

Western Renewable Energy Zones Project
Technical Committee Meeting
April 23-24, 2009
Meeting Summary and Next Steps

Decision Items & Next Steps

- The TC will have a conference call during the week of April 27 to review the final decision made at the meeting.
- WGA will send Steering Committee members “hub” maps with background information and instructions for reviewing.
- States will decide what hubs they want illustrated on the maps and will document the hubs, including providing documentation of wildlife sensitivity data in a footnote to each hub.
- A draft TC report and a “hub” map will be sent to the TC.
- At the May meeting the SC will review the report with map, comment on it, and send to the Staff Advisory Council with a recommendation to send the report to Governors for their June 2009 meeting. The SC will also recommend whether to/what to send out for public comment.
- If the SC is not able to agree on sending a report to the WGA Staff Advisory Council (SAC), the SAC will decide on next steps and whether the report ought to go forward to the Governors.
- WGA will collate all state maps, and will send the TC results from the May 14 SC meeting.
- Before June 2009, WGA staff, in consultation with the Chairs of the E&L WG, WGWC and the ZITA WG will develop a work plan for the E&L WG to review state wildlife data and its application to screen the hubs to address wildlife sensitivity concerns. The work plan will also address ZITA’s role in review of the wildlife sensitivity data and results of the hubs.

NOTE: All of the documents referred to in this meeting summary are available on the WGA’s WREZ web page for this meeting: <http://westgov.org/wga/initiatives/wrez/technical/briefing4-24-09.htm>.

DAY 1 – April 23

Welcome, Introductions, Overview of TC Objectives for Meeting and Agenda

Dianne R. Nielson and Steve Ellenbecker, Co-Chairs of the WGA Staff Advisory Committee, welcomed the Technical Committee (TC) to the meeting.

Tom Darin and John Savage, TC Co-Chairs also welcomed meeting participants, and thanked them for their participation over the last year. Tom indicated that the main objective of the WREZ process is to identify the richest renewable energy resources in the West with minimal environmental impact and most economic transmission to connect the resources with the load. June move from Qualified Resource Areas (QRAs) to Renewable Energy Zones (REZs), and propose these REZs to the Governors in June. Tom asked that TC members keep this objective in mind, and respect other people’s issues and concerns. John indicated that the renewable energy zones have been picked up in draft federal legislation, which has focused national attention on this process.

Steve Black, Secretary of the Interior Salazar’s Energy Counselor, explained that he is observing this meeting to understand issues that the TC is working on. He indicated that Secretary Salazar embraces the WREZ project and urges the TC to work diligently toward near-term consensus, especially in light of the December 2010 deadline to begin construction on new renewable energy projects. Secretary Salazar would like to increase opportunities for renewable energy on federal lands, and is working to build this objective into an administrative solution under the existing FERC authority. Mr. Black indicated that there is significant level of planning needed in order to integrate all aspects of renewable energy

development, and the federal government is hoping for this kind of state/regional collaboration. He is available if anyone has questions.

Abby Arnold, Kearns & West facilitator, reviewed the meeting's agenda, milestones and objectives. She mentioned the three main decisions on which the TC should strive to reach consensus at this meeting:

1. TC recommendations on how to move from QRAs.
2. Discuss next steps for the Steering Committee (SC).
3. Develop policy recommendations for the Governors.

Rich Halvey, WGA, welcomed the TC and reiterated the national implications of this process. The WREZ project will provide the foundation for the interstate collaboration needed to meet growing energy demand, and calls for a new collaboration between load serving entities (LSEs) and states. The Governors are committed to meeting the goals set forth in the WGA's Clean and Diversified Energy Committee report. He emphasized that all TC members should be provided an opportunity to not only participate in but support the process.

Mr. Halvey also reviewed the TC charter, which states that the WREZ project focus is to identify areas that contain the best renewable energy resources that have the potential to provide electricity for the Western Interconnection. Mr. Halvey reiterated that Phase 1 of the WREZ project is to identify those areas that contain rich resources with good developability characteristics, and that can justify building new transmission. Phase 1 will result in a report that outlines the documentation behind the process and how REZs should be represented. Rich explained that not all states have provided wildlife data yet into the process through the Western Governors' Wildlife Council, as it is WGA policy to not release documents that states do not allow for public release. Therefore, the maps presented at his meeting will be draft only and not considered final.

Karl Gawell, Geothermal Energy Association, encouraged the TC to determine a path forward with the WREZ project, despite potential conflicts. He asked Rich what the TC's specific role is in the process, how the TC's work will be represented, whether the TC needs to come up with consensus group input, and whether there is room for the TC to question information sources and expand on agenda items in a dialogue with the Work Groups (WGs). Ms. Arnold suggested that as information at the meeting is discussed it will be important to be clear about what is in draft and what has had the benefit of TC approval. Ms. Arnold reminded the TC that the groundrules require that the TC do their best to reach consensus and if consensus is not reached, a report from the WGA staff and facilitator go to the SC reflecting items where consensus was not achieved.

Staff Advisory Council Input on Mapping to the WREZ TC

Dianne R. Nielson explained that the WGA Staff Advisory Council reviewed the TC draft report. The SAC wanted to reaffirm the WREZ goals, acknowledge the important work invested in the process, and made a series of suggestions for how to move forward with the WREZ report to the Governors, including suggestions for how to display resources and transmission hubs in each state, building on state approved wildlife data. (See attached SAC memo).

Some members of the TC thanked the SAC for their insights and reaffirmed the importance of working with each governor. The TC discussed how each Governor could propose how to portray their maps. Other TC members raised questions about a terminology used in labeling the wildlife maps. The term "avoidance" does not mean development is precluded in all states. In some states, avoid could mean an area where it is difficult to develop, but in other state, it could mean that the wildlife classification is significant enough that mitigation is not an option. The SAC suggested that states determine how information should be portrayed to developers.

Steve Ellenbecker presented Wyoming's proposal for how to present the wildlife and resource information in the June report to the Governors. In Wyoming, there are over 40 wind developers, seven major transmission projects, current BLM siting processes, and a sage grouse Working Group convened to avoid a sage grouse Endangered Species Act listing, along with other funding and project considerations. Mr. Ellenbecker encouraged the TC to seriously consider on-the-ground data and experiences. He reiterated that Wyoming is working to avoid a sage grouse listing, as the effects of a listing would be devastating to the wind industry and transmission projects, and would have a severe financial impact on the state's economy. Mr. Ellenbecker presented the Wyoming-endorsed map that shows an alternative REZ analysis of Wyoming resources, and highlights specific areas in Wyoming that would cause the least wildlife impact. He indicated that Gov. Freudenthal asked the TC to carefully express the WREZ maps and consider local and state priorities.

Environment & Lands Work Group Presentation

Brian Weber and Pam Eaton, Environment & Lands Work Group (E&L WG) Co-Chairs, presented the E&L WG process, progress to date, and feedback needs from the TC.

