has even extended three-phase lines to get users off diesel generators.  The later three utilities seemed a little concerned about meeting their targets longer term once the low hanging fruit is gone.

Merchant Transmission

* The large transmission projects that have been permitted in-state (TDI New England/Clean Power Link, VT Greenline) still do not have contract with any states in southern New England. States in southern New England are looking at off-shore wind in short-term to address increased winter demand (when off-shore wind produces well) to move away off fossil fuel based generators.

Reports, etc.

* PUC will issue a report on July 15, 2019 on how to promote EV use in Vermont.  The report will address barrier/equity issues, charging station fee transparency, and how EVs could help contribute to the state transportation fund (since they don’t pay gas tax).
* Other reports/PUC orders that will be coming out by summer: DPS update on meeting state comprehensive energy plan goals, DPS report on impact of RES on electric rates (March 15), and a PUC order addressing future energy efficiency utility (EVT, BED, VT Gas) coordination with DUs/demand resource plan reporting/fiscal agent.

**GMP ONLINE MAPS: https://www.trorc.org/programs/energy/regional-energy-plan/**

* [GMP SOLAR Capacity Map 2.0](http://gmp.maps.arcgis.com/apps/webappviewer/index.html?id=4eaec2b58c4c4820b24c408a95ee8956)
* [GMP Three Phase Map](https://gmp.maps.arcgis.com/home/webmap/templates/OnePane/basicviewer/embed.html?webmap=0c9e879daf694bb5b04c14e436d618d3)

<https://www.vermontspc.com/grid-planning/whos-who>

<https://www.vtenergydashboard.org/>

CONVERSIONS

USE MWh kWh/1000 = MWh

Megawatt hours (MWh) = Megawatts (MW) x Hours (h).

ALL MWh info on the handouts IS ANNUAL

When a 1-MW [maximum rate of energy generation] wind turbine produces at 25% of that capacity as averaged over a year, its annual output is

1 MW × 0.25 (energy type capacity generation factor) × 365 days × 24 hours = 2,190 MWh.

SOLAR: 10 acres generates 1 MW

Technology Capacity Factor Annual MWh Output per MW of Installed Capacity

Solar 14%-16% 1,300

Small Wind 20%-25% 2,000

Utility Scale Wind 25%-35% 2,600

Methane 60%-90% 6,600

Biomass 60%-80% 6,100

Small Hydro 40%-60% 4,400