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California Energy Commission
DOCKETED
09-RENEW EO-1
TN # 69242
JAN. 24 2013

January 23, 2013

Desert Renewable Energy Conservation Plan
California Energy Commission
Dockets Office, MS-4
Docket No. 09-RENEW EO-01
1516 Ninth Street
Sacramento, CA 95814-5512

Attention: David Harlow
Director
Desert Renewable Energy Conservation Plan

Subject: Southern California Edison Company comments on Description and Comparative Evaluation of Draft DRECP Alternatives

To the Desert Renewable Energy Conservation Plan Team:

Southern California Edison (SCE) appreciates the opportunity to provide comments and recommendations on the Description and Comparative Evaluation of the Draft Desert Renewable Energy Conservation Plan (DRECP) Alternatives, released by the California Energy Commission (CEC) on December 17, 2012.

SCE provides these comments as recommendations for improvements on issues of importance to our utility operations consistent with our obligation to plan, permit, construct, own and operate transmission infrastructure to meet renewable energy and reliability needs in a safe, reliable, and cost-effective manner. SCE believes that transmission planning and effective conservation mitigation are two key elements for the DRECP's successful implementation. In addition to the specific comments attached to this letter, SCE has outlined the following key principles for successful mitigation and transmission planning based on our own experiences operating under Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs). SCE offers these principles as recommendations for inclusion in the DRECP:

Key Principles for Successful Conservation & Development Outcomes in HCP/MSHCP/NCCPs:

SCE believes that the DRECP will, when complete, provide the regulatory framework necessary to support investment in renewable energy resources and associated electrical transmission facilities, while ensuring effective protection and conservation of native wildlife and plant species and the natural communities that support them. SCE has had favorable experiences with HCP/MSHCP/NCCP models, including reducing the amount of time to secure necessary "take" permits (from years to months), providing cost certainty (pre-determined mitigation fee schedule), reducing the risk of litigation (plan consistency versus individual projects), and providing regional benefits to conservation efforts.

1218 S. Fifth Avenue
Monrovia, CA 91016

Drawing from these experiences, SCE offers the following key principles for consideration in the development of the DRECP:

- The DRECP should be practical and accessible to stakeholders in order to facilitate a clear understanding of the responsibilities entailed with participation in the plan. SCE has found that successful planning occurs when agencies and stakeholders attain mutual understanding of each party's interests. This understanding can be facilitated by denoting stakeholder roles, establishing rules of engagement, and identifying measures of success and clear timelines for stakeholder involvement throughout the duration of the plan.

- The DRECP administrative system to implement the plan should be designed for efficient centralized processing, review, and approval of projects while addressing local and regional resource and planning concerns.

- The DRECP should address clear conservation purposes and include elements of a mitigation program that are transparent, systematic, and based on sound science. A program designed in this way will provide certainty to developers about the requirements and costs of mitigation, and assurances to the conservation community that conservation priorities can be maintained as needed.

- The DRECP should ensure durable conservation through land designation, management, and funding:
    - Conservation lands should be protected from future administrative decisions that undo or undermine their designation. Conservation should have a level of durability equal to the level of impact for which it is being used to mitigate.
    - Conservation lands should be administered by agencies that possess the authority and responsibility to monitor and manage threats that may impact the baseline of target conditions of protected species and habitats.
    - Agencies should be assured adequate funding for conservation management as required in the final DRECP so as to meet biological goals and objectives for natural communities and covered species.

- Fee structure should be fair and commensurate:
    - Fees associated with the plan should be commensurate with project specific impacts to covered species and their habitats (i.e. greater impacts result in higher mitigation costs), rather than proportional to total project cost. A mitigation program based on environmental disturbance would encourage developers to avoid and minimize their impacts to species and habitats whenever possible, thus, advancing conservation goals and objectives and reducing project costs. Moreover, such a fee structure may also expedite projects by incentivizing development on previously disturbed lands that typically face less opposition from stakeholders than biologically/culturally sensitive lands.

- Mitigation measures for Biological Goals & Objectives should be clearly defined so that stakeholders have an understanding of what measures must take place

and how those measures will be implemented to effectively accomplish DRECP objectives. Mitigation measures to be implemented for covered activities under the plan must be reasonable and feasible in order to allow for the timely and cost effective construction of projects while providing an appropriate level of protection for covered resources. Creating consistent methods for determining the required mitigation up front when developers are planning their projects will lead to more timely permitting and better designed projects while avoiding duplicative mitigation requirements.

Key Principles for Transmission Planning:

Electrical infrastructure upgrades and additions will be needed to safely and reliably interconnect renewable energy resources from designated Development Focused Areas (DFAs) to population centers.

Integrating land use into the DRECP planning efforts will provide greater certainty, resulting in a more orderly, rational, timely, and cost-effective state and regional transmission planning and permitting process. Coordination of state and regional planning efforts of the California Independent System Operator (CAISO), California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and the Western Electricity Coordinating Council (WECC), including broad stakeholder participation, are essential to achieving the state's goals. The TTG has made tremendous progress in initiating these efforts, but they must be strengthened and carried forward throughout the DRECP process.

