

SPSC DSM Work Group (Dec. 12 memo),

(Please note feedback is requested by Dec. 16. Thank you for your continued support.)

LBNL has completed its analysis of Demand Response (DR) potential in the SPSC High DSM Case. LBNL subcontracted with The Brattle Group to update DR potential estimates from the FERC 2009 *National Assessment of Demand Response Potential*. The updated DR potential estimates reflect major developments in DR program design, enrollment, and participation.

High level results of the updated model are:

- 1) For the Enhanced-BAU scenario, the previous WECC-wide DR impact was 6% (2019); updated model is 7% (2022).
- 2) For the Achievable Participation scenario, the previous WECC-wide DR impact was 13% (2019); updated model is 14% (2022).

The updates are described in detail in a PDF attached to this message. Here is a high-level summary of the updates:

- 1) Incorporated 2010 FERC survey values in place of 2008 FERC survey values. This affected existing DR levels and per-customer non-pricing program impacts.
- 2) Updated participation rates using 2011 "expert survey" performed by Brattle and Global Energy Partners. The previous model estimates used "conjecture and judgment" for these participation rates. There were some mapping issues because the survey did not ask for Commercial and Industrial (C&I) breakdown (i.e., small, medium and large). For large and small C&I, Brattle kept the participation rates at the same as previous model which is a conservative approach.
- 3) Pricing impacts now come from the Brattle "Arc of Responsiveness". The previous approach used the Brattle PRISM model that only had elasticities from California Statewide Pricing Pilot (CA SPP), Baltimore Gas & Electric, and Excel (Colorado). The "Arc of Responsiveness" uses 109 studies to build a scatterplot of price ratio and impact. There are two "arcs", one with technology and one without.

Please find attached the state-level DR potential in the High DSM case for your review. You will notice several worksheets, please review both the "Assumptions" Tab and "Results" Tab:

- 1) The "Assumptions" Tab identifies the assumptions driving each of the scenarios (i.e., Expanded Business-As-Usual (BAU) and Achievable Participation). We are recommending each state use the Expanded BAU scenario, except California, which will use the Achievable Participation scenario. This is consistent with our approach last year.
- 2) The "Results" Tab allows you to see the DR potential for each state and scenario. Select the relevant state and scenario in the drop-down menus at the top of the worksheet. The DR potential is expressed in MW amounts based on the NERC reliability forecasts, as well as a % of system peak. We will apply the DR potential as a % of system peak to the High DSM Peak Load Forecasts and allocate them from a state-level basis to each WECC balancing authority.

We are requesting feedback from SPSC Work Group members whether they agree using the Enhanced

BAU scenario for their state (or Achievable Participation scenario for California), and whether they are comfortable with the corresponding DR potential.

We are requesting feedback by Friday, December 16. Please provide your feedback directly to Andy Satchwell at LBNL (ASatchwell@LBL.GOV).

Thanks again for your ongoing support of the DSM Work Group efforts!

Steve

Steve Ellenbecker

303-573-8910

sellenbecker@westgov.org