Testimony of Carl Zichella
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Mr. Chairman, Madame Chair, members of the Committees, I am Carl Zichella, Director of Western Renewable Programs for the Sierra Club. I am testifying this morning on behalf of our 1.3 million members and supporters in the United States and Canada. My position is a relatively new one for the Sierra Club. I am tasked with helping bring renewable energy resources up to scale and finding acceptable transmission solutions to move these resources from remote locations to load centers in the most environmentally sensitive way. We believe that taking into consideration wildlife and land conservation goals early in the process will accelerate not delay the construction of needed transmission for renewable energy.

Fundamental to accomplishing this goal is acknowledging that the old way of doing transmission planning is not working and has led in nearly every case to difficult and contentious disputes that have delayed many transmission projects that might otherwise have been able to proceed had they been more inclusively planned and environmental, cultural and community impacts avoided.

This understanding is shared by many stakeholders, who like the Sierra Club are intent on helping bring renewable energy to scale to help combat climate change, diversify the electricity supply system, meet legislative and policy mandates establishing renewable portfolio standards (RPS) and provide greater security and reliability to the region and nation's electricity supply system while conserving wildlife habitat and protected lands. These stakeholders include load serving entities both public and private, transmission sponsors, state and federal officials, consumer advocates, and renewable energy development companies as well as many national environmental organizations like my own.

In order to find solutions that can both achieve broad public acceptance and be built promptly stakeholders have to collaborate in identifying potential problems early in the process and crafting mutually acceptable solutions between and among themselves. To do this they need to have a process that establishes trust, facilitates communication and mobilizes public and private resources to develop and recommend an implementation plan that is both practical and politically viable. The product of such a process is a plan of development regulators can consider, modify and adopt.

This realization has led to two approaches that have shown real promise for deriving outcomes that enable needed projects to move forward in a timely way: California's Renewable Energy Transmission Initiative (RETI) and the Western Governors Association's (WGA) Western Renewable Energy Zone (WREZ) process. Both directly involve diverse stakeholders in seeking transmission solutions and both rely upon identifying promising resource development areas (called renewable energy zones) which have both excellent renewable energy resources and few environmental conflicts. They have become a functioning alternative to transmission planning business as usual

and have become a model that has been recognized and included in federal legislative and administrative efforts presently under consideration.

The former (RETI) has been underway for more than two years, has completed two of three phases and is rapidly progressing to facilitate preparation of plans of service for transmission development that will help California attain a 33% renewable energy contribution to the state's electricity generation portfolio.

The latter (WREZ) has completed the first of a proposed four phase process and is currently evaluating how to move to its next phase and more discrete zone identification using resources being made available by the Department of Energy (DOE) under the auspices of both WGA and the Western Electricity Coordinating Council (WECC). Both processes benefit from strong state and federal policy initiatives to enhance renewable energy distribution to load centers.

Case 1: RETI

The RETI process was launched in the fall of 2007 as a cooperative effort by the California Energy Commission (CEC) and Public Utilities Commission (CPUC), the California Independent System Operator (CAISO), and Public Utilities in northern and southern California. The goal was to utilize a resource assessment and zone identification plan to prioritize recommendations for transmission upgrades that would enable the state to meet a 33% RPS standard in the most economical and environmentally responsible way possible. These bodies constitute the RETI coordinating committee and have general oversight of the process.

Central to RETI's approach is the idea that stakeholder balance and broad public involvement would yield the best result. A stakeholder steering committee was convened to guide the work and preside over outreach to the stakeholders within their respective classes and communicate more broadly with the public through periodic "plenary" sessions. Stakeholder classes are: public utilities, investor owned utilities (procurement and transmission development divisions), state regulators (CPUC and CEC), energy generation companies from the solar, wind energy and geothermal energy sectors; Federal land managers such as the U.S. Forest Service (USFS), Bureau of Land Management (BLM) and Department of Defense (DOD), the CAISO, the California Department of Fish and Game, representatives of counties and consumer groups and environmental (including both lands and wildlife) organizations. (See attachment "A" *SSC Member List.*)

Working groups were established with participation from each of the stakeholder classes to take on assessing the resource quality, location and cost to develop in various areas as well as a sophisticated analysis of public and environmental constraints that refine the areas to be recommended as "competitive renewable energy zones (CREZ)" to which transmission would be analyzed and eventually recommended by the RETI. Technical support was provided by facilitators from the Center for Energy Efficiency and Renewable Technology (CEERT), consultants Black and Veatch, and staff from the CPUC and CEC.