SCE recommends that the DRECP use the following transmission principles for planning and implementation purposes:

- Facilitate Cost-Effective, Environmentally Sound Transmission Planning, Siting, and Permitting: The DRECP should facilitate cost-effective, environmentally sound transmission planning, siting, and permitting. The DRECP should recognize the need for sufficient future transmission system upgrades and additions to integrate renewable energy resources. Moreover, the DRECP should acknowledge the need to designate additional transmission corridors or expand existing corridors in coordination with regional planning efforts by WECC and others, and should take into consideration the cumulative impact to the electrical grid of multiple downstream transmission infrastructure changes to accommodate new renewable generation projects. The DRECP should recognize the need for utilities to acquire sufficient lands to support transmission corridors, upgrades and additions, and to hold such lands for future use consistent with the DRECP planning horizon.

- Provide flexibility in the Reserve Design to facilitate transmission corridors, upgrades and additions in the most cost-effective, environmentally sound manner.

- Identify potential transmission system upgrades and additions, including collector substations, network upgrades, downstream upgrades, interconnections, corridors, and related infrastructure (such as roads), sufficient to support renewable energy development in the DFAs and to maintain a reliable and safe electrical system.

  Proximity of a renewable generator to existing transmission lines does not guarantee available capacity on those lines for electricity. For instance, transmission lines located in proximity to DFAs may not necessarily have sufficient capacity to accommodate the anticipated renewable generation in the DFAs.

- Encourage the use of existing roads, transmission rights-of-way, and corridors, wherever possible, consistent with all applicable reliability planning criteria required by the North American Electricity Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and the California Independent System Operator (CAISO).

- Analyze potential transmission upgrades, additions, new or expanded corridors, and related infrastructure in sufficient detail so as to facilitate timely permitting by local, state, and federal entities when the transmission facilities are actually proposed to be developed.

- Coordinate with the CAISO's Transmission Planning Process (TPP) to ensure that transmission upgrades and additions needed to support renewable energy development in areas identified by DRECP are considered for inclusion as "policy driven projects".

- Coordinate with the WECC regional transmission planning efforts to ensure consistency and compatibility across the western region of North America. Coordination of state and regional planning efforts could lead to a fully integrated west-wide transmission system, taking advantage of generating characteristics of both variable and flexible generation to lower costs, increase reliability, and to facilitate "system balancing" across broad geographic regions to "smooth out" the variability of renewable energy resources.

  DRECP should pay particular attention to transmission corridors, upgrades and additions that may be needed to safely and reliably integrate renewable energy resources, both imported and exported, in to the electrical grid consistent with the DRECP planning horizon.

- Coordinate with long term, comprehensive energy and environmental planning efforts, including the CPUC Long Term Procurement Plan (LTPP) and the BLM Solar PEIS to direct development to high renewable resource value, low conflict areas.

In addition to these planning principles, the SCE Transmission Technical Group leads have also included specific technical issues and suggestions referring to limitations of

the transmission planning metrics and findings in the TTG Conceptual Transmission Plan, which can be found in the attached comments page.

Thank you for the opportunity to provide comments and suggestions to the DRECP. Please find attached specific comments keyed to the Draft DRECP Alternatives by chapter, section, and page. SCE looks forward to working with you to ensure that the DRECP facilitates cost-effective, environmentally sound transmission planning, siting, and permitting.

Sincerely,

Roger Overstreet

1218 S. Fifth Avenue
Monrovia, CA 91016

Description & Comparative Evaluation of Draft DRECP Alternatives
Comment Form

Comments submitted by: Southern California Edison
Contact information: Roger Overstreet
roger.overstreet@sce.com
1218 S. Fifth Avenue, Monrovia CA, 91016

Commenter (Your Name)	Comment #	Comment Location: Chapter	Section #	Page #	Paragraph	Paragraph (from top)	Reviewer Comment (e.g., organization, content, grammatical comments)
Southern California Edison	SCE- 01	1	2	23			Additional language from the Appendix A TTG report needs to be inserted here that reminds the reader that the TTG analysis is not a siting exercise and was just meant to approximate the affected acreage necessary for the transmission requirements for each DFA Alternative. Right now, the Transmission Planning Goals and Assumptions section reads like a RETI style exercise that will likely be interpreted as: The DRECP TTG said we need these specific lines in these specific locations. Such caveat language is located in the following places in the Appendix A TTG Report: P. iii, second paragraph This is a conceptual transmission plan for the alternatives and is not intended to be a siting exercise. Thus, the line segments represent only the electrical connections (i.e., the end-points of line segments) and do not reflect specific siting plans or routes. However, the Garamendi principles were used when constructing these maps and thus the lines were drawn to follow existing rights-of-way wherever possible. The new transmission lines identified through this exercise have not been evaluated for their specific locations, constructability, desirability, cost, or likelihood of their successful permitting. They also have not been studied by transmission planning groups to identify reliability concerns or effects on other transmission systems. P. 9, first paragraph: The TTG was convened to identify a conceptual transmission plan and how much land could be needed to accommodate potential transmission elements in the plan. However, the TTG did not conduct a transmission siting evaluation which would normally include power flow studies and stability studies, and economic analysis to compare new transmission with "non-wires alternatives" that support the development of renewable resources at different locations. The conceptual transmission plans and associated acres of impact reported in this document are based on the professional judgment of experienced transmission planners representing major utilities across the state. P.19 second paragraph: As noted above, the purpose of the DRECP TTG exercise is to identify a conceptual transmission plan and

