

Zone Identification and Technical Analysis Work Group Workplan

I. Overview

The ZITA work group will identify all renewable resource potential in the Western Interconnection, and from that pool of resources will determine geographically concentrated priority renewable resources. This will be accomplished by building upon state renewable resource assessments while incorporating new and existing region-wide resource specific studies, particularly NREL's wind/solar integration study. The identified resource areas will serve as a base upon which restrictions relating to land use, regulatory mandates (or limitations) and environmental sensitivity would be layered. Through consensus of the stakeholders, including close coordination with the E&L work group, these restrictions will be identified and characterized as areas for potential mitigation or for exclusion.

Once the REZs and their restrictions have been identified, the work group will assess resources to provide cost and operational characteristics for similar groupings of resources within the zone, for ultimate use in the model. This will include identifying costs of inputs into the model, including, but not limited to: net capacity factor of the resource (hourly, seasonal, and annual), operating characteristics, transmission interconnection/collection costs, development costs (including capital cost), local factors relating to inputs for resource (i.e. water for solar, transportation to resource, etc.), mitigation costs for environmentally sensitive lands and other local factors. The work group will coordinate with consultants Black and Veatch to incorporate and ground truth input assumptions for the supply curve models.

II. Goals and Objectives of ZITA Work Group

A. Western REZ Goals

- Identify all commercial renewable resource potential and characterize the most economically competitive renewable energy resources in the Western U.S.
- Identify land use, environmental and developmental constraints
- Identify where development should be avoided
- Provide a listing and characterization of REZs and potential transmission corridors
- Identify suitable renewable parameters (MW, portfolio mix, seasonal performance, operational impact on reliability) for input into modeling detailed conceptual transmission development options.

B. Short-term tasks (by January 2009, end of Phase 1)

- Identify resource criteria for initial study areas using NREL Base Resource maps and other resource information for other sources.
- Develop additional criteria, in conjunction with the Environment & Lands work group, to further narrow the study areas. These criteria will be based on classification areas that are off limits by law or policy.
- Receive information from states as to state sensitive areas
- Receive input from renewable developers as to area of interest, which may validate and/or enhance NREL Base Resource maps and other resource information as needed.

- Produce maps showing all renewable resources, with screens resulting in candidate study areas. Further screens will be applied to the candidate areas based on land use and environmental screening from E&L.
- Coordinate activities with other WREZ work groups.
- Apply economics to the selected areas and develop cost components for modeling.
- **At every step**, document the development of the criteria and assumptions. Make information available for public review and comment.
- Produce and release a product (e.g. a report or presentation) summarizing the work done by the group and outlining next steps.
- Develop an informational tool that can be enhanced and adjusted over time.
- Provide data inputs to the GTMWG.

C. Work Group Meetings

- The ZITA work group will meet on a regular basis facilitated by conference calls, webinars, and on-site meetings. ZITA co-chairs will work with the WGA representative to coordinate and notify all members of upcoming meetings. It is expected that the group will schedule twice monthly calls and only meet when necessary. It is also anticipated that specific tasks may be identified and require a subgroup of participants to address the task outlined. These findings will be presented to the larger group and included on the website.

III. Next Steps and Timeline

A. Expertise of Work Group (June)

1. Seek representation by all 11 states, Canada and Mexico
2. Resource Planners from LSE's in GTMWG to provide insights on the areas that are being represented
3. Seek tribal representation
4. Establish contact for each state on providing GIS layer data for their sensitive areas
5. Seek balanced and diverse stakeholder representation

B. Finalize 2008 Work Plan (by June 23, 2008)

1. Draft workplan to group by June 16
2. Schedule Webinar
3. Present workplan to Technical Committee

C. Gather Base Resource Data to Identify Initial Study Areas (June – August)

1. Work with NREL to consolidate/gather resource maps and to provide layering and GIS.
2. Coordinate with states which have already assessed their renewable resources, particularly Colorado, California, Arizona, and Nevada.
3. Determine how to fill in the gaps for those states without resource assessments and treat the differing basic assumptions and methodologies of the existing resource assessments.
4. Work with NREL to identify initial filters.

5. Test and select screening criteria to identify initial study areas.
6. Document and update website with selection criteria for review. Conduct regular conference calls and webinars to inform stakeholders on the process.

D. Define Technology Threshold

1. Define renewable technology threshold criteria for inclusion into study areas, taking into account states/countries and NREL's definition of 'developable' resources which include but are not limited to:
 - a. Resource generation potential (i.e. resource class, hub height)
 - b. resource availability and electricity generation characteristics (i.e. seasonality, temporal variations, nominal size for plant)
 - c. resource generation interdependencies (i.e. proximity to available raw materials, water use, land-use footprint in area/MW, transportation logistics)
 - d. required topography and geographic location
2. Provide Resource Threshold criteria to the Generation and Transmission Modeling Work Group as to the assumptions and inputs that should be modeled for different renewable resources.
3. Host regular conference calls with resource experts and all interested stakeholders. Stakeholders will reach out to any outside associations to pass along upcoming calls and relevant decisions made by the group.

E. Work with Environment and Lands group as they identify filters that take into account environmentally sensitive and other developmentally constrained areas (August - November)

1. Lead discussion on hydropower and biomass but allow E&L to participate.
2. Lead discussions on specifically identified land issues:
 - Military lands
 - Slope/Topography
 - Land cover
 - Urban areas, airports, wetlands and water bodies
 - Tribal lands – ZITA will conduct outreach to tribal communities to see if they would like to identify any specific lands within REZs as developable.
3. Discussions with E&L on additional criteria to apply and gain understanding of additional filters for the candidate study areas. This information will be considered in conjunction with technical information on developable resources.
4. Consolidate filters from all facets of the study into a GIS layer (?) management tool to demonstrate impacts of various criteria on the study areas.
 - Electronic consolidation of information.
5. Host joint meeting open to all interested stakeholders that will inform the public of the process and decisions made.

F. Generate a list of Areas of Interest utilizing information and filters developed in previous steps

G. Work with the Generation and Transmission Modeling Work Group (September – December)

1. Provide locations and generation and interconnection characteristics of candidate priority areas to the Generation and Transmission Modeling Work Group
2. ZITA will work with Black & Veatch to validate cost and performance information.

H. Supply Curve Analysis (November- December)

1. Review cost assumptions with Black & Veatch for use in modeling.
2. Address Black & Veatch's request for data as necessary.
3. Ensure that the data that is provided meets the modeling working groups needs.
4. Document areas of uncertainties and note sensitivities to assumptions.

I. Non-REZ resources

1. All information during the study will be retained and made available for public review.
2. Non-REZ renewable resources will have maps that will be used in publicly-released report(s) by the Steering Committee, as part of the overall WGA WREZ project.
3. The ZITA work group will develop a format to present this information (ie. Similar to the Colorado SB 07-91 process).

J. Post Proposed Zones for Public Comment (December – January)

1. Produce and release a product (e.g. a report or presentation) summarizing the work done by the group and outlining next steps.