

Western Renewable Energy Zones Project
Technical Committee Webcast
July 18, 2008
Summary and Next Steps

Introductions

Abby Arnold, Kearns and West, facilitated the Technical Committee webcast and began by introducing those on the webcast and conference phone. She walked through the purpose of the meeting and proposed agenda. The webcast agenda is available in *Attachment A* and a list of Technical Committee attendees is available in *Attachment B*.

Expected outcomes of the webcast:

- Technical Committee and Work Group co-chairs will brief Technical Committee members on operating groundrules, assumptions for Phases I and II of the project, workplans for the three work groups, and a proposed process for identifying renewable energy zones (REZs) in Phase I.
- Members will have the opportunity to comment on and discuss each document, and that feedback will be used to update the material.
- Except for the operating groundrules, the Technical Committee is not expected to achieve consensus on any of the documents during this webcast.

Operating Groundrules

Abby Arnold provided a brief overview of the operating groundrules and Technical Committee co-chairs Tom Darin and John Savage asked the committee for comments or suggestions on the document. Bob Cleaves, a new addition to the committee representing the biomass industry, had only received the groundrules that morning so was unable to object to or support them. While it was understood that that Mr. Cleaves required additional time to review the material, given there were no comments from members, it was decided to adopt the groundrules. However, the groundrules are a dynamic document and can be amended should the need arise.

WREZ Premises/Assumptions

Rich Halvey presented an overview of the premises document, and reminded the committee that they requested the document at the first meeting in May. The premises document is intended to record the underlying premises for Phase I and II of the WREZ project for all members to agree upon early in the process. WGA staff worked with a Coordinating Group, comprised of Technical Committee and Work Group co-chairs, DOE/NREL staff and additional technical support, to outline draft premises, building upon suggestions made at the May Technical Committee meeting. Rich highlighted that the majority of discussion in the Coordinating Group has been on the project's treatment of renewable resources that fall outside of identified REZs and a proposal for how to address hydropower and biomass resources. The group did not reach consensus on those issues, but is bringing the document to the Technical Committee for their thoughts and comments.

Discussion Items

Technical Committee members discussed hydro and biomass resources, suggested setting boundaries for including technologies that are currently under development, and questioned the focus on non-development areas and how the definition of those areas will be utilized by Western states.

As it is currently drafted, the premises document states that supply curves for REZs will be developed excluding hydro and biomass resources. However, if hydro and biomass resources significantly affect the gigawatts produced in a zone, thereby justifying need for transmission, the resources will be screened to determine their development potential and incorporated into the supply curve. Brian Weber, E&L work group co-chair, noted that the work group supports this treatment of hydro and biomass because the inclusion of hydropower and biomass, even “small hydro,” could affect the work group’s ability to develop its recommendations. Adding these resources would require adding an additional assessment task, by requiring the group to assess the environmental impacts from resources other than solar, wind or geothermal.

ZITA work group co-chair Amanda Ormond added that it was the impression of some parties that biomass and hydro resources were not great enough to solely define a REZ, therefore time and effort should not be spent to include these resources in the initial supply curves that will be used to define proposed REZs. Ron Lehr added that when considering hydro and biomass in the analysis, some parties may discuss the need to have some renewable resources back-up other resources (i.e. using hydro to back up wind generation). They noted that it is important to focus the conversation on matching resources with load, not matching resources with resources. Finally, Larry Mansueti confirmed that his idea of the purpose of WREZ is to provide information to state officials, LSEs, and other stakeholders to meet the WGA Clean and Diversified Energy Advisory Committee report, supporting 30,000 MW of clean energy by 2015, which relates to all types of renewables.

Some members of the Technical Committee representing the hydro and biomass industry had serious concerns about the current language in the premise document. Additional questions were asked regarding the types of technologies that would be considered (i.e. pumped storage). Others offered suggestions for how hydro resources, in particular, have been handled in other zone identification processes. DOE noted that Idaho National Laboratory has current information for heavily screened sites with hydro potential and British Columbia offered that PG&E considers the province as one zone for integrating all types of renewable resources.

