Vermont System Planning Committee
Forecasting Subcommittee
March 28, 2017 | 9:30am-12:00 p.m.
Public Service Department Giga Room

Minutes of Load Forecasting Subcommittee Meeting on 3/28/2016

Attendees: Jeff Monder (GMP), Rip Kirby (GMP), Deena Frankel (VELCO), Shana Louiselle (VELCO), Dave Westman (VEIC), Nathaniel Vandel (Supply), Carole Hakstian (VEIC), TJ Poor (VPPSA), John Woodward (PSD), Hantz Presume (VELCO), Bill Powell (WEC), Mike Leach (BED), Dean Denis (VEC), Mike Beliveau (VEC)

Review Minutes

- Minutes of February 9 approved after brief discussion.
    - Hantz elaborated on what was meant by "difficulty of dealing with storage." Importance of shapes to this forecast. Need to pay attention to ability to serve load at peak hour and how DG is affecting transmission system (typically highest impact is during lower load shoulder season).
    - GMP has a target of 200MW of storage by 2020

Overview of GMP Tier III plan (Jeff Monder). Jeff Monder gave presentation on fossil fuel offset opportunities being targeted by GMP through their programs structured to comply with Tier III of the RES.

- The majority of GMP's early on compliance will be accomplished with residential heat pumps and HP water heaters (around 1,800). Customers will have option to bundle HP with smart thermostat and controls that will enable peak-shaving and response to demand events.
- GMP also explained GMP's thinking about a variety of custom large customer projects, including line extensions to gravel pits and lumber mills.
    - VEIC pointed out similar approach being taken by VEC in partnership with VEIC where the customer receiving line extension works with EVT to improve efficiency under a special contract.
    - VPPSA pointed out that any custom projects that are certain to happen need be communicated to VELCO.
- GMP shared insights from research into viability of EVs as T3 compliance measures.
    - GMP is offering installation of EV charger for new buyers of EVs, which they would be able to control.
    - Currently there is no market for bidirectional EV charging technology. Accelerated depreciation (from charge cycles) of customer vehicle and coordination with real-time demand are large obstacles. There are some bidirectional electric transit applications.
- Group agreed that for purposes of load forecasting, EVs can't be realistically characterized as generators (or load reducers) at this time. The pace of EV proliferation and the timing of new EV loads remain open questions. Previous load forecast overestimated the number of EVs on the road today by 300%.

ITRON update/check-in Eric Fox gave presentation on forecast building efforts to date. Highlights include:

- Several econometric drivers are forecasted lower by Moody's than in 2015 (population/households, GDP)
- EIA electric heating end use intensity projections now includes HP consumption, and is higher than previously as a result. Cooling end use intensity projection is also higher because of HP. Inclusion of HP load may complicate adding exogenous HP load to econometric forecast.
- EIA projection of lighting intensity appears overstated
- Miscellaneous loads are decreasing in EIA intensity projections for first time. This is around 15 to 20% of all loads.
- Two VT zones drive VT's summer peak: BED and Burlington Zone (GMP)
- The current plan for deriving projections of zonal peaks is to weight zonal load by customer class shares of load and to square those consumption totals with the load shapes implied by the end-use intensity projections. If ITRON had access to AMI data this exercise would not be necessary; load shapes could be measured directly. Geography specific solar generation would then be layered on the zonal load shapes.
- Group discussed which EE savings trajectory should be assumed for the first draft of load forecast. EEU Budgets will not be approved until June. EVT feels Base Case scenario is acceptable stand-in.
    - Hantz Presume asked if EE savings claims are valid for 8pm peak. Answer still being investigated by EVT. Eric Fox said ITRON methodology does not require EE load shape assumptions because end-use intensities will reflect EE savings. How to distinguish EIA HP versus exogenous HP in end-use intensity.
- ITRON is only looking at the Solar Net Metering capacity reported to EIA by DUs. Subcommittee will need to figure out whether this includes group systems or not, or if other data should be used instead.

Scheduling and ToDos

- Forecast needs to be done by end of May. Base case forecast done by end of April
- Chuck Watts or other GMP representative: Understand GMPs NM and other solar forecast.
- John Woodward will compile information from DU T3 plans re: number and type of load-building measures expected under different scenarios.
- John Woodward will compare informal PSD Solar NM capacity projection with ITRON's payback model. Need to get ITRON's analysis.
- Carole Hakstian – EE info – Treatment of Heat Pumps in forecast so that don't double count
- EV Forecast – Carole Hakstian to discuss with Dave Roberts, TJ Poor to discuss with VTrans current EV forecasts.