

WREZ Model Development Subgroup Meeting

AGENDA

Objectives of the meeting

- *Develop an overall consensus on the objectives and form of the model/s to be developed so that LBNL & B&V can start model development*
- *Develop an overall consensus on some of the key modeling issues (in remaining available time, after consensus is reached on objectives/form)*
- *Agree on a process of receiving further feedback from the modeling sub-group*

Overview of the Meeting – Paul Smith/Jerry Smith GTMWG Co-chairs

Proposed Objectives of the Tool

1. Enable LSE resource planners (and regulators) to compare more distant renewable generation options with local renewable and non-renewable resource options.
2. Identify where other LSEs may have interest in the same renewable area(s) for the purpose of finding opportunities for collaboration that can lead to the cost-effective construction of transmission to preferred zones.

Discussion and consensus on proposed objectives and alternative objectives (e.g., Are utility planners/regulators primarily looking for a tool to analyze specific transmission lines in some detail, or are they looking for a tool to analyze the competitiveness of a broad set of REZ resources on a screening level (which then becomes the starting point of the analysis of specific transmission lines)? Or, are both of these objectives equally valuable?)

Form of the Tool to Meet the Objectives

Optional forms of the model - LBNL & B&V will present at least two alternative concepts, and pros and cons of each

Discussion to develop consensus on the form of the model/s .

Identification of Key Modeling Issues and Group Preferences on How to Proceed to Resolve the Issues

- 1) Feasibility of evaluating delivery of electricity from multiple REZ to one or more load zones
- 2) Default and user supplied model inputs

- 3) Market value adjustment components for inclusion in the tool
 - a) Capacity value: an adjustment based on the contribution of a resource toward meeting the capacity needs of the system
 - b) Time-of-day energy value: an adjustment based on the value of energy from the marginal unit displaced by energy from a renewable resource
 - c) Integration costs: The costs of additional reserves, load following capability, and unit commitment issues due to the variability and uncertainty in the production of a renewable resource
 - d) Additional factors may play an important role in comparing the relative market value of different resources.
- 4) Use of transmission segments in calculating distance from REZs to load zones
- 5) Number of load zones
- 6) Sensitivity analyses
- 7) “What if” capabilities
- 8) Data inputs needed from ZITA Work Group, GTMWG sub-groups and others
- 9) Non-traditional model outputs such as water use, emissions, land use
- 10) Other issues

For each item, LBNL & B&V will present their initial thinking on how we might address the issue, followed by open discussion to develop some direction.

Relationship of LSE Resource Model and development of supply curves for Renewable Energy Zones

NREL / B&V plans for developing supply curves

Model Development Sub-Group and LBNL/B&V interaction in executing the next steps