Co-chairs and WGA staff recognized there needs to be an education process to help the group understand the significance of hydro and biomass resources in supporting large-scale transmission, identify definitions for those resources in the context of WREZ, and understand the impacts those resources would have on the work plan of the E&L work group. This discussion item was tabled for a later date.

- ***Next Step:** The ZITA work group will schedule a conversation with relevant parties to review resource data and make a proposal to the Technical Committee*

- on the treatment of biomass and hydro resources in WREZ. The E&L work group will provide input regarding the affect biomass and hydro will have on their work.*
- ***Next Step:*** *The ZITA work group will discuss definitions for biomass and hydro resources in the context of the WREZ project.*

Dan Schochet raised the issue of how WREZ will define the time horizon for emerging renewable energy technologies that will be considered in the zone identification process. Amanda Ormond said that the ZITA group will take on the task of defining developing technologies and determining how or whether they are considered in the identification of resource potential outside of REZs.

- ***Next Step:*** *ZITA Work Group will address time horizons for developing technologies in the resource and zone identification process.*

Additionally, Steve Ellenbecker suggested editing the language in item 1.e. of the premises document, which states that non-development areas are not enforceable until actual statute is established but the areas may become policy of WGA. The member suggested that the second sentence in this item, addressing WGA policy, be removed because regardless of WGA policy non-development areas will fall within the jurisdiction of individual states, and those state will have the authority to determine any policy regarding non-development areas.

- ***Next Step:*** *WGA will consider this suggestion and make a recommendation to the Technical Committee.*

Steve Arenson proposed editing item 1.b. in the premises document to reflect considerations of military airspace.

- ***Next Step:*** *Steve Arenson will send his suggested edits to WGA (Madeleine West).*

Work Group Workplans

The Technical Committee heard remarks from work group co-chairs on each of the three work plans. Members were then asked for their comments and feedback with the understanding that no final decision was to be made to adopt the workplans. After receiving comments from the Technical Committee, co-chairs will update the workplans and WGA staff will prepare a comprehensive synthesis document.

ZITA Work Group

Amanda Ormond provided an overview of the ZITA workplan, highlighting that it is still a work-in-progress and as new issues are raised from the Technical Committee they will be incorporated in the workplan as necessary. The resource identification process for the work group will begin with receiving a set of criteria from NREL and Black & Veatch which the work group will review in a stakeholder decision-making process. The group will strive to define resources and develop candidate study areas that will be narrowed based on resource criteria and criteria from the E&L work group. Then, Black & Veatch will apply the economic analysis to those remaining areas.

Tom Darin questioned why in the current timeline the supply curves will be done before

all of the environmental criteria are available from the E&L work group. As indicated in the work plans, the timeline for the wildlife exclusion areas will come after the supply curves are proposed to be completed; therefore supply curves will not reflect all of the exclusion areas. Rich Halvey clarified that additional wildlife or environmental screens will be applied as a subsequent step in the process. The initial supply curves will be applied to narrow the zones with currently available screens such as resource criteria from the ZITA work group and identified regulatory screens from the E&L work group. The analysis of the supply curves will be updated to incorporate additional wildlife and environmental factors as they become available through the E&L work group process. Amanda Ormond added that the E&L and ZITA work groups are still planning a joint workshop to coordinate on regulatory screens and resource criteria applied to the supply curves.

Steve Arenson pointed out that non-environmental land use concerns, like military lands, permitting restrictions, and topography were not addressed in either the ZITA or E&L workplans. Amanda noted that this was to be done in conjunction with the E&L work group, but that the ZITA work group will adjust their work plan to reflect this oversight.

- **Next Step:** *Amanda Ormond and WGA staff will update the ZITA workplan to reflect that ZITA will be leading the discussion on non-environmental land use concerns. The specific environmental and non-environmental land issues will be identified in each work plan to make sure no issues are left out.*

E&L Work Group

Brian Weber outlined the E&L workplan for Technical Committee members. He highlighted how the work group will be coordinating closely with the Western Wildlife Habitat Council (WWHC), a group of state fish and wildlife agencies formed from policy recommendations in the WGA Wildlife Corridors Initiative. The WWHC will coordinate the collection of state agency data and the mapping of wildlife corridors and sensitive ecosystems. The E&L work group will provide input to the WWHC and will also work in tandem to identify regulatory screens for land issues.