Brian Weber reiterated that E&L WG is a separate entity from the Western Governors Wildlife Council (WGWC). Through its charter, the E&L WG was established to recommend how wildlife data would shape the process, but the E&L WG and the WGWC need to better collaborate in order to determine how wildlife input is used to shape the final recommendations. The E&L WG received guidance and recommendations from the SAC and the WGWC, but the E&L WG needs direction on how the SAC and WGWC input will affect any WG determinations and how the avoid and sensitive areas ultimately affect the creation of REZS.

Action Item: *The TC needs to resolve the issue of how wildlife "avoidance areas" are determined, and whether the WGWC wildlife information goes to the SC for approval, or into the Phase 1 Report. The E&L WG also needs direction on the role of states in determining how avoidance or sensitive areas are considered for development.*

The group reviewed a handout listing the status of state wildlife maps, as well as draft QRA maps, and discussed the following:

- The GIS layers for only those maps approved by Governors will be displayed on the website. It is anticipated that wildlife categories will be on the website but not represented as specific data sets, as some data are sensitive.

Action Item: *The TC needs to determine what information to include in the report and what to post on-line as background information.*

- The difference between the E&L WG definition of "avoidance" and WGWC "avoidance" is that the former relate to policy interpretations and are not specific to wildlife. The wildlife characterizations in the WGWC maps have not been vetted through the E&L WG consensus process.

Action Item: *The issue of developability in wildlife avoidance areas needs more time to be considered.*

- It was clarified that the discount factor applied to wind and solar resources determines how much nameplate potential is available. This is a product of the Zone Identification and Technical Analysis WG (ZITA WG). The E&L WG discussed potentially recommending a different discount factor based on wildlife data. One approach to defining an avoidance area would be to

allow each state to define what it thinks is a suitable application on an area-specific basis. Brian Weber recommended a 'grill' type approach to zone boundaries.

- In creating a regional market for renewable energy, REZ maps include data mapped at different scales, which presents problems from a technical analysis perspective.
- The TC thanked the E&L WG for its work, and reiterated that the tasks at hand are both unprecedented and significant. It was indicated that although there are challenges to overcome in regards to terminology, wildlife data, data congruity and roles, that final REZs require an assessment of wildlife sensitivity.
- Pam Eaton indicated that the E&L WG is prepared to continue working through these challenges.

Action Item: *The E&L WG needs the following guidance from the TC and other WGs in order to recommend how the wildlife data should apply to QRAs, and move into next steps:*

- *Explicit delineation of the E&L WG role, ZITA WG role and WGWC role.*
- *Full data submittal from WGWC.*
- *Full public comment process where the public provides input into the wildlife categorization.*
- *Extended time to achieve these tasks.*
- *Definition of E&L role in Phase 2, conceptual transmission planning.*
- *A flexible economic model to allow for leniency in the wildlife data.*

Zone Identification and Technical Analysis Work Group Presentation

Amanda Ormond and Lisa Szot, ZITA WG Co-Chairs presented the ZITA WG work since the last TC meeting. At the beginning of the ZITA WG process, ZITA was directed to develop criteria to determine the highest quality resources in the Western Interconnection. After receiving preliminary wildlife data that removed significant portions of QRAs from contention, the ZITA WG revisited the discount factor for solar and developed potential scenarios to maximize concentrated resource potential in QRAs based on the draft wildlife criteria. The final wildlife data has not yet been compiled, and the ZITA WG asked for increased interaction with the E&L WG in order to work through any recommendations regarding the wildlife data and collaboratively develop REZs based on each group's data and criteria, and understand each other's perspectives.

Ryan Pletka, Black & Veatch, presented the QRA MW spreadsheets that take into account hypothetical changes to the ZITA WG criteria. The spreadsheet shows three different columns/scenarios, each broken down by resource

- MW resource potential with solar and wind resources discounted 96.5% and 75%, respectively.
- MW resource potential with solar and wind resources discounted 96.5% and 75%, respectively, and wildlife avoidance areas discounted 100%.
- MW resource potential with solar and wind resources discounted 95% and 75%, respectively, wildlife avoidance areas discounted 100%, biomass resources quantified and geothermal resources not excluded from avoidance areas.

A second spreadsheet showed:

- Raw resource potential in MW, with wildlife avoidance areas discounted 100%, no wind or solar discounts, biomass resources quantified and geothermal resources not excluded from avoid areas (about 10 times the amount of energy needed).

Mr. Pletka indicated that the tables reflect the resources only within QRAs, and do not reflect non-REZ resources. The spreadsheet is in draft form, as not all of the data is available yet and the wildlife avoidance data is still draft in many states. The ZITA WG evaluated whether there were revisions that could be made to bring QRAs that were at risk of not becoming a REZ to at least 1,500 MW (there is a 1,500 MW minimum threshold/100 mile diameter criteria to meet in order to be a QRA). The two main steps the

ZITA WG suggested taking were changing the discount factor for solar (results of which the first spreadsheet evidenced), and changing the boundaries to combine any neighboring QRAs that do not meet the 1,500 MW threshold, into one QRA. With the discount factor change four additional QRAs would reach the threshold, and five would not. If a QRA falls just slightly below the 1,500 MW threshold, it will still be considered.

TC Members made the following points:

- In order to provide for openness and transparency; it would be helpful to identify the specific criteria used, the principles behind them, and the subsequent actions that were taken as a result. This would address the concern that QRAs are being determined arbitrarily.
- Although they seem arbitrary, the QRAs align with existing commercial interest.
- The methods used are still iterative, and the ZITA WG is looking for feedback on the feasibility and applicability of these options. Modifying the discount factor is a “minor adjustment option” to work with the wildlife data presented that was developed for the TC to consider.
- Geothermal resources currently count three times toward meeting the 1500 MW threshold.
- This process has broad scale numbers that are similar to the California RETI process. Even though the goal of the process is to identify the broad potential for development, a “developability scale” would help define the process. The ZITA WG technical screens try to accomplish that.
- There is good alignment in technical potential with BLM leasing activity in Arizona, Nevada, and California.
- Supply curves will be developed for each QRA and different blocks of resources will be priced out.
- It was suggested that the E&L WG receive final wildlife data from the WGWC then hold a public comment period on that data. Developing an “Interim Phase 1 Report” for the WGA Annual Meeting could provide details on where the process currently stands, and the anticipated objectives.

Western Governors Wildlife Council

John Harja, Chair of the WGWC, provided background information on the WGWC’s wildlife categorization effort. Mr. Harja indicated that the WGWC is composed of senior-level state representatives, and it is not a closed group. The WGWC agrees that the WREZ project goal is to determine where the best renewable energy resources are, and to facilitate transmission to those resources, but that the intent of the wildlife recommendations need to be clear. The WGWC was established to map wildlife corridors and crucial habitat issues, and consider how those issues can be incorporated early into policy and planning processes. The WGWC did not provide an application of the wildlife data for the WREZ, only a broad prioritization of crucial habitat data as it relates to renewable energy development. These recommendations are not binding and do not carry any regulatory weight, they are for informational purposes.