							its associated land impacts. The TTG is not conducting a comprehensive siting evaluation, so the transmission lines shown on Figures 1 through 6 should be considered as conceptual only. Due to the complexity of the information presented in the figures, no existing lines are shown, but the conceptual lines follow existing ROWs or designated utility corridors where possible.
Southern California Edison	SCE-02	1	2	25	1		For helicopter construction, the sentence reading: *"The use of helicopters to install transmission lines could reduce the need for access roads but such a site-specific analysis was beyond the scope of the TTG effort."* should be changed to: *"The use of helicopters to install transmission lines may reduce the need for access roads in certain situations but such a site-specific analysis was beyond the scope of the TTG effort."*
Southern California Edison	SCE-03	4	4	21			Regarding transmission lines, the use of paint on towers and support facilities is mentioned. SCE has determined that the use of paint is not a viable alternative due to the need to repaint towers on a regular basis and the associated negative environmental impacts due to the presence of the deteriorating paint and the work involved to repaint a tower.
Southern California Edison	SCE-04	App. K		12			Objective GOEA2.2: Decrease relative to existing conditions mortality risks associated with flight strike hazards including: unmarked transmission lines, unmarked guy-wires, and wind turbines. Southern California Edison has been working with the U.S. Fish and Wildlife Service on transmission line impacts on golden eagles, background research and information provided by the Service shows that transmission lines do not present a collision hazard for golden eagles therefore marking of lines is not warranted unless there are special environmental conditions (e.g. crossing a large water body) that need to be addressed.
Southern California Edison	SCE-05	1 and App. A	2 and 3	25 and 9			Comments below to be added in the following two sections of the report: (1) Under Chapter 1, Section 2 and Page 25 at the end of the last paragraph, (2) Under **Section 3. Assumptions for Conceptual Transmission Analysis to Support Renewable Resource Development within DFAs** prior to Sub-section 3.1 on Page 9 of the **Appendix A Transmission Technical Group (TTG) Report:** Due to limited resources and time constraints, the TTG team opted for a simplified spreadsheet analysis in developing the "2040 Conceptual Transmission Plan" for five DRECP Alternatives. This analysis resulted in a "conceptual set" of transmission and substation components for each DRECP Alternative based on generically sized transmission line and substation components that would be needed to collect renewable resources from DFAs and deliver those resources to load centers. This approach helped the TTG team to assess and determine the land impacts of the conceptually planned transmission and substation infrastructure to support the primary objective of the land conservation efforts within the DRECP map boundary. The approach, although correct in a conceptual sense, is not the result of an in-depth transmission planning exercise which usually requires a detailed technical analysis involving the power flow, stability and short circuit programs along with ensuring and adhering to transmission reliability standards in order to develop a logical, accurate, reliable and tangible transmission system of lines, and substations to interconnect new generators. Detailed studies also examine the economics of the planned components, potential alternates, and account for additional critical power system performance parameters. The TTG recognizes that there are key limitations related to transmission planning metrics and findings for

							the California transmission grid network over the 2020 – 2040 time periods that have not been considered or assessed in the TTG Conceptual Transmission Plan. In the absence of in-depth technical studies utilized in transmission planning the following specific issues have not been considered: 1. Interaction impact of DFAs' new renewable generation with major California transmission Paths' transfer capabilities 2. Accounting of the expected system load growth, new thermal and other generation resources and their locations, and new unknown long term transmission upgrades for reliability considerations leading to 2040 by utilities and CAISO 3. Testing of transmission contingencies and constraints within California 4. Retirement of In-Basin Generation in California under proposed State Water Resources Control Board's Once-Through Cooling (OTC) policy by 2020 and replacement generation and its locations 5. Detailed assessment of routing and optimal use of the existing transmission corridors and rights-of-ways in developing the most suitable locations of the conceptual delivery lines' origination and termination substations 6. Separation requirements that may be needed to ensure the grid is protected from severe contingencies caused by multiple adjacent circuits
Southern California Edison	SCE-06	1	2.5	23		2	The following statement needs to be inserted prior to the last sentence of the second paragraph: "However, it must be noted that the growth of load at various load centers in California by 2040 and its eventual service by the planned delivery lines included in the "DRECP Conceptual Transmission Plan" for the DFAs' renewable resources MWs has not been assessed and evaluated for the unknown amount and locations of new generation resources, new transmission upgrades, and unknown load growth trajectory at various California locations outside of the DRECP plan area between 2020 and 2040 due to resource and time constraints and lack of detailed technical studies by the TTG team. This critical missing data may potentially result in a different set of termination locations of the delivery lines to various load centers in California which has not been determined in the TTG study."