Alex Daue, representing Pam Eaton on the Technical Committee, suggested adding “other sensitive lands” to the list of areas where the work group will attempt to reduce impacts from renewable energy - under the goals and objectives section of the workplan.

- **Next Step:** *Work Group co-chairs will consider this suggestion.*

Tom Darin asked how the E&L work group is planning to deal with potential gaps in data across state and country boundaries, and among different species. A concern would be if the work group moved forward in the midst of data gaps, implying that if there is no data for a particular area then that area is assumed to be developable. Brian Weber responded that consistency in data has been a discussion item for the work group and is a priority so as not to bias proposed REZs. The group made a decision to dive into the process, understanding that a goal is to achieve consistency in data, but first looking to see what data is available and what level of consistency already exists.

- **Next Step:** *Include in E&L workplan protocol for handling data gaps.*

Tom Darin also asked whether there is a planned outreach strategy for the E&L work group to enhance buy-in from constituency groups. He wondered whether NGO members are expected to be the only WREZ representatives reaching out to their community. Karen Deike, WGA staff coordinating the WREZ outreach strategy, said that achieving buy-in is a key goal for the WREZ. A draft outreach strategy is currently being prepared with WGA and DOE, and it includes working with work group co-chairs and members to collect contacts for the development of an outreach database. The database will be utilized to send out updates on WREZ progress, solicit comments on work products, create necessary listserves for work groups and issues areas, etc. Karen asked that Technical Committee members begin sending in contact information for the database.

Generation and Transmission Modeling (GTM) Work Group

Jerry Vaninetti, GTM work group co-chair, summarized the workplan for Technical Committee members. He highlighted the two overarching tasks for the work group as providing guidance to LBNL in developing a model to evaluate the delivered price of power from various REZs, and guiding WREZ project staff to engage in the WECC transmission planning process. The GTM work group will review existing models and consider necessary model features, then LBNL and Black & Veatch will develop the WREZ model based on input from the work group.

Tom Darin noted that a bullet of the workplan under “Interface with Other WREZ Work Groups” states that the GTM work group will use inputs from the E&L work group to identify conceptual transmission projects to deliver energy from “priority” REZs to load centers. Tom wondered how some of the identified REZs will be considered priority for conceptual transmission. Jerry Vaninetti and Tom Darin agreed that removing the word priority would leave the opportunity for the GTM work group to determine in the future which REZs will receive conceptual transmission.

- *Next Step: The GTM work group will remove the word “priority” from the second bullet under “Interface with Other WREZ Work Groups” on page 1 of the workplan.*

Steps for Development of REZs

Rich Halvey described a proposed process for the WREZ to complete Phase I – identification REZs. The step-by-step process describes starting with base renewable resource maps and from there identifying which areas should be excluded from a REZ based on resource criteria or wildlife, lands and sensitive ecosystem information. The process map describes that areas will be considered candidate study areas as they are being defined, and will not be proposed REZs until the all of the criteria screens and the economic analysis have been applied. When the work groups have completed their analysis that information will be sent to the Technical Committee to identify REZs. The Technical Committee’s recommendation will go to the WREZ Steering Committee for final approval.

Steve Ellenbecker, staff to Governor Freudenthal, and Dianne Nielson, staff to Governor Hunstman, offered the suggestion that the phrasing of WREZ documents be put in a

different light. Instead of characterizing the decision-making process in Phase I of the WREZ as determining non-development areas, the project is really focused on identifying areas where renewable energy development is encouraged. Non-development areas are necessary to identify only for the purpose of establishing REZs, for the ultimate purpose of transmission planning. Steve and Dianne offered that the purpose of the WREZ is not to memorialize decisions on what areas are developable and what areas are not, but to make transmission decisions. Additionally, REZs and non-development areas will fall within state and provincial jurisdictions and the WREZ project cannot determine the treatment of those areas. Other members added that state agencies and state representatives are involved in the Phase I process for WREZ, so it may be that the positions of the individual states on development and non-development areas carry some weight in the process.

