

Summary of Modeling WG Webinar Wednesday, June 27, 3 PM ET

Official/designated WG members in attendance: Erin Hogan (Chair), Alan Myers, Bob Pauley, Craig Taborsky, Doug Gotham, Ezra Hausman, Hisham Choueiki, Michael Goggin, Ryan Kind, Tyler Ruthven, Wil Burns, Ralph Luciani and Bruce Tsuchida (CRA), Youngsun Baek and Alex Smith (ORNL); Dave Whiteley, Flora Flygt and John Buechler (EIPC).
Facilitator: Catherine Morris (Keystone).

**NOTE: To facilitate the rapid pace of the MWG meetings during June 2012, these summaries will focus on the action steps taken during the meeting and next steps resulting from the meeting. Details of modeling discussed will be captured in the matrix of inputs (see below) and the output framework drafts, to be updated regularly on the [Phase II – MWG page](#) online. Recordings of the webinars will also be posted.*

1. Wind shape diversity

- CRA proposed a methodology for incorporating greater wind shape diversity, on a geographic basis, within regions or balancing areas with large amounts of wind, in order to be more reflective of the fact that, in reality, all wind units in a particular region would not be producing the same amounts of wind at the same time.
- This proposal involved creating geographic or locational clusters of wind by dividing areas into quartiles (or quartiles-of-quartiles, in particularly large areas) using latitude and longitudinal specifications.
- The shapes that are created will not be assigned directly to the locationally relevant buses because this information is not available; rather the average wind shapes will be assigned randomly across the area so that they are roughly equally represented.
- The MWG discussed whether this might introduce more errors than are resolved by the methodology, given that the differentiated wind shapes would be assigned randomly across the area.
- They discussed the concern about “oversmoothing” or not being able to capture the transmission impacts of the variations in wind that would typically be present across these areas.
- The methodology involved assigning the same number of megawatts for each region, while making appropriate adjustments for Class 3 and Class 4 wind.
- The group ultimately decided to support CRA’s proposed methodology, as presented.
- There is very little offshore wind in S1 and S3, so only one wind shape will be used for the added wind. In S2, there was significant offshore wind, so, assuming there are enough data points available, a similar approach to the quartile method will be used for the offshore wind added in PJM-E and VACAR in S2.
- Once a wind shape is assigned to a particular unit, that wind shape will remain constant across the three scenarios (whether that unit is “activated” or not in that scenario).

2. DR Price Curve

- Because DR was modeled as a pseudo-generator, the DR price is the main lever available for trying to dispatch DR in a manner similar to real life.
- In Phase I, the price used was \$750/MWh for all DR, and it was deployed very little. In Phase II, even if the average price should mimic that of Phase I, it may help to provide a price curve so that some DR may be dispatched at lower prices.

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- Using the NADR model, ORNL created a price-responsive DR price curve, showing DR penetration at various prices, and then broke that into a “step” curve with six different price points or blocks (the maximum GE MAPS will allow), and then allocated the non-price-responsive amounts to the different price blocks proportionally.
- The group discussed various parameters for determining the upper and lower bounds and the overall shape of this price curve.
- ORNL proposed a price curve based on the fact that during peaking times in NEEM, DR was in competition with CT units. By looking at the locational marginal price, they determined how to start the price curve at the level where it would be competitive with CTs, and then stepped it up from there in order to achieve a weighted average price of \$750/MWh. This was to create an opening for a higher, more realistic level of DR to be called upon.
- There was some discussion of whether, in the base run, it would make more sense to adjust the curve so that the starting price would be slightly higher – for instance, equivalent to the price at which the least-efficient CTs would be called upon.
- Ultimately the group decided to proceed with ORNL’s proposed DR price curve (as shown on slide 7 of the ORNL presentation) for all three scenarios.
- The group agreed that one or more of the sensitivities might be used to vary the DR price curve, depending on the results of the base run.

3. Modeling output framework

- CRA briefly reviewed their list of data that will be provided on an hourly basis, in an attempt to accommodate stakeholder requests.
 - Hourly generation by type, by NEEM region (including DR)
 - LMPs by load area within NEEM regions
 - Flow gate flows and shadow prices
 - Demand (an input)
 - 8760 output of wind units *absent curtailment* (can compare pre- and post- to determine if there was curtailment)
- CRA confirmed that emissions data would be provided on an annual, not hourly, basis.
- Stakeholders will review their data requests and CRA’s outputs framework memo, and see if there are any remaining issues.

4. Next steps

- The MWG will hold its next call Monday, July 2, at 1 p.m. ET, during which members will further discuss the modeling output framework and sensitivities (including request from Canada that new renewable units be added in sensitivities).
- Erin Hogan will put together and distribute a presentation on the MWG’s recommendations and circulate it to the MWG prior to Monday’s call so it can be sent to the SSC July 2.