

Summary of Modeling WG Webinar
Wednesday, June 13, 3 PM ET

Official/designated WG members in attendance: Erin Hogan (Chair), Brenda Harris, Craig Taborsky, Ezra Hausman, Hisham Choueiki, Maryam Sharif, Michael Goggin, Michael Wegner, Ryan Kind, Stan Hadley, Stuart Hansen, Wil Burns, and Michael Wegner and Marya White (for EISPC), Ralph Luciani and Bruce Tsuchida (CRA); John Buechler, Flora Flygt, and David Whiteley (for 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.***

Outstanding Questions from last MWG Webinar on Input Data

- DR Pseudo-Generator Dispatch Supply curve: Stan Hadley is working on a supply curve that averages to \$750/MWh and doesn't get into baseload area. GE-MAPS doesn't dispatch DR as in real life, so have to develop a workaround. MWG will need to evaluate the results of the workaround and consider using a sensitivity to analyze this factor.
 - In Scenario 1 some regions have 25% of peak served by DR, so there is the need for careful attention.
 - The vision of Scenario 1 would most likely use DR more often and for longer periods than is allowed now (i.e. Smart Grid landscape).
- Wind shape stratification approaches: CRA approach begins with the Phase 1 single curve by NEEM region and stratifies into multiple curves using CRA's statistics (disaggregating) or NREL approach using EWITS more granular data, maybe even bus-level (building up).
 - Main concern with CRA's approach is granularity on balancing area level instead of NEEM areas (much larger, e.g. MISO-W). So far, working on a dual track until evident whether NREL can make those calculations in time for CRA's analysis.
 - Update on wind shape example from CRA: can circulate a short write-up of shapes by NEEM region with MISO-W example, but will not do randomizing of data points for a shape for each subgroup until sure of how many shapes going to use.
- CRA will treat DR as a committable resource, and whether it will be committed will depend on the supply curve pricing.
 - DR has no startup cost, no minimum generation level, so one of the first economic resources? Would commit lower \$/MWh points on the curve, but not the more costly ones. The supply curve for pricing (and the heat rate curves, etc.) is the same in both the commitment and the dispatch steps of GE-MAPS.
 - Bruce Tsuchida: Regions vary on commitment process, so whether real-time pricing (dispatch step only) would be better may depend on regional approach (day-ahead commitment, or other). Discussion to continue next week.
- Commitment rates between regions: Question of allowing Scenario 1 generation to be committed across regions (e.g. DC ties)
 - S1 issue only. [see Final 3 Electrical Maps from Stan] Looking at the power flows across the NEEM regions, adjust by taking NEEM's annual (a seasonal range) flow for MISO-W to PJM and convert to a range of MW that PJM would add and MISO-W would subtract for their respective commitment phases. In dispatch step, entire EI run, but commitment pool process is what needs a workaround in this case. The concern may

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not be very important since in S1 that has all the wind, the worry is the difference between CC and CTs, since coal plants are largely deactivated.

- How to deal with committing some resources that are going over AC not DC lines? –CRA may be able to set AC/DC levels of exports ‘jointly.’
 - How to deal with power that flows *through* a region? There was not a lot of power going out of PJM, so it should not be too big of a concern. In real-time, wind will flow according to transmission constraints.
 - SPP exporting a lot of wind, and not all to Entergy: SPP-N and Nebraska to MISO may warrant another export assumption...this is affected by the size of commitment pool related to the DC lines source and sink—discussion to continue.
- Heat rate increments - see Stan Hadley’s (ORNL) presentation for data from WECC units compared to NEEM results
 - Clarifying issue of heat rates for existing vs. planned: For existing plants, CRA has 4 different CC heat rate aggregate rates to apply.
 - For new CC plants, going to a two-step would not work well, since CC’s typically work on a single block (when they’re turned on, they run full load) in GE-MAPS.
 - May be easiest to go with CRA numbers for existing plants, since there is very little difference. No opposition to using CRA’s step function for existing incremental heat rates to be applied to all CCs, CTs and coal.
 - For very new units, much lower heat rate curve/ step-function will be assumed (‘CC-6’).
 - Consensus was to use CRA data.
 - Outputs Framework
 - Update on format example from CRA: other reports too focused. No good example available.
 - Request for annual fuel consumption by NEEM region is feasible.
 - In first part, will look very similar to Phase I reports.
 - Request to highlight specific states’ outputs, e.g. peak electric demand day, gas consumption→ not likely, but CRA will investigate.
 - Request to have hourly data instead of annual at NEEM region-level (8760 hour data for generation by capacity type, demand, and flows across major interfaces)→ CRA will need to hear more specificity about details and more input from other sectors, then check with David Whiteley to determine feasibility. Discussion to continue.

ACTION ITEMS:

- CRA: break down wind load shapes in MISO-W as an example region.
- Stan Hadley: DR price to be stratified into a schedule
- Next MWG call: **Monday, June 18, 1-2:30 PM EDT**