Mr. Harja indicated that for the purpose of the WREZ project three levels of sensitivity were established; avoidance, high-sensitive and insufficient data. Some states prefer to use the word “crucial.” Avoidance areas do not mean “cannot develop,” but they mean that there would be significant development and mitigation issues to deal with due to critical habitat. States are providing the best possible data categorizations that they currently have available, but every state has a different perspective on the development implications of the categories. The WGWC was asked to provide this categorization data, and it was left to the E&L WG to decide how those categorizations would impact QRAs. The WGWC wants to be careful that the data is used as it was intended. Mr. Harja indicated that there is agreement on the intention of the definitions, but the challenge lies in agreeing on terms and definitions that fit the meaning of the wildlife designations and are consistent across the region.

The TC made the following points:

- Many TC members emphasized that wildlife data must be reviewed prior to use, and expressed concern that the WGWC process is not open to all stakeholders. Until wildlife data has been completed and reviewed, it should not be incorporated into the draft maps. The wildlife data could be represented differently as long as it's clear that it is not final.
- The WGWC was established to develop a better data system of providing wildlife information early in the planning process, but mapping is incomplete because of data gaps. The E&L WG and the WGWC should review the wildlife data and determine how to effectively use existing data, and ensure that projects can be properly developed.
- The ZITA WG and the E&L WG need to discuss how the wildlife data impacts the QRAs and decide how to best portray the information. The word "avoidance" has negative repercussions in the finance community. Wording and perception matter and are as important as the actual substance of the maps.
- The definitions of avoidance and high sensitive are confusing. The WGWC and the E&L WG need to be clear on the what the categories mean, as they can mean anything from "development will be unmitigatable" to "possible, but not on critical habitat."
- It was reiterated that the WGWC was asked for their best professional judgment on wildlife data over an 82 million-acre spread of land, to help the WREZ project identify REZs. The maps reflect the best advice about the environmental sensitivities when designating these zones, and this data needs to be publicly vetted.
- The implications of using a high level of granularity that takes large areas out of REZ contention could eliminate lands with excellent resource and economic profiles. The TC should determine what level of precision to strive for. One option would be to avoid precisely quantifying the REZs, and provide a range of possible development or energy capacity. Another option would be to modify the environmental criteria from avoidance/high sensitive to impossible to develop/hard to develop/easy to develop scale which provides guidance without prohibiting development. Trying to be precise can create roadblocks, when all that is needed is guidance, but the process also needs to inform where development is most feasible. WREZ cannot tell developers where to develop or where not to develop.
- Since the process is intended to review areas within the Western Interconnection where there are renewable energy opportunities that require transmission, curtailing those areas with stringent wildlife data seems extreme. Each area warrants a project-specific examination of wildlife impacts, in order to avoid putting global restrictions on lands that could send the wrong message to developers.
- It was suggested that the "avoidance" designation be changes to "high-sensitive" so as not to give them impression that development decisions are being pre-determined.
- These disagreements are all legitimate, but there needs to be a process moving forward that build relationships and trust. The President is calling for bold actions in figuring out how to build out renewable energy. The TC needs to make bold decisions in order to build transmission lines from good resources to the load centers that need it.

Action Item: *The TC needs to agree on what information can be provided to the SC by May and to the Governors by June.*

Summary of Public Comment

Liming Yang, UTIER

I am from China, and I am happy to be here and to hear what is being discussed, as the policy making process and decisions are very transparent. In China, coal is the #1 carbon dioxide and greenhouse gas emitter, although China is moving toward clean energy. I am working on a collaborative between Utah and China to create a model of green practices for China. We currently have a solar demonstration site, and a wind and biomass energy center. We are trying to use US experience to help China set up the

proper procedures, technologies and regulations for renewable energy development. China is struggling with environmental contamination and frequent regulatory changes that are not performed systematically. The industry needs to be involved in the regulatory changes. I am here to ask for people's interest in coming to China in May to offer advice to the Chinese government to help evolve the renewable energy industry and our resources. China needs a similar process to the WREZ process, with environmental remediation. We struggle with annual policy changes every year. This process shows that it is important to bring everyone together to discuss solutions. If anyone is interested in coming to China to help out, I would be happy to host you there.

Barbara O'Neill – EnXco

I work with enXco to develop wind and solar products, and I represent some of the views of other developers in this area. I would like to thank everyone for providing the opportunity for this collaborative process. We are happy to embrace this forum and work with the environmental, land use and wildlife interests. I would like to comment on the fact that the lands that have been identified have already been developed in many places, with oil and gas, minerals extraction, roads, telecommunication towers, and other needs. These developments managed to meet their economic objectives. From a renewable energy perspective, we all want to protect the environment and we are all interested in collaboration. Showing maps with broad brush areas that cannot be developed is difficult for the industry to defend. We need to take more time to understand the data and science, and understand where the maps come from. The science is fuzzy for developers right now. The implications of making the maps that we are currently considering would be difficult to undo. We want to make sure that the TC understands that the public will be opposed to these maps. In addition, landowners outside of REZs will have leverage to charge more for their land in highly sensitive or avoid areas. The call for renewables will certainly increase, and we should all work toward an end point and avoid limiting ourselves. I am hoping that everyone can be reasonable, and to not use the term avoid or the color red, with do not embrace the possibilities available to developers. Please carry out this process in streamlined and informed way.

Presentation of Visual Examples of Options for Displaying data, REZs and MW

David Hurlbut, NREL, presented a visualization of the maps with various criteria and assumptions applied to them. These visuals can inform what the next steps for the TC could be. NREL and Black & Veatch sought to take the data available as it was mapped, and develop a way to visualize the potential zones, to help inform a decision. Mr. Hurlbut displayed a variety of map layers that show:

- Potential centroids for regional markets
- High quality resource areas that could be delivered to nodes or substations
- Developable areas
- Gradient layers of existing resources
- An estimation of REZ resources
- The portion of resources that are in highly sensitive areas
- Gradients showing the type and quality of resources

The WREZ process is dynamic and changing. The resources that appear on the compiled map are those that went through the standard resource identification approach, that are of high enough quality and concentration, remaining after E&L WG wildlife sensitivities are applied. The hubs that remain after discount factors are applied include the E&L statutory/regulatory exclude areas and policy avoids. The maps show the substations and "hubs" where 1,500MW of renewable resource is available, and where transmission could be modeled. Earlier maps show the distinction. Mr. Hurlbut indicated that these maps are draft only and based on non-finalized data, provided in order to visually evaluate the different alternatives. When looking at the images, the TC should consider where the best location is to develop regional transmission that delivers the highest concentrations of the best resources to load centers. The centroids or hubs are considered the collection point for these resources.

