VSPC Load Forecast Committee
August 5, 2014
VPPSA

In attendance:

Carole Hakstian, VEIC (Chair)
Rip Kirby, GMP
Tom Lyle, BED
Jared Kaplan, VPPSA
Hantz Presume, VELCO
Nathaniel Vandal, Green Peak Solar
John Woodward, PSD
Eric Fox, Itron
Mike Russo, Itron
TJ Poor, PSD
Gillian Eaton, VEIC via phone –
Mike Leach, BED, via phone -

The entire meeting was focused on Itron's presentation of draft load forecast. The presentation will be available on the VSPC website; key discussion items that had not been previously addressed and clarifications are noted below.

TASKS: The Committee generally agreed to have some back and forth via email on the heat pump and net metering aspects of the forecast, and attempt to schedule a meeting at the end of August.

- Itron completes a demand forecast, built from the bottom up via monthly sales. They also provide a VELCO system forecast. The VELCO system forecast includes the NH load pocket, the remainder of the difference between the two is line losses.
    - Standard Offer is also added back into the system data in order to identify VELCO system demand.
- Economic drivers discussed include population growth, real income, GSP. Itron acquired most recent Moody's and Woods & Poole forecasts – these forecasts are significantly different. Most Itron assumptions, largely based on older Moody's forecasts, fall in between the two forecasts.
    - Itron will review VT specific population forecast from ACCD: http://dail.vermont.gov/dail-publications/publications-general-reports/vt-population-projections-2010-2030
    - State long-term economic projections not really available at this time, although John (PSD) has provided to Itron the results from the short term revenue forecast to review: http://www.leg.state.vt.us/jfo/state_forecasts/2014-07%20July%20Forecast.pdf.

- There is, however, an upcoming effort to customize Moody's variables into VT baseline for regional impact simulations, which will produce more VT-specific projections. This is expected at the end of September.

- Energy Efficiency in the forecast
  - Group reached general agreement that the approach taken by Itron to count 20% of the future expected energy efficiency (since 80% was embedded in the forecast) was reasonable. LEDs will be treated slightly differently (see below)
  - TJ suggested that energy efficiency should be counted at target levels, not "modeled" values. VEIC's Demand Resource Plan produces modeled values, this is what has been used for the forecast in the past. VEIC has always reached the "stretch" target – that is the target they are incented to acquire. TJ suggests that this stretch target should be used, otherwise we are undervaluing efficiency.
    - Filings are due with the PSB by Aug 18 re: "stretch" targets. If the Department, VEIC, and BED come to agreement on performance targets, then new EE values will be provided. Over 2012-2014, stretch target was 10% higher than modeled values. For the 2015-2017 period, stretch targets are 20% above modeled results. VEIC notes that these targets are available for 2015-2017 only and not the full forecast period. Also, these goals represent a three-year goal, not annual goals. If these values are to be used, the group will need to estimate annual savings for 2015-2017 to upload to the load forecast.
  - LED saturation. Itron examined the expected penetration of LEDs in VT relative to EIA baseline through creation of a technology stock accounting model (Itron will provide the model).
    - There is potentially a stronger decline in lighting intensity than what would be expected just by using the approach described above counting 20% of future EE.
    - Itron calculated a new lighting intensity, by changing LED lighting stock numbers, technology share to reflect the faster growth in share of LEDs.
    - The impact on average lighting intensity was 1.3% decline (previously the model showed a 1.1% decline).
    - The Group reached general agreement that adjusting the lighting intensity to reflect EEU programs was appropriate.

- Heat Pumps in the forecast
  - Itron showed two scenarios of heat pump penetration – EIA regional penetration forecast, and GMP IRP base forecast.
    - The GMP IRP base forecast was based on VEIC's DRP assumptions, and is consistent with their innovation center projections
    - It shows by 2034 over 25% of customers will have heat pumps.
  - Itron also showed the impacts of both scenarios. Notably, the winter peak consumption associated with space heating did not increase until the second ten years of the forecast thanks to the trend of declining intensities, even under GMP assumptions. However,

summer peak was affected – by as much as 75MW under GMP assumptions (assuming cooling load was new and not replacing room AC).
    - The Committee expressed some skepticism about the GMP ramp rate, and also about the impacts associated with differing levels of penetration.
    - **COMMITTEE TASK: Have some back and forth by email and hold a meeting near the end of August in order to make a determination.**

- NM forecast – used GMP forecast and looking to apply generally to the remainder of the state.
    - Assumes that generation from rooftop units are capped in a couple of years while group NM systems (called "community" systems in the presentation) eat up the remainder of the 15% cap by 2022. Thereafter generation grows at the rate of demand.
    - Created solar payback model (Itron will provide) in order to estimate the pace of development.
        - One key assumption is that costs will continue to decline by 10% per year through 2022 (down to a little over $2/watt)
    - There was significant discussion re: the pace, price, and effects of NM. The group came to no agreement
    - **COMMITTEE TASK: Have some back and forth by email and hold a meeting near the end of August in order to make a determination.**