- **Next Step:** *The Coordinating Group and work groups will think through Steve and Dianne's idea to alter the phrasing of many of the WREZ documents, taking the focus off of non-development areas and emphasizing areas where development is encouraged for the purpose of transmission planning.*
- **Next Step:** *Include process steps for determining REZs in the synthesized work group workplan document.*

Wrap-Up/Next Steps

- **Next Step:** *Technical Committee members send individual comments on the premises document and work group workplans to WGA (Madeleine West) by Friday, July 25.*
- **Next Step:** *WGA will prepare a synthesized version of all three workplans and send that to Technical Committee members by August 8.*
- **Next Step:** *WGA will send out a scheduling e-mail to set a date and time for the next Technical Committee webcast (sometime around the week of August 18).*
- **Next Step:** *WGA staff will work with work group co-chairs and the Coordinating Group to resolve "parking lot" issues in the workplan synthesis.*
- **Next Step:** *If Technical Committee members have comments on the webcast (technical issues and/or suggestions for process) please e-mail WGA (Madeleine West).*

All Next Steps are identified below:

Task	Who	When	Status
E&L WG co-chairs will consider adding "other sensitive lands" to the list of areas where the work group will attempt to reduce impacts from renewable energy.	E&L WG co-chairs	On next conf call (July 22)	In Progress
WGA will send out a scheduling e-mail to set a date and time for the next Technical Committee webcast (sometime during the week of August 18).	WGA	By July 24	Completed
GTM work group will remove the word "priority" from the second bullet under "Interface with Other WREZ Work	GTM WG	On next conf call (July 24)	Completed

Groups” on page 1 of the workplan.			
Technical Committee members will send individual comments on the premises document and work group workplans to WGA (Madeleine West).	Technical Committee	By July 25	
If Technical Committee members have comments on the webcast (technical issues and/or suggestions for process) please e-mail WG A (Madeleine West).	Technical Committee	By July 25	
WGA will consider whether non-development zones may become WGA policy and make a recommendation to the Technical Committee.	Coordinating Group	On next conf call (July 30)	
The Coordinating Group will discuss altering the phrasing of many of the WREZ documents, taking the focus off of non-development areas and emphasizing areas where development is encouraged for the purpose of transmission planning.	Coordinating Group	On next conf call (July 30)	
ZITA work group to schedule a conversation with relevant parties to review resource data and make a proposal to the Technical Committee on the treatment of biomass and hydro resources in WREZ. The E&L work group will provide input regarding the affect biomass and hydro will have on their work load.	ZITA WG	Before Aug 8	
ZITA work group co-chairs will update the workplan to reflect that ZITA will be leading the discussion on non-environmental land use concerns. The specific environmental and non-environmental land issues will be identified in each work plan to make sure no issues are left out. Steve Arenson will send specific edits to the work plan, if necessary.	ZITA WG co-chairs	Before Aug 8	
ZITA work group will add to their workplan identifying definitions for biomass and hydro resources in the context of the WREZ project.	ZITA WG	Before Aug 8	
ZITA Work Group will update workplan to address time horizons for developing technologies in the resource and zone identification process.	ZITA WG	Before Aug 8	
Include in E&L workplan protocol for handling data gaps.	E&L WG	By Aug 8	

WGA will include steps for determining REZs in the synthesized work group workplan document.	WGA	By Aug 8	
WGA will prepare a synthesized version of all three workplans and send that to Technical Committee members.	WGA	By Aug 8	