The TC had the following discussion about the draft resource maps that were presented:

General Discussion

- It was expressed that viewing these maps was helpful to visualize the technical variations and how data can be interpreted.
- The wildlife data was compiled as a broad assessment, and only some states have been officially approved. The E&L WG and the ZITA WG have been struggling with how to use this data to develop maps, and how to show each step taken to reach the final maps. There is concern that the maps are based on arbitrary threshold determinations.
- The TC needs to use on-the-ground strategies in order to determine whether impacts can be mitigated. The Governors need to convey a message that many areas can be developed despite significant challenges.
- The TC needs to understand where all of the wildlife data comes from and what it means in terms of impacts to development, as some states have dramatically changed the maps from what the WGA previously used. All of the data used had been processed by NatureServe.
- It was reiterated that the process needs to focus on identifying the best areas to site interstate transmission that can bring renewable resources on line. The more efficiently the TC can identify the location of likely transmission, the more helpful it will be. The maps presented are not development maps and should not be used as such. The QRA maps provide an idea of the relative amount of renewable energy available under the current criteria, so that the process of inter-state transmission planning can move forward. Determining what the next step is, is more important than discussing wildlife values.
- Concern was expressed about using low quality wildlife data to categorize avoidance areas that may actually allow a specific project to be permitted. A potential solution to best portray wildlife data is to show a map only with a circle of potential resource that informs where transmission should go.
- In this stakeholder process the E&L WG requires more time to review the data. From the state wildlife agencies
- One categorization suggestion for wildlife data is to simply state how “careful” developers should be in light of wildlife concerns.
- It was reiterated that the WREZ process is an opportunity for all stakeholders to vet the data, lend credibility to the regional transmission approach, and inform national legislation around transmission siting. The TC has to be careful to maintain the transparency of transmission siting. To that end, determining crucial wildlife habitat within REZs cannot be rushed.
- The TC discussed whether it can provide the Governors with an Interim Report, in order to inform the Governors that work is still in process.
- While the ZITA WG criteria are technical, the wildlife designations are not as concrete. The combination of objective and subjective screening is more difficult. Even though the process is iterative, the final results need to be credible.
- It was indicated that the wildlife categorizations should be vetted on a state-by-state basis.
- In subsequent phases the TC and the WGs could further discuss concerns about the definitions, habitat data, and individual state needs. However, it was indicated that as the process moves into determining transmission corridors, the same challenges about wildlife issues will arise.

Action Item: *The TC needs to determine what recommendations will be sent to the SC.*

State evaluation of data and determination of QRAs discussion

- Each state could potentially decide how to categorize wildlife data on a state-by-state basis. The states should look at existing proposals throughout the region and evaluate ground development in their own states, in order to inform maps.

- Some TC members are concerned that states are not acting consistently in their consideration of wildlife data and expressed the need for all Governors involved in the WREZ process to be engaged and knowledgeable about the issues in order to indicate what types of maps work best for them. Although states should be provided flexibility in how their data is represented, there are disconnects between state and WREZ data. The TC needs to brainstorm potential options for states to depict information on a state-by-state basis but in a congruous way that works for all stakeholders.
- The SAC recommended an addendum to the Phase 1 Report that allows each state to present their state REZ efforts. It is important that Report reviewers are aware that other studies were conducted alongside the WREZ process.
- The wildlife data is not yet complete on a regional level, and will not likely be ready in time for the June deadline. A suggested path forward is to identify the resource potential in each QRA, and outline next steps for the E&L WG in recommending the application of wildlife sensitivities.
- Many of the TC members support a regional, rather than state by state, approach to REZ identification. Although there are state-initiated processes, the WREZ process should evaluate the resources on a regional basis in order to accurately compare resources for all states.
- It was reiterated that the WREZ process is accomplishing two separate tasks: a renewable resource assessment to demonstrate regional resource potential with excluded lands, and a wildlife screen that is becoming a state-by-state evaluation as each state has its own determinations on how development should occur. It would be a problem to develop maps that are incongruous with state permitting determinations. While the process should be cognizant of state-by-state preferences, the information should be combined to provide regional maps.
- Some TC members disagreed that the task at hand revolved around reviewing wildlife data and choosing between a regional or state-by-state approach to REZ determination. The TC should focus on definitions and instructions; let the state determine which cuts they would like to make to the REZs, then ensure that the quality of the data and its uses are clearly defined.
- It was indicated that although the definitions are important, the goal of fostering sustainable transmission projects that can be developed in a reasonable timeframe takes priority. Therefore, the maps that incorporate all relevant data available facilitate that goal. The final REZ determinations need to be in synch with the state data in order to inform transmission.
- The TC determined that it would not be possible to identify REZs without an analysis of wildlife sensitivity. As an alternative, each state could be provided a map with a number of centroids that were developed based on the QRA determinations and based on the QRAs less renewable resources within the wildlife avoidance areas. Each state could decide which centroids to include, and have the option to delete centroids if they wished (but not add any), and decide whether to include the “avoidance” areas on their state map. Centroids will be chosen on a state-by-state basis, and fed into the regional process.
- One TC member indicated that the TC seems to have digressed from its original intent of determining how to move the REZ resources to load centers. Although the WREZ process should utilize state-by-state data and on-the-ground data, a regional approach should inform what the states should do.

Hub/Centroid Discussion

- It was suggested to show a dot in a general QRA area whose size informs the relative energy potential in that REZ. However, states should not be allowed to add centroids. The WREZ process should ensure that no precedents are set in allowing states to depict their own centroids, as a state-by-state approach would yield a different result than a regional transmission mapping initiative, and this could be a “slippery slope.” The final maps should show more than just a centroid.

- It was indicated that the issue with wildlife data is that people do not understand it. Once the wildlife data is better understood, will the centroids still matter? In transmission planning, the location, size and/or amount of resource associated with a centroid is important to inform modeling. If there is additional information that could be incorporated into centroids, the centroids would not be obsolete.
- At this point the centroids are only used to provide data for the transmission planning model. Some TC members were concerned that if the centroids are determined at this point in the process that they will not be open to modification and states will have unfettered input into the centroids. There is also concern that since the intent of a REZ is to incorporate levels of wildlife sensitivities as well as the non-REZ resources, the centroids should incorporate wildlife data.
- It was indicated that future modifications to the centroid can be accommodated in the model.
- Determining centroids can be accomplished by displaying them in the Interim Report as a dot, and not reflective of MW. The centroids could be displayed with two screens: with and without the wildlife data. This approach provides the states latitude to demonstrate the work completed to date.

