

Western Renewable Energy Zones Project
Technical Committee Meeting
May 29, 2008 – Salt Lake City, UT
Summary and Next Steps

Welcome and Introductions

Abby Arnold, Kearns and West, facilitated the Technical Committee meeting and began by walking through the purpose of the meeting and proposed agenda. This was the first meeting of the WREZ Technical Committee, and the main objectives were to introduce the WREZ project, describe the organizational structure, clarify the role of the Technical Committee and work groups, and determine a schedule and next steps for moving forward. The group chose to alter the agenda to work through the lunch break and end the meeting by 1pm to allow Technical Committee members an opportunity to participate in the Resource Zone Identification Work Group meeting in the afternoon. Ms. Arnold referred Committee members to a set of proposed ground rules and asked them to send any comments or edits to WGA staff. WGA staff will combine the comments and prepare a revised version for members to review and adopt at their next meeting.

Role of Technical Committee in WREZ Project

Rich Halvey, WREZ Project Manager at WGA, provided an overview of the project organization and began a group discussion of the role the Technical Committee will play in determining work products for Phase I of the WREZ. Mr. Halvey described the purpose of each Phase of the WREZ, with the Phase I work product being a map of renewable energy zones within the Western Interconnection. A copy of the presentation is available at: <http://www.westgov.org/wga/initiatives/wrez/brief5-28/Halvey2.ppt>

A portion of the presentation addressed a proposed timeline for the Technical Committee and designated work groups to complete Phase I of the project. Several Committee members expressed concern about completing Phase I in the current timeline and stressed the importance of expediency, coupled with the need to balance with a vetted, complete work product that has achieved buy-in from stakeholder groups. The concerns of the group were also put in the context of DOE's desire to have a viable work product at the end of the calendar year to assure funding for the WREZ project will continue through an Administration change. Further discussion of the Phase I timeline was deferred until later in the meeting.

Other general issues that were raised included a recommendation that the Committee consider developing a conceptual track for the project with the ultimate goal of designing the project to achieve Phases 3 and 4. The concern was that there may be process mistakes in Phases 1 and 2 that make completing Phases 3 and 4 difficult, and what the group decides now should be within the context of how to achieve Phases 3 and 4.

Another member asked for a clear action item requiring work groups to present their zone criteria to the Technical Committee for review before moving too far forward in the process. Mr. Halvey responded to this concern by explaining that the work group chairs

each have a seat on the Technical Committee for the main purpose of maintaining lines of communication between the two groups.

Lastly, the group discussed the need to address certain assumptions or premises on which the WREZ project is based to make certain that work groups are working within these premises in developing work products, and to assure that Technical Committee members all hold a common understanding of the project's design. A broader conversation of project assumptions took place later in the meeting.

Lessons Learned from State REZ Processes

Representatives from Colorado, California and Nevada presented on important lessons learned from their state REZ projects for Technical Committee members to consider. Dave Hurlbut, NREL, spoke on behalf of the Colorado REZ project and identified the following lessons:

- Aggregating resources into concentrated zones made sense for some renewables (concentrated solar and wind) and not for others (residential PV). Identifying zones for concentration of resources serves a purpose for transmission corridors but wasn't as relevant for smaller community resources.
- The Colorado project decided not to designate zones for smaller distributed resources. In WREZ, utility scale concentrations of renewables would benefit from transmission and the identification of zones.
- It was a challenge to put available environmental information into a form that could be integrated into GIS analysis. A recommendation for WREZ is to identify areas of environmental concern, but have the data in a format that can be mapped, and get GIS metadata in a format that can work into the calculations for supply curves.
- For geothermal in particular, Colorado was able to pull data from state studies to achieve a more robust analysis of the resource. Utilizing state studies in the WREZ would be a benefit.
- Colorado looked at wind and CSP resources separately to determine where the resource concentrations were. There are values in combining them in same development plan, but it might be too confusing to view on maps when mapping the entire Western Interconnection.

Traci Bone, California Public Utilities Commission, spoke on the California RETI process and provided the following recommendations to the Technical Committee:

- Don't try to reinvent the wheel - use information that is already available, and build on that.
- Make transparency a priority. Do everything you can in as transparent a manner as possible, but balance that with the need to get work.
- To facilitate transparency and communication, have a website and post everything there - meeting agendas, minutes, presentations, mission statements, draft reports or resolutions, etc.
- Use technology to facilitate participation in meetings (i.e. Web Ex and Video conferencing).