The project's first phase concluded with a resource and first-ever environmental supply curve to rank CREZ by cost and environmental preference.

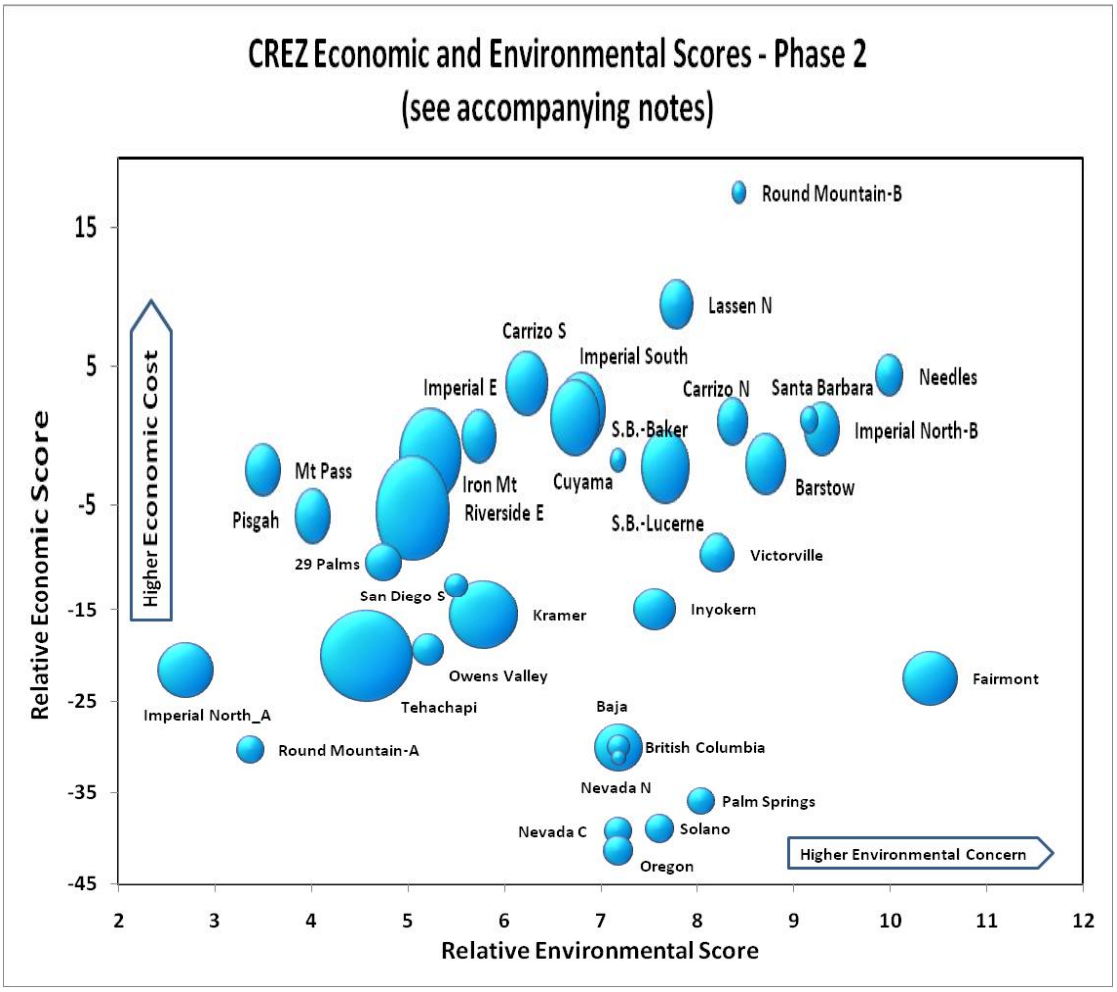

Figure 1: Combined economic and environmental ranking, RETI phase II. Size of circle represents energy potential; CREZ in lower left have best environmental and economic ranks.