Interim Report Discussion

- A suggested modification to this approach was to omit the debate about definitions and wildlife issues in the Interim Report. The Interim Report could simply address the current accomplishments of the project and acknowledge that there are still issues that need to be resolved. Since the wildlife data is not fully understood, the Interim Report should not go into detail about those items.
- It was indicated that the open and transparent stakeholder process should be implied in the Interim Report. It was also indicated that the WREZ process is not a regulatory process. Therefore, the wildlife sensitivities can be expressed as such for the time being, with an indication that as a project is further developed, mitigation would be defined by the appropriate siting authority.
- The TC discussed whether to display non-REZ resources in the maps. In a subsequent phase, the resources not identified in a REZ could be evaluated as contributing to the regional market but not as a concentrated area of rich resources that can drive regional transmission.
- The main challenge is how to depict the process to date in the Interim Report. In the next phase, the process can further analyze the technology, wildlife impacts, and state data.

The TC took a break to allow the states to convene to determine what the next steps should be and made the following proposal for interim work and possible next steps:

Action Item: *David Hurlbut will create a map with resource area centroids. The size of the centroids is based on the resource potential in each QRA.*

Action Item: *The Interim Report to the Governors will highlight the main products that came out of Phase 1 so far:*

- ✓ *Common West-wide resource information.*
- ✓ *Common West-wide exclusion areas.*
- ✓ *Common technical cost/supply cost assumptions.*
- ✓ *A model with which to calculate the delivered price of power to load centers across the Western Interconnect.*
- ✓ *Individual state attention to the identification of resources.*
- ✓ *State review of wildlife data.*

The TC developed a series of next steps that were reviewed overnight, and modified the next day into Option A.1 and A.2 (see Day 2 discussion).

DAY 2 – April 24

Ms. Arnold presented a revised agenda for the day, based on discussions with the TC chairs. The TC will focus on their recommendation to the SC, receive an overview of Phases 2-4 from Doug Larson, and hear from the authors of the Phase 1 Report.

John Savage reviewed the TC process for reaching consensus and urged the TC members to focus their comments on what it would take for them to reach consensus and make a final decision, and provide language that will improve the final product.

For the greater portion of the morning meeting, the TC refined and developed three options to portray the WREZ maps, and in light of state-specific concerns regarding data portrayal: Option A.1 and Option A.2, and as well as a third option (Option A.3) that can be included in either option A.1 or A.2. These options are portrayed below.

OPTION A.1

- Show raw resource data centers/hubs/centroids:
 - Placeholders that are subject to further study in Phase 2.
 - Based on MW/h of energy available.
 - Provide a visual with resources within the centroids minus excludes and original avoids.
 - i. States decide whether to adjust centroids (delete any, not add any) and determine whether to ‘show’ wildlife sensitivity (avoid &/or high sensitive) resource area centroid.”
 - **i.a.** *Footnote* areas in centroids highlight that have wildlife sensitivity concerns (terms TBD)
 - QRAs are shown.
 - ii. The Interim Report would address the source of wildlife information, the QRA process, and provide an opportunity to link to the WGWC information, and suggest that the QRAs would be released for public comment.

OPTION A.2

- Show raw resource data/hubs/centroids:
 - Placeholders that are subject to further study in Phase 2.
 - Based on MW/h of energy available.
 - Provide a visual with resources within the centroids minus excludes and original avoids.
 - i. States decide whether to adjust centroids (delete any, not add any) and determine whether to ‘show’ wildlife sensitivity (avoid &/or high sensitive) resource area centroid.”
 - **i.b.** *Centroids are indicated with a visual or pie chart* whether (easily vs. less easily developed); footnote could be subject to change based on follow-up.
 - States can decide whether to show QRAs.

OPTION A.3 (to accompany A.1 or A.2):

- Appendix maps in TC report show wildlife maps approved by the Gov and QRAs

In order to reach these options, the TC engaged in the following significant discussion that provides the background on how the options were developed:

Centroid Discussion

- Yesterday's discussion indicated that centroids would be displayed, and each state could decide whether to include the avoid areas. TC members were split on whether to show the avoid areas, since the visual has significant meaning.
- The centroid is the spot representing the resources from a single QRA. The objective is to deliver power from those centroids to regional load centers. Some TC members are opposed to including QRA boundaries on the map, while some want the QRAs shown to reflect the technical work completed to date.
- The TC discussed many options to represent the maps, including:
 - Centroids on the maps that are associated with the original QRAs and adjusted by states, based on wildlife avoidance areas.
 - A pie chart over the QRA that visually indicates areas that have wildlife sensitivities and areas that do not. States could decide whether or not to use a pie chart to display wildlife sensitivities.
 - The centroids would be sized according to MW in the QRA.
 - Only show the dots without wildlife data, to avoid incorporating data that is not vetted by stakeholders. For this option, a footnote could be provided by the states indicating the sensitive wildlife areas. In the footnote, states could provide any information desired about wildlife sensitivities, including the information that would have otherwise been in a pie chart.
 - Provide a first centroid map that shows QRAs based on the ZITA WG process with centroids, and a second map with a wildlife overlay on the QRAs, to demonstrate what lands are still eligible to be in a REZ. Each state can decide what information to include and what to exclude.
- The current QRA maps do not include wildlife data, just the ZITA WG and E&L exclusions and policy avoids.
- One TC member expressed that if the states are to make decisions on where the centroids should be located within a QRA, they should be provided all the information available, including wildlife data.
- In the planning phase, states could be allowed to move within a QRA or remove the centroids as they see fit. Every state would have its own process to modify the centroids in partnership with the wildlife agencies and state technical staff. States will have the opportunity to decide which QRAs should be given a centroid based on their wildlife data analysis. States would be given instructions on how to choose the centroids.
- Each centroid must be linked to a QRA, but may or may not be informed by wildlife avoidance areas. Many TC members expressed concern that wildlife issues would not be addressed in the centroids, but another TC member indicated that centroids should show resource data without wildlife information since not all wildlife data is complete in every state.
- Some TC members indicated that the approach of developing a QRA maps with centroids does not adequately address all of the complex concerns that need to be acknowledged in the development process, nor does it represent the significant work completed to date.
- The TC discussed whether states would apply the decisions made across the regions and in a consistent way. Every state is in a different position. Some states would like to determine their own centroids.
- Centroids should indicate MW/h instead of MW.
- It was also expressed that the actual resource potential in the QRA needs to be demonstrated, as opposed to the nameplate value. Doug indicated that it is feasible to indicate MW energy in a QRA, as long as the centroid remains in the QRA. The centroids would eventually be used as transmission hubs in the model.
- It was indicated that it is important to reflect the ZITA WG and E&L WG's work to date, including QRA boundaries and work on statutory exclude and initial avoid areas.

- One TC member indicated that the maps that would be given to the states are high-level, and should not reflect all of the detail.
- For Washington, the specific resource designation is not as important as the regional sharing of renewable energy resources. Utilities need adequate guidance on what is developable, and where resources will come from in order to inform the transmission modeling.
- All states should understand the magnitude of issues that are still unresolved. Each state can then make a high-level decision about how to portray wildlife data in their state (footnote, pie chart, etc). The WGA would receive a state-by-state report of each state's determination.