- Recognize that all stakeholders are busy, so project staff should make it easy for them to participate by preparing draft work for them to review.
- Get the schedule for the initiative out for everyone at the beginning of the project so that everyone is clear on what the expectations are.
- Get agreement from key stakeholders on basic principles and goals of the project at the start (i.e. definition of consensus, transparency as a goal, process for resolving disputes among members, roles of the different groups).
- Make sure stakeholder representatives understand their obligations to the process especially in terms of representing their interest groups.
- Active facilitation of the working groups is essential.
- Consider establishing a small “coordinating committee” that is responsible for working with the Technical Committee chairs to ensure that the project stays on track.
- Decision-making agencies need to be actively involved in the WREZ effort and clear about what they need from the WREZ process. In RETI, each decision-making agency added an attachment to the Mission Statement that attempts to do this.
- Put your processes and understandings in writing - turning back to Mission Statement or charter when clarity is needed to reach consensus or resolve a dispute.

Lastly, Christy Morris, Nevada Division of Minerals, presented the process Nevada undertook for the RETA project and identified the following lessons for WREZ:

- Keep zones with realistic criteria, understand that every state will have experts in different areas and different states will have different criteria.
- Maps will be key in every phase of the project. It is essential to have capable GIS contacts because maps will be morphing as the project progresses.
- Paper maps have limitations – there is only so much you can show on paper without losing clarity. Nevada put maps into an interactive website and the final product for WREZ should be an interactive map.

Question & Answer

Committee members asked questions of the three presenters that centered on the timelines in which the other states worked, and how data was collected. Representatives from Colorado and Nevada both stated that it took their groups approximately 6 months to identify areas and prepare draft maps – given the criteria they were working under. Dave Hurlbut added that his prospect for the WREZ is that any supply curve analysis will be predicated on the data that is already there – NREL is not planning to do new surveying. He’s hopeful that supplemental data can be collected from work group members or through their stakeholder networks. There was a suggestion that the Technical Committee discuss exactly what their expectations are for treating resources outside of the REZ and get those directions down in writing. Members also embraced the idea of forming a “coordinating group.”

Technical Aspects of the California RETI Process

Ryan Pletka, Black & Veatch, gave a presentation on the technical aspects of the RETI project. Black & Veatch are also the contractors who will be working with NREL to provide technical support to the WREZ project. Mr. Pletka outlined the purpose of the RETI process as being a statewide planning process for the next state upgrades of transmission lines. While California has a goal of getting to 20% renewable energy by 2010, RETI is focusing on 30% renewable energy by 2020 in their transmission modeling. In the first phases of RETI they focused on getting buy-in from stakeholders on the methodology, assumptions, and framework used to identify zones, so that when the areas are mapped people will understand the thinking that has gone into their development. For RETI, it has taken 6 months to establish assumptions, methodology and initial resource screening for the state as well as areas beyond California's borders.

Question & Answer

One member asked if the data in California was screened to eliminate renewable projects that are not actually "viable." Mr. Pletka replied that while viability of a project is difficult to objectively assess, they considered environmental factors, constructability of resource (can you build roads to them, etc.) and characterized each project in a particular area with their own consistent assumptions.

In response to another member's question Mr. Pletka stated that the assessments being done by Black & Veatch in areas outside of California do not include as deep a level of analysis as those within the state. The technical team may analyze the out-of-state areas deeper to consider the environmental impacts of particular development projects in the next project phase. The team is not, however, assuming that if an area is outside of California that it is automatically developable.

Project Assumptions

Committee members returned to the discussion of identifying agreed upon "assumptions" or principles that would guide the project and, in particular, the tasks of the work groups. Some members began brainstorming specific assumptions for discussion which included:

- How to incorporate Canadian resources and analyses in the process;
- How or whether to address energy storage technologies;
- How or whether to consider emerging technologies in the mapping process;
- How or whether to consider both large and small hydro improvements;
- How or whether to consider Smart Growth technologies in the assessment;
- How or whether to assess alternative to wires such as distributed generation;
- How or whether to address environmental justice issues;
- And the need to work with WECC staff to ensure reliability concerns are addressed.

The group recognized that some of their assumptions will fall into project principles for discussion and debate, while other issues may be best addressed within individual work groups. Ultimately, the Committee decided that members would send assumptions or principles to WGA staff to collect and synthesize. A complete list of items will be brought to the Technical Committee at their next meeting for discussion and

consideration. The final list will be available for the group to refer to as substantive and process questions arise.

WREZ Phase I Methodology

Group discussion then turned to the methodology for achieving Phase I of the WREZ project – identifying and mapping renewable energy zones within the Western Interconnection. Members discussed the importance of setting an appropriate timeline for the project, understanding that the data will always be imperfect and incomplete. Determining what is possible to achieve within a realistic timeline is critical. The work groups will also have to struggle with determining the data that is currently available, what additional information is needed, and what resources WREZ has to help in collecting data. Tribal nations need to be included throughout the project, and it will be important to keep focused on how the work of Phases 1 and 2 will need to set up successful Phases 3 & 4. Additionally, DOE set specific timeline targets for the project that fit the needs of the agency, so keeping their interests in mind is important for long-term funding of the project.