An "exclusion" map was generated to identify areas with low development potential due to environmental and other land use constraints. (See attachment "B" *Southern California REZ Conceptual Transmission Line Segments*)

This work was further refined in Phase II as issues that could not be fully explored were developed further, including forecasts of energy cost, demand, penetration of distributed energy and energy efficiency and the amount of energy needed to meet the 33% goal, called the "net short." A detailed economic and environmental analysis of possible transmission solutions for the CREZ flowed from this work, using a shift factor analysis to determine which of the proposed line projects would best benefit renewable energy transmission. Approximately 85% of the improvements needed were found to be upgrades to the existing transmission infrastructure or construction in already designated rights of way. This is a significant advantage in that establishing new rights

of way is one of the most controversial and time consuming problems facing transmission development.

Phase II resulted in a transmission development recommendation that is now undergoing analysis from regulators, load serving entities and CAISO expected to produce a plan of service for renewable generation across the CREZ. The interaction between transmission development specialists and the RETI stakeholder steering committee is still being worked out.

Links to RETI reports and all supporting documents and presentations can be found at: http://www.energy.ca.gov/reti/index.html.

New developments have the potential to alter this recommendation significantly. These include a proposal (supported by many conservation organizations that are also engaged in renewable energy siting activities) by Senator Diane Feinstein to designate a new national monument in the east Mojave Desert, the BLM's Solar Energy Programmatic Environmental Impact Statement and solar energy zone identification process as well as significant new development proposals for CREZ previously believed to have little commercial interest. The process will incorporate these developments to the maximum extent possible as it continues toward its goal.

Lessons learned:

Several key lessons have been learned that be useful in guiding similar efforts elsewhere in the country. These could help make interconnection-level planning much more effective.

1. Diverse stakeholders can effectively work together in complicated planning efforts provided technical support is provided and leadership is provided from key stakeholders.
2. The renewable resource available is among the world's best. This allows for selective siting that avoids conflicts later.
3. Public willingness to accept transmission is much greater when transmission is dedicated to renewable energy "green" resources.
4. Landscape level ecological assessments are needed to better provide for compliance with federal and state laws and to preserve opportunities to manage for climate adaptation and habitat resilience. We need to know more.
5. New mitigation strategies are needed to maximize conservation and adaptation opportunities. Public and private conservation efforts must be merged, both in terms of information and on-the-ground actions.
6. Collaboration between and among federal agencies and federal and state authorities is essential to avoid permitting bottlenecks and to identify the zones and transmission lines that can be most easily developed.
7. Transparency of data and decision-making led to valuable public involvement and comment. Integrating these comments and recommendations in a timely way led to much stronger documents and plans and enhanced public acceptance.
8. Maximum use of existing infrastructure guarantees more rapid progress and better decisions. It reduces environmental impacts and costs. It is extremely

hard to designate and approve new rights of way. Reconstructing, reconductoring and other strategies can increase transmission capacity without the unnecessary and controversial designation of new rights of way.

9. Sharing of transmission assets between public and private utilities is a way to reduce costs and environmental impacts and increase public acceptance.
10. Public meetings in affected communities were critical and though occasionally difficult led to strong and useful recommendations.
11. The information in the process was dynamic and updates and adjustment of these data were periodically needed to make the product most useful.

Case 2: WREZ

The WGA's WREZ process followed closely on the RETI model of early and vigorous stakeholder involvement to identify the most promising zones for development and the likely transmission solutions to move the power to the load centers. Like RETI it employed the resources of government and private consultants. The National Renewable Energy Laboratory (NREL) and consultant Black and Veatch played key roles. WREZ was governed by representatives of the states in a steering committee and the committee work was overseen by a technical committee not unlike RETI's SSC. Public comment was accepted and influenced the work products positively and considerably.