Wildlife data discussion

- Some TC members expressed concern that the wildlife data needs to be reviewed by all stakeholders, not just wildlife experts. There are currently no maps that are fully vetted by the entire group of stakeholders involved in the process. If the wildlife data is not characterized in the maps, the E&L WG work will not be represented and states will not be able to see the full wildlife info.
- Wildlife concerns need to be recognized. If the wildlife data is not incorporated into the immediate next set of maps, the process must be extended to accommodate the E&L WG's need to further analyze and incorporate the data. The maps should be a step in the direction of establishing REZs.
- Depending on the interim proposal for map characterization, the next step could be to further analyze wildlife data and propose wildlife data concurrently with ZITA WG criteria.
- Idaho cannot live with the hierarchical wildlife classifications as displayed in public maps, as it is the state role to interpret wildlife data to developers, the public and interest groups. States should be able to adjust and determine what level of wildlife sensitivities to display. There is a lot of work to be done in order to communicate the wildlife data accurately on a regional basis.
- John Harja indicated that he can discuss the wildlife definitions with the WGWC.
- The E&L WG's priority is to help identify areas with significant wildlife issues. In its future role, the E&L WG would like to work with wildlife agencies to understand the key wildlife issues and how that affects the scale of development. The goal is to continue the process going forward.
- Some TC members expressed concern that deleting reference to the wildlife data does not give the reader a visual representation the difference wildlife statuses or magnitude of the wildlife data. The sources of wildlife information needs to be addressed in the final report, even as a reference to the web.
- It was indicated that the granular wildlife details need to be resolved after Phase 1 and that the wildlife issues should not be omitted from the report. There are sensitivities with including all of the wildlife data on the maps, but the Governors are able to understand these subtleties and act accordingly. Each state needs to resolve its wildlife data and it needs to be vetted through the stakeholders.

The TC voted on each option presented. TC members could vote on as many options as they desired. There were 34 "yes" votes for Option A.1 and 22 "yes" votes for Option A.2. There were 29 "yes" votes for option A.3. Option A.2 (showing the QRA with the raw resource) was therefore deleted. **It was determined that the TC "can live with" Option A.1.**

TC Review and Comment on Phase I Summary Report

Karen Deike and Ted Rose presented the status of the Phase 1 Report. They indicated that a small group of WREZ participants have been working on the report. Ted presented an overview of the main sections of the draft report, and a structure for moving forward. Key points from Ted's presentation are:

- The WGA wants to ensure that the key decision points made during the process to date are documented and made accessible. Although the question of how much detail to include in the report is unresolved, the WGA's goal is transparency and openness.
- If TC members are opposed to a particular approach or inclusion in the report, they may indicate that to a member of the drafting committee, or participate in the committee.
- It was requested that the Phase 1 Report accurately represent all of the issues, and that the process be indicated as a progress.
- Also unresolved is how to characterize the resources and the "non-REZ resources." It will be indicated that REZs are defined by scale, and that REZ vs. non-REZ determinations are not yet final. However, it will be indicated that any development within a REZ would complement other resource development to meet state needs.
- Ted indicated that the drafting committee will focus on precision in the language, and incorporate the overall discussion points of today's discussion. Modifications will be made to the report based on the outcome of the meeting. The Report will be drafted in consideration of future funding, transmission modeling, and next steps.
- The Interim Report from the Technical Committee to the Steering Committee will document the following:
 - Steps taken to get to TC Recommendation
 - Background, source and status of wildlife information and data
 - QRA identification process
 - Formation and role of WGWC
 - Role of and linkage to WGA Wildlife Corridors Initiative
 - E&L WG purpose and future
 - ZITA WG purpose and future
 - Public accessibility and involvement
 - Future work for the TC

The TC had the following discussion about the Report and Next Steps:

- It is important to meet the June deadline for a Phase 1 Report to the Governors. A WGA bylaw indicates that everything that is submitted to the Governors have a 30-day review period.
- It was indicated that the Report should acknowledge that public review of the maps is necessary.
- The Report to the Governors needs to address the challenge of simultaneously assessing resource area criteria and environmental issues in the areas.
- For the development community, it is important to represent information in a clear, consistent and transparent way.
- The Report should discuss all work completed to date, including QRAs, the status of the wildlife data, in addition to the fact that there are unresolved issues, such as how to portray wildlife sensitivities in the maps.
- It was indicated the WREZ is a regional process in collaboration with states. States can end up with different outcomes, but there is back and forth needed between the TC and states at this point in the process in order to identify innovations and problems so that the regional interests can work collaboratively on a common result. The Report should reflect that.
- The TC discussed whether it can develop an Interim Report for the Governors, and if there are work products that can be sent to the SC for their May 14 meeting in time. It is not possible to change the date of the May 14 SC meeting.
- The TC is hesitant to rush through the schedule in order to develop deliverables. The products that are submitted to the SC need to be put through public review. It was indicated that the SC should receive an Interim Report with the state maps at their current stage, information on the status of the maps and of the state-by-state wildlife data. The SC and the SAC will make

decisions on how to move forward, whether to put the maps out for public comment, and on recommendations to the Governors.

***Action Item:** The TC will write a proposal that is succinctly stated, in order to clarify what was decided upon at the meeting and to ensure that there was consensus on Option A.1. The TC will then develop a report for the SC.*

Next Steps for Phases II, III, IV and Technical Committee Involvement

Doug Larson presented on next steps for the WREZ process. This presentation (Phase 2 – 4 presentation.ppt) is available on the WREZ website.

ATTACHMENT A: AGENDA

Western Renewable Energy Zones Project Technical Committee Meeting Sheraton Hotel, 150 West 500 South Salt Lake City, Utah

April 23-24, 2009

PROPOSED AGENDA

Purpose:

- Approve REZs
 - Review of background materials to help TC establish REZs *and* develop TC recommendation on REZs
- Review and comment on Phase I Summary Report, and agree on how to finalize
- Review and agree on draft Policy Recommendations and discuss next steps
- Discuss and agree on Phase II, III, and IV Technical Committee involvement
- Review
 - Schedule leading up to June WGA Annual Meeting
 - Schedule for Phases II, III and IV