The following methodology for criteria development was discussed:

- Identify areas for consideration (NREL base maps);
- Identify additional factors to narrow that area based on RE resources, incorporate any other filters we identify (wildlife, lands, etc.), and you are left with candidate study areas;
- Perform supply curves on candidate study areas;
- The areas selected after supply curves become proposed REZs;
- End of phase 1 is the identification of final zones (approved by Steering Committee).

The Technical Committee tasked the three work groups with developing specific work plans and timelines for Phase I of the project that they think can be realistically achieved given the methodology above. Work groups were given until June 23 to make proposals to the Technical Committee for their review and approval.

Technical Committee Membership

Members discussed whether they should be allowed to have designees or alternates on the Committee. Ultimately the group decided that alternates will be allowed with the understanding that it is the members' responsibility to keep their alternate fully educated and informed on the project, and an alternate cannot be allowed to rehash old conversations or bring up old decision items. WGA expects Technical Committee members to attend in-person Committee meetings. In the event a member cannot attend a meeting an alternate can participate on their behalf. If a member would like to have an alternate they should designate that person as soon as possible by notifying WGA staff. In turn, WGA staff will attempt to keep in-person meetings to a minimum and will provide alternate means of meeting participation (conference calls, etc.) when possible. The Steering Committee will have to approve a change in the charter to this affect.

Work Group Membership

Work groups will attempt to finalize their membership as much as possible by June 10, making sure key stakeholder groups are represented. Work groups will send their membership lists (through the WGA) to the Technical Committee for review. This project is an open process, so there is the understanding that work groups are open to any interested party and membership can be updated as often as is needed. However, work group members are expected to be active participants, engaging in all work group discussions and providing support in the form of outreach to interest groups, soliciting information/data, drafting and/or reviewing materials and providing prompt responses to Technical Committee and WGA requests.

Outreach

WGA will develop an Outreach work group and will present an initial outreach strategy to the Technical Committee on a later call.

Wrap-Up/Next Steps

The Technical Committee approved the proposed work group chairs and discussed scheduling future conference calls, webinars and meetings. They also discussed the need for WGA to begin soliciting available data from state agencies and other organizations. The following next steps were identified:

Task	Who	When	Status
Post Work Group registrants online for Technical Committee.	WGA staff	May 30	Done
Revise Technical Committee roster.	WGA staff	June 3	Done
Identify “coordinating” group for Technical Committee – 4-6 members for WGA staff to turn to for guidance as project moves along.	WGA staff & Tech Committee co-chairs	Before June 10	Done
Schedule regular monthly call for Technical Committee, schedule first 2hr webinar & set-up web support/CentralDesktop for Committee.	WGA staff	By June 13	
Finalize Work Group membership and send to Technical Committee (through WGA staff). Group discussed having “observers” on Work Group for people who just want to follow the activities of the group vs those who commit to doing the work.	Work Group Chairs	June 10*	
Send comments on draft ground rules to WGA staff. Technical Committee will review and approve on a future call/webinar.	Technical Committee members	June 10	
WGA send out “call for data” to Technical Committee and Work Group members for their circulation to all parties with relevant	WGA staff	By June 13*	

data for resource and wildlife areas.			
Send project “assumptions” to WGA – underlying premises of WREZ for the public, and that the Work Groups will need to work within.	Technical Committee members	June 15	
Notify WGA staff of TC alternates, if desired, with the understanding that alternates should be fully briefed on the progress of the group and will not “rehash” old discussions.	Technical Committee members	June 15	
Work Groups submit to Technical Committee (through WGA staff) revised workplans and schedule.	Work Group Chairs	June 23*	
Compile revised workplans and “assumptions” and update timeline; send out to Technical Committee.	WGA staff	Wk of June 27	
Send to WGA “call for data” responses in appropriate format.	Technical Committee, Work Group members, other stakeholders	By June 30*	
2-hour Technical Committee call/webinar <ul style="list-style-type: none"> • Review/approve workplans • Approve ground rules • Discuss assumptions/presumptions • Discuss future schedule? 	Technical Committee	Wk of July 7	

* Technical Committee chairs are consulting with the work group chairs to determine whether this deadline needs to be extended and will modify the dates if they see fit.

Attachment A: Meeting Participants List

Name	Title	Company	Region	Phone
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Anderson, Jerald	President	Mt. Wheeler Power	UT	435-855-2189
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