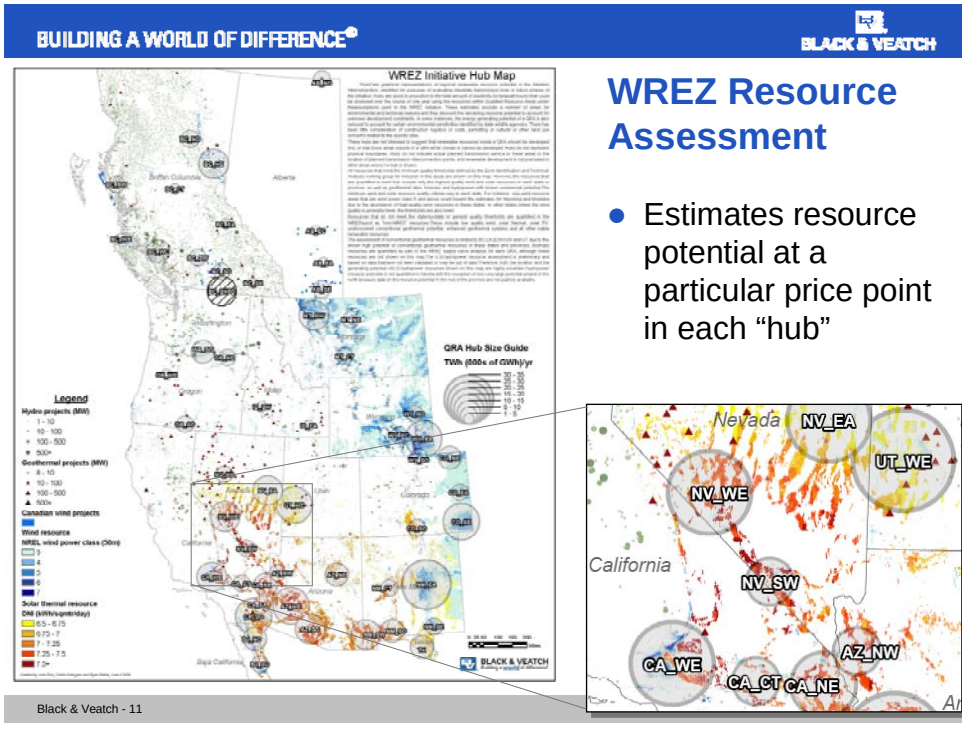

Figure II: Representation of WREZ results from presentation to RETI SSC. Circles are proportional to energy potential and do not represent zone identification. Colors represent resource quality.

It differs in several important respects:

1. The scale of the project was much larger than RETI and the timeline for program results much shorter.
2. Coordinating stakeholders across the western interconnection which includes 11 states, two Canadian provinces and Baja California, Mexico) was more difficult than coordinating stakeholders in RETI who were predominately from one state.
3. The steering committee was comprised mainly of government officials rather than a mix of stakeholders.
4. WREZ has no energy production goal. Unlike RETI which bases its work on a discrete goal (RPS) and forecasts the energy needed through a "net short" calculation, WREZ took a higher-level approach. The goal was establishment of a regional energy market.
5. WREZ has not yet identified zones.

<u>Lessons learned:</u>

1. Planning across the entire interconnection requires a great deal of resources to facilitate stakeholder involvement and provide good technical assistance and analysis to the process.
2. Differences between policy goals of the states make establishing a regional market extremely difficult. Producing, consuming and "pass through" states all have different goals.
3. Differences between how states characterize wildlife data and management practices needs to be reconciled before zones can reasonably be identified. This is a very significant obstacle.
4. Some means of coordinating state procurement and cost allocation policies is essential to creating regional renewable energy markets in the absence of federal coordination and tariffs. Traditional utility and state approval processes focus on limited service *territories* within the interconnection. Moving remotely constrained resources to distant load centers requires much broader policy and cost allocation than is required under existing laws. Expanding renewable generation has benefits across the entire western interconnection that are more regional and national than local in nature. These include cost, reliability and energy security, and wildlife and habitat protection.
5. States and federal agencies can shorten approval times by coordinating environmental review processes, eliminating duplicative need determinations, and addressing more broadly cost allocations. Federal coordination will be needed if this cannot be effectively done by the states.
6. State leadership on siting on non-federal lands is critical to success. This can avoid many local and environmental conflicts that might otherwise be inadequately considered.
7. Resources need to be provided so state agencies can be full partners in identifying the most environmentally beneficial transmission solutions.
8. As with RETI, public willingness to accept new transmission development is much greater when transmission is dedicated to renewable energy "green" resources.

Conclusion

Business as usual transmission planning has been fraught with conflict, delays, and inefficiencies. Involving key stakeholders early on in transmission planning encourages the making of better decisions that can be more easily accepted by the public, shortening approval timelines and initiating project construction more rapidly. Early consideration of and planning for habitat and lands conservation concerns will reduce conflict and accelerate development later. Coordinated procurement and more equitable cost allocation policies are needed either by and across the states or through a federally coordinated policy that involves the states as key stakeholders. By focusing this new development attention on renewable energy sources public acceptance of new transmission development will be greater. Finally, landscape-level environmental assessments and innovative conservation and mitigation strategies are needed to preserve opportunities for habitat and wildlife adaptation to climate change. This is a joint federal-state responsibility.

Thank you for considering this testimony.