Attachment A: Agenda

WREZ Technical Committee Webcast
Friday, July 18, 10am – 12pm MDT

Proposed Agenda

Time	Agenda Item	Lead
10:00 am MDT	Introductions/Roll Call	Tom Darin and John Savage, Committee Co-chairs; Rich Halvey with other WGA Staff; and Abby Arnold, <i>facilitator</i>
10:05 am	Review Agenda and Expected Outcomes Expected outcomes: <ul style="list-style-type: none"> - Consensus on operating ground rules (<i>attached</i>) - Briefing and discussion of Assumptions document (<i>attached</i>) - Briefing and discussion of Three Work Group Work Plans and timeline (<i>attached</i>) - Briefing and discussion of "steps to develop REZs" (<i>attached</i>) 	
10:10 am	Review and Adopt TC/Work Group Groundrules <ul style="list-style-type: none"> - Review ground rules - Call for consensus 	
10:25 am	Review and Seek Comments on Draft Assumptions Document <ul style="list-style-type: none"> - Review draft assumptions document - Questions and Comments 	
10:40 am	Review and Seek Comments on Work Group Workplans <i>Criteria Work Group (ZITA WG)</i> <ul style="list-style-type: none"> - Review workplan - Questions and Comments 	Amanda Ormond and Lisa Szot, Co-chairs; Linda Davis, WGA Staff
11:00 am	<i>Environment and Lands Work Group (E&L WG)</i> <ul style="list-style-type: none"> - Review workplan - Questions and Comments 	Tom Darin* and Brian Weber, Co-chairs; Shaun McGrath, WGA Staff *Tom Darin is sitting in for Pam Eaton and Carl Zichella
11:20 am	<i>Generation and Transmission Modeling Work Group (GTM WG)</i> <ul style="list-style-type: none"> - Review workplan 	Paul Smith and Jerry Vaninetti, Co-chairs; Doug Larson, WGA Staff

	- Questions and Comments	
11:40 am	Stepping Back From Individual Workplans: Review Sequence of Steps to Develop REZs and General Schedule - Review steps - Questions and Comments	Rich Halvey, WGA staff
11:55 am	Review TC Progress and Direction for Next Steps	Tom Darin and John Savage
12:00 pm	ADJOURN	

Attachment B: Participants' List

Western Renewable Energy Zone Project Technical Committee Webcast July 18, 2008

Co-chair – Tom Darin, Western Resource Advocates
Co-chair – John Savage, OR Public Utilities Commission
Bob Anderson/Jim Byrne – Western Grid Group
Steve Arenson– OSD Sustainability Office
Dana Cabbell – Southern California Edison
Bob Cleaves – USA Biomass Power Producers Alliance
Alex Daue *for Pam Eaton* – The Wilderness Society (*Environment & Lands WG Co-chair*)
Steve Ellenbecker – WY Governor's Office
Tom Fair – NV Power & Sierra Pacific
Hatice Gecol – NV State Office of Energy
Katherine Gensler – Solar Energy Industries Association
Traci Bone *for Dian Grueneich* – CA Public Utilities Commission
Jeff Hein – CO Public Utilities Commission
Greg Jergeson – MT Public Service Commission
Julie Keil – National Hydropower Association
Ken Eklund *for Paul Kjellander* – ID Office of Energy Resources
LaVerne Kyriss – WAPA
Ron Lehr – American Wind Energy Association
Wendy Wallace *for Steve Lindenberg* – U.S. DOE EE
Will Lutgen – NorthWest Public Power Association
Les MacLaren – British Columbia Ministry of Energy, Mines & Petroleum Resources
Elliot Mainzer – Bonneville Power Administration
Larry Mansueti – U.S. DOE OE
Bevan Laing *for Ian McKay* – Alberta Energy
Brad Nickell – WECC
Dianne R. Nielson – UT Governor's Office
Amanda Ormond – Ormond Group LLC (*RZI WG Co-Chair*)
Dan Schochet – Ormat Technologies
Cameron Yourkowski *for Rachel Shimshak* – Renewable Northwest Project
Linda Silverman – U.S. DOE
Richard Smart – Community Hydropower Consulting
Robert Taylor – Salt River Project
Yvonne Taylor – Western Municipal Conference
Jerry Vaninetti – TransElect (*Modeling WG Co-Chair*)
Rebecca Wagner – NV Public Utilities Commission
Brian Weber – PacifiCorp (*E&L WG Co-Chair*)
Jessica Youle – AZ Department of Commerce

WGA Staff:

Linda Davis

Karen Deike

Rich Halvey

Pam Inmann

Doug Larson

Madeleine West

Abby Arnold