| Thursday, April 23, 2009 | | |
|--------------------------|--|---|
| 7:30-8:00am | Registration and Continental Breakfast | |
| 8:00–8:40am | I. <u>Welcome, Introductions, Overview of TC Objectives for Meeting and Agenda</u> <ul style="list-style-type: none">▪ Introductions of TC members▪ Opening comments from Chairs▪ Review and approve agenda▪ Review decisions/outcomes to be made by TC at this meeting | <i>Dianne R. Nielson, Utah Governor's Energy Advisor</i> <i>Tom Darin/John Savage – Co-Chairs and Abby Arnold, Kearns & West</i> |
| 8:40-9:00am | II. <u>Overview of Products Prepared for Technical Committee Deliberation</u> <ul style="list-style-type: none">▪ Review Purpose of the WREZ Phase I: what is the product we are trying to develop for this phase?▪ WGA Staff Advisory Council (SAC) memo summary of interests▪ Data and maps available for today's discussion▪ <i>Draft</i> Phase I Summary Report (<i>will be revised based on TC meeting</i>)▪ <i>Draft</i> Policy Recommendations (<i>to be discussed on second day</i>)▪ Review Schedule for TC report delivery, including one-week public comment period, and recommendation to Steering Committee and then to Governor's in June. | <i>Rich Halvey, WGA, John Savage, Tom Darin, Co-Chairs</i> |

| | | |
|---------------|---|--|
| 9:00-10:15am | <p>III. <u>Review background materials and options for developing REZs</u></p> <ul style="list-style-type: none"> ▪ WGA SAC memo summary of interests ▪ E&L discussed options for application of wildlife data to refine QRAs into REZs ▪ WGA Staff Recommendation <ul style="list-style-type: none"> - ZITA recommendations ▪ Begin presenting visual examples of options for displaying data, REZs and MW <ul style="list-style-type: none"> - Present data layers and options for geographic boundaries and overlays - Conduct mapping exercise to identify main REZ map to be submitted to Governors as part of TC/SC Report to Governor's - Review list of additional maps that will be linked to the report and available on the web - Questions and Answer <p><i>Technical Committee considers options for REZs (wildlife and resource data) statistically and spatially.</i></p> | <p><i>Dianne R. Nielson and Steve Ellenbecker</i></p> <p><i>E&L Co-Chairs and John Harja, Western Governor's Wildlife Council Chair</i></p> <p><i>Rich Halvey, WGA</i></p> <p><i>ZITA Co-Chairs</i></p> <p><i>WGA Staff, Black and Veatch & NREL</i></p> |
| 10:15-10:30am | Break | |
| 10:30-10:50am | <p>IV. <u>Public Comment</u></p> <p><i>(Members of the public are invited to speak for no more than 3 minutes. Please sign up at front table.)</i></p> | |
| 10:50-12:00pm | <p>V. <u>Continue Visual Options and Technical Committee Discussion on REZs</u></p> <p><i>Based on discussion above; Technical Committee discuss options for displaying REZs for public comment and Steering Committee consideration.</i></p> | <i>Tom Darin and John Savage, Co-Chairs</i> |
| 12:00-1:00pm | Lunch <i>(served for TC members)</i> | |
| 1:00-3:00pm | <p>V. <u>Technical Committee Discussion on REZs</u> continued.</p> <p><i>Based on discussion above; Technical Committee discuss options for displaying REZs for public comment and Steering Committee consideration. Agree on a recommendation to the SC.</i></p> | <i>Abby Arnold and TC Co-Chairs</i> |

| | | |
|-------------|---|--------------------------------|
| 3:00-4:00pm | VI. <u>TC Review and comment on Phase I Summary Report</u> <ul style="list-style-type: none"> ▪ Presentation of report and final editing process ▪ TC Feedback on report | Rich Halvey & Karen Deike, WGA |
| 4:00pm | Wrap-Up and Adjourn <i>(On the second day we will discuss policy recommendations, please review the policy recommendation hand out and be prepared to discuss them on day two.)</i> | |
| 5:15-6:30pm | Reception | |

Friday, April 24, 2009

| | | |
|---------------|--|--|
| 8:30-9:00am | VII. <u>Overview of the Day, Review Objectives and Agenda</u> <ul style="list-style-type: none"> ▪ Review agenda <p>Open table: <i>Upon reflection what is on TC members minds and decide when during remainder of session to address.</i></p> | Abby Arnold |
| 9:00-10:30am | VIII. <u>Review and Policy Recommendations to Governors</u> <ul style="list-style-type: none"> ▪ Presentation on policy recommendation development within TC and WGA proposed process for Governor consideration. ▪ Review policy recommendations <p><i>Technical Committee agree on submission of policy recommendations to WGA SAC for consideration.</i></p> | Rich Halvey, WGA |
| 10:30-11:40pm | IX. <u>Next Steps for Phases II, III, IV and Technical Committee Involvement</u> <ul style="list-style-type: none"> ▪ Review of Phase II progress ▪ Scope for Phases III and IV ▪ Review and discussion of TC involvement in Phases II-IV | Rich Halvey, WGA and Doug Larson, WIEB, Tom Darin and John Savage, Co-Chairs |
| 11:40-12:00pm | X. <u>Public Comment</u> <i>(Members of the public are invited to speak for no more than 3 minutes. Please sign up at front table.)</i> | |
| 12:00pm | Adjourn | |

ATTACHMENT B: ATTENDEES LIST

Technical Committee Participants:

| | |
|------------------------|--|
| Co-Chair – Tom Darin | Western Resource Advocates |
| Co-Chair – John Savage | OR Public Utilities Commission |
| Bob Anderson | Western Grid Group |
| Leslie Barron | BC Transmission Corporation |
| Traci Bone | CA Public Utilities Commission |
| Ray Brady | BLM |
| Dana Cabbell | Southern California Edison |
| Pam Eaton | The Wilderness Society (<i>E&L WG Co-Chair</i>) |
| Ken Eklund | ID Office of Energy Resources |
| Steve Ellenbecker | WY Governor's Office |
| Karl Gawell | Geothermal Energy Association |
| Dian Grueneich | CA Public Utilities Commission |
| Arthur Haubenstock | BrightSource Energy |
| Ed Higginbottom | BC Transmission Corporation |
| Tom Kaiserski | MT Dept. of Commerce, Energy Infrastructure Promotion & Dvpt. |
| Julie Keil | National Hydropower Association |
| LaVerne Kyriess | WAPA |
| Shayleah LaBray | PacifiCorp |
| Bevan Laing | Alberta Energy |
| Ron Lehr | American Wind Energy Association |
| Les MacLaren | British Columbia Ministry of Energy, Mines & Petroleum Resources |
| Larry Mansueti | U.S. DOE OE |
| Greg Nelson | PNM Resources |
| Brad Nickell | WECC |
| Dianne R. Nielson | UT Governor's Office |
| Amanda Ormond | Ormond Group LLC (<i>ZITA WG Co-Chair</i>) |
| Howard Schwartz | WA Department of Community, Trade and Economic Development |
| Richard Smart | Community Hydropower Consulting |
| Paul Smith | Arizona Public Service (<i>Modeling WG Co-Chair</i>) |
| Lisa Szot | Tessera Solar (<i>ZITA WG Chair</i>) |
| Robert Taylor | Salt River Project |
| Bob Therkelsen | Northwest Public Power Association |
| Jerry Vaninetti | TransElect (<i>Modeling WG Co-Chair</i>) |
| Rebecca Wagner | Public Utilities Commission of Nevada |
| Brian Weber | PacifiCorp (<i>E&L WG Co-Chair</i>) |
| Cameron Yourkowski | Renewable Northwest Project |
| Carl Zichella | Sierra Club |

