

Western Governors' Association

Western Renewable Energy Zones Zone Identification and Technical Analysis (ZITA) Working Group October 10, 2008 9:30 – 11:00 MDT

CALL SUMMARY

Next Steps

- **The Technical Committee will review resource criteria and Draft Candidate Study Area maps at their October 15-16, 2008 meeting.**
- **The next ZITA WG call will go over technology assumptions.**
- **Geothermal, Canada and Mexico data will be incorporated into the CSA maps.**

Action Items

- **Claude Mindorff to send Black & Veatch proposed solar and wind cut off points for British Columbia.**
- **Todd Fisher to send Black & Veatch the names and locations of two tribes with wind projects in WY.**
- **Jason Berry to send the UT draft geothermal resource assessment to John McCaull, Ryan Pletka and Dave Hurlbut.**

The purpose of this call is to discuss the draft candidate study area (CSA) maps, and wind and solar criteria that will be presented to the Technical Committee (TC) at their October 15 – 16, 2008 meeting.

Draft Criteria Maps Discussion

- Lisa Szot, ZITA Working Group (WG) Co-Chair indicated that at the September 22-23 WG meeting, the group finalized resource criteria, and then divided into smaller groups to develop draft CSAs. The draft CSA maps were compiled and turned into preliminary composite resource maps.
- All of the U.S. data needed in order to map the CSAs is available. Mexico and Canada data is not yet complete, but the same resource criteria will be applied to those maps for GIS analysis, after the data is obtained. It is anticipated that the Canada maps will be developed before the Technical Committee meeting.
- Geothermal data is not yet layered on the maps, as geothermal criteria and maps are being fine tuned with help from the Geothermal Energy Association (GEA). It is anticipated that this information will be added before the TC meets. USGS also released an updated assessment of U.S. geothermal resources, including maps and locations for medium high temperature data, unidentified hydrothermal resources, EGS and hot dry rock resources. This information will help define resource allocation, inform areas of higher geothermal potential, and reinforce geothermal capability within CSAs. John McCaull indicated that the GEA is trying to increase participation and data sharing in the WREZ process from geothermal companies.
- NREL and Black & Veatch will present the following at the TC meeting for TC review:
 - Draft CSA composite maps.
 - Summary of the minimum criteria for the project based on the finalized criteria, and associated data sets.

- Possible options and alternatives on how to reduce the resource data sets.
- It was indicated on the call that the Technical Committee will discuss (among other things):
 - Whether there will be at least one CSA in every state.
 - Which wind class to use for each region.
- The ZITA WG discussed the solar documents that were distributed.
 - The main solar criterion is 6kw/m²/day.
 - The solar table shows resources available for each state, and what criteria they meet in order to demonstrate high quality resources in each state.
 - The solar maps will later display the BLM's ACESs and layers for the inventory of roadless areas, as well as CA RETI exclusions.
 - There is no risk of undervaluing solar potential in each state, as any given region could add to solar capacity.
 - Solar resources of lesser capacity could also be shown, in order to inform statewide potential.
- The ZITA WG discussed the wind documents that were distributed.
 - Wind is more widely available than solar. Therefore, there is uncertainty as to what resources will be used by states or what will be developed for REZs.
 - Different class thresholds will be applied to different regions. In general, a class 4 threshold will be applied to most regions, and a class 3 threshold for states that do not have high quality wind resources. (e.g. WY and MT can set a threshold for class 5 wind, but class 5 wind would not be imported from WY to CA, as it is more cost effective to develop lesser resources locally). The cost of transmission will help determine which class to use. States may export or import wind - these considerations are cross-hatched on the maps.
 - A potential threshold to quantify wind resource density is to consider areas with more than 1500 MW within a 100-mile radius. Each grid square on the map represents an area that has the technical potential to support long distance transmission.
 - There are areas of high resource potential on tribal lands. However, the most economically viable areas are being identified, regardless of land designation.
- After the Technical Committee meeting, more technical assumption analysis will be conducted on the CSA map, with input from the Environmental & Lands WG on environmental exclusion areas.

Additional Discussion Items

- The WREZ process' primary consideration is how to meet load demands with the highest quality resource. Transmission will be built through to best resources. A resource's viability lies in its proximity to transmission, but transmission lines will not be resource-specific.
- The end WREZ report will contain proposed REZs, without resource attribution.
- The Generation and Transmission Modeling WG will consider that any transmission development will carry side benefits, including promotion of local economic development. This will be characterized in the supply curves.
- **Claude Mindorff will send Black & Veatch proposed solar and wind cut off points for British Columbia.**
- Steve Arenson indicated that military space screening would not occur at the CSA level, but at the REZ level. There may be additional land holding exclusions based on legal restrictions. The DoD will work with WGA soon to determine those areas.
- Some CSAs or portions thereof are already developed. Although these areas are minimal, they will be subtracted from the entire potential.

- The criteria reflect the most competitive resources in each state, and out of those areas, a secondary screen will demonstrate which areas are the most likely to be competitive on an interstate basis.
- Todd Fisher indicated that he has wind project data for two tribes in WY. **Todd will send Ryan Pletka the name and location of those tribes.**
- **Jason Berry will send the UT draft geothermal resource assessment to John McCaull, Ryan Pletka and Dave Hurlbut.**
- The CSAs will be progressively narrowed down to REZs.

Administrative Items

- The next ZITA WG call will be after the Technical Committee meeting, to go over the technology assumptions and discuss how to move from CSAs to REZs.

Call Participants:

Steve Arenson	OSD Sustainability Office
Jason Berry	Utah State Energy Program
Peter Brehm	Infinia Corp.
Angus Coyle	BP Alternatives
Linda Davis	Western Governors' Association
Josh Finn	Black & Veatch
Sharon Firouz	First Wind
Todd Fisher	NARP
Ed Higginbottom	BC Transmission Corporation
David Hurlbut	National Renewable Energy Lab
Bart Jones	TransCanada
Mark Lausten	DOE Solar/Sentech
Julia Levin	National Audubon Society
John McCaull	Geothermal Energy Association
Claude Mindorff	WindEau, Inc.
Amanda Ormond	Ormond Group LLC
Dan Ozenne	San Diego Gas & Electric
Ryan Pletka	Black & Veatch
Howard Schwartz	WA State CTED Energy Policy
Elaine Sison-Lebrilla	Sacramento Municipal Utility District
Ron Steinbach	Tri-State Generation and Transmission Association, Inc
Carl Sylvester	ESRI
Lisa Szot	NM RETA
Cyrus Tashakkori	E.ON Climate and Renewables
Henry Tilghman	Vestas
Cameron Yourkowski	Renewable Northwest Project
Carl Zichella	Sierra Club
Jason?	Vestas

Facilitation:

Morgan Poncelet	Kearns & West (recorder)
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