Observers:

| | |
|-----------------|----------------------------------|
| Jose Antonijuan | Enerfin Energy Company, Inc. |
| Renee Arellanes | Idaho Office of Energy Resources |
| Bob Barrett | U.S. Fish and Wildlife Service |
| Steve Black | BLM |
| Cory Blair | E.On Climate & Renewables |
| William Boyd | GE Energy |
| Jennifer Bredt | RES Americas |
| James Bryant | Energy Futures Network Ltd. |
| Direlle Calica | Schaff & Clark Deschene LLC |

| | |
|--------------------------|--|
| Kevin Daly | Gaelectric |
| Edgar DeMeo | Renewable Energy Consulting Services, Inc. |
| Ward Allen | |
| Anne Gillette | CA Public Utilities Commission |
| John Harja | Utah Governor's Office & Western Governors' Wildlife Council |
| Robert Henke | ICF International |
| Scott Higginson | Renegy Holdings |
| Colin Jackson | Novairus Energy, LLC |
| Shawn McBrady | Raser Technologies |
| Jeremy McGrath | Raser Technologies |
| Les McLaren | Province of British Columbia |
| Jeff Miller | ColumbiaGrid |
| Doug Miyamoto | NRCS |
| Alex Morales | ENERFIN |
| Mike Noonan | Westwood Professional Services |
| Paul Parker | EPG |
| Reed Park Haney | West |
| Marcia Patton-Mallory | US Forest Service/ WFLC |
| Brent Peterson | |
| Suzanne Phinney | Aspen Environmental Group |
| Justin Rammell | Beatty & Wwozniak, PC |
| Orvil St. Clair | RES Americas |
| Brad Shoulder | |
| Flavio Soares Parpinelli | ISOLUX CORSAN |
| Tim Steffir | |
| Frank Wilkins | DOE |
| Liming Yang | |

Technical Consultants:

| | |
|---------------|-------------------------------|
| David Hurlbut | National Renewable Energy Lab |
| Ryan Pletka | Black & Veatch |

Project Staff:

| | |
|-----------------|------------------------------------|
| Abby Arnold | Kearns & West (Facilitator) |
| Tom Carr | WIEB |
| Linda Davis | WGA |
| Karen Deike | WGA |
| Rich Halvey | WGA |
| Pam Inmann | WGA |
| Doug Larson | WIEB |
| Paul Orbuch | Orbuch Consulting LLC (Consultant) |
| Morgan Poncelet | Kearns & West (Recorder) |
| Ted Rose | Rose Carbon (Consultant) |
| Madeleine West | WGA |

ATTACHMENT C: TC RECOMMENDATION TO SC

WREZ Technical Committee April 23 – 24 Outcome: Recommendation to Steering Committee

As an interim decision, the WREZ Technical Committee generally agreed to the following recommendation to the Steering Committee for a report and map. (*This was called OPTION A.1 during discussion on April 24.*)

The Technical Committee (TC) spent significant time developing this agreement. The TC report will document the steps the TC and its work groups took to get to this decision, including the QRA identification process and the consultation with the Western Governors' Wildlife Council as part of the process. The report will note how the public can access the information.

The Technical Committee recommends to the Steering Committee, for their consideration, a map that represents resource concentrations through the visual image of “hubs” (also called centroids) The map depicts the following:

- Renewable resources of Class 3 and greater wind¹ and solar with a D.N.I.² of 6.5 and greater, minus ZITA technical excludes³, E&L excludes⁴ and E&L initial avoids⁵.
- “Hubs” will be located over the resources; calculated based on the MWh of energy available in each original QRA.
 - Hubs will be located by calculating the point that minimizes the average distance to all 50 km grid cells counted in the QRA.
 - The scale of the hubs will be sized by the MWh of energy estimate.
- Each state/province will decide which hubs they would like to keep in their jurisdiction, and where they will be located based on wildlife sensitivity information or other information. In general, the hubs should stay within the high quality resource of an original QRA⁶; however a state may choose to consolidate resource areas by locating a single hub between the QRAs. States/Provinces will have the ability to delete or adjust hubs based on information within the state/province, as long as those hubs are still connected to the underlying QRA resources. No new hubs may be added.
- States/Provinces will be asked to footnote hubs to highlight known wildlife sensitivity concerns or those that still need to be addressed.
- No boundaries for the underlying QRAs (with or without wildlife sensitivity) will be shown on the map. However, original ZITA created QRAs and WGWC wildlife maps approved by the Governors will be available on-line as background resources.

¹ Except in Wyoming where only Class 4+ wind will be shown.

² Direct Normal Irradiance, a measure of the amount of solar radiation from the direction of the sun.

³ E.g. slope criteria, urban areas and water bodies.

⁴ Statutory/regulatory precluded areas such as National Parks, National Monuments and wilderness areas.

⁵ Non-statutory areas recommended by land management agencies such as State Parks and State Wildlife Areas.

⁶ Original QRAs were required to meet a minimum threshold of 1,500 MW for wind and solar, and 500 MW for geothermal. Any hub must be associated with a QRA that meets those thresholds.

General next steps to prepare for June 2009 Report to Governors

1. Develop Map for June 2009 Report

- The Interim Report from the Technical Committee to the Steering Committee will document the following:
 - Steps taken to get to TC Recommendation
 - Background, source and status of wildlife information and data
 - QRA identification process
 - Formation and role of WGWC
 - Role of and linkage to WGA Wildlife Corridors Initiative
 - E&L WG purpose and future
 - ZITA WG purpose and future
 - Public accessibility and involvement
 - Future work for the TC
- WGA will send Steering Committee members “hub” maps with background information and instructions for reviewing.
- States will decide what hubs they want illustrated on the maps and will document the hubs, including providing documentation of wildlife sensitivity data in a footnote to each hub.
- A draft TC report and a “hub” map will be sent to the TC.
- At the May meeting the SC will review the report with map, comment on it, and send to the Staff Advisory Council with a recommendation to send the report to Governors for their June 2009 meeting. The SC will also recommend whether to/ what to send out for public comment.
- If the SC is not able to agree on sending a report to the WGA Staff Advisory Council (SAC), the SAC will decide on next steps and whether the report ought to go forward to the Governors.
- WGA will collate all state maps, and will send the TC results from the May 14 SC meeting.

2. Develop a workplan for next steps on review and screening of hubs for wildlife sensitivity

Before June 2009, WGA staff, in consultation with the Chairs of the E&L work group, Western Governors’ Wildlife Council, and ZITA work group will develop a workplan for E&L to review state wildlife data and its application to screen the hubs to address wildlife sensitivity concerns. The workplan will also address ZITA’s role in review of the wildlife sensitivity data and results of the hubs.