

**CALIFORNIA ENERGY COMMISSION**

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512  
[www.energy.ca.gov](http://www.energy.ca.gov)



March 28, 2012

Lamont Jackson  
Office of Electricity Delivery and Energy Reliability  
Mail Code: OE-20  
U.S. Department of Energy  
1000 Independence Avenue SW  
Washington, DC 20585  
[Lamont.Jackson@hq.doe.gov](mailto:Lamont.Jackson@hq.doe.gov)

Dear Mr. Jackson:

The California Energy Commission staff thanks you for the opportunity to provide comments on DOE's Request for Information (RFI) on the Rapid Response Team for Transmission Docket No. RRTT-IR-001. The RFI focuses on learning how to make the development times for generation and transmission more commensurate with one another. In the RFI, the DOE highlighted three problems that may arise in the development of long-distance transmission lines designed to bring "cleaner, more diverse fuel sources" to load areas: nonsynchronous evaluations by all governmental entities with jurisdiction; uncertainty about whether all necessary permits and approvals will be received; and significantly different development times for generation and transmission. We offer the following responses and recommendations that we hope are responsive to your request.

### **Role of the Energy Commission in the Electric Sector<sup>1</sup>**

The Energy Commission has been the State of California's primary energy policy and planning agency for the last 30 years. In California, the construction and operation of any thermal power plant with a generating capacity of 50 megawatts (MW) or greater require that a license (certificate) first be issued by the Energy Commission. This certificate takes the place of any other state, regional, or local permit that would otherwise be required. This certificate process examines all aspects of the proposed facilities, including engineering, environmental, health, and public safety issues. In this capacity, the Energy Commission serves as the lead review agency under the California Environmental Quality Act (CEQA). When licensing new thermal power plants, the Energy Commission also licenses related transmission facilities up to the point of interconnection with the existing electricity transmission grid.

---

<sup>1</sup> The Request for Information (RFI) specifically states: "In response to this RFI, please specify the role of your company or agency in the electric sector."

In addition, the Energy Commission takes a keen interest in ensuring adequate transmission infrastructure for the state. Since the late 1970s, the Energy Commission has actively participated in both state and federal efforts to address transmission corridor planning and permitting issues.

Beginning in the late 1970s and early 1980s, the Energy Commission became an active participant in the U.S. Bureau of Land Management's (BLM) corridor planning efforts. In the late 1980s and early 1990s, in response to state legislation, the Energy Commission conducted an extensive investigation of transmission issues in the state, culminating in a 1992 report to the Legislature recommending how best to address transmission problems in the state. More recently, the Energy Commission has made a number of recommendations to both the Governor and the Legislature under the state-mandated *Integrated Energy Policy Report* and *Strategic Transmission Investment Plan* to improve transmission corridor planning and permitting in California.

In late 2005, the BLM and DOE designated the Energy Commission as a cooperating agency in the federal Programmatic Environmental Impact Statement (PEIS) effort for energy corridors in the Western States, under Section 368 of the Energy Policy Act of 2005. The Energy Commission's role in this federal proceeding is to ensure that the state's energy and infrastructure needs, renewable generation policy goals, and environmental concerns are considered in the PEIS.

With the passage of Senate Bill 1059 (SB 1059, Escutia and Morrow, Chapter 638, Statutes of 2006), California is continuing to develop an integrated, statewide approach to electric transmission planning and permitting to address the state's critical energy and environmental policy goals. Regarding SB 1059, the Legislature found and declared that:

- California currently lacks an integrated, statewide approach to electric transmission planning and permitting that addresses the state's critical energy and environmental policy goals.
- Planning for and establishing a high-voltage transmission system is vital to the future economic and social well-being of California.
- It is in the interest of the state to identify the long-term needs for electrical transmission corridor zones within the state.
- It is in the interest of the state to integrate transmission corridor zone planning at the state level with local planning.

SB 1059 provides a bridge between the transmission planning process and the permitting process by designating transmission corridor zones (transmission corridors) on state and private lands available for future high-voltage electricity transmission

projects, consistent with the state's electricity needs identified in the biennial *Integrated Energy Policy Report* and *Strategic Transmission Investment Plan*.

SB 1059 enables local governments, utilities, energy developers, public interest groups, California Native American tribal governments, affected landowners, and members of the public to participate in the corridor designation process by commenting on the suitability of any proposed transmission corridor with respect to environmental, public health and safety, land use, economic, and transmission system impacts or other factors in which they may have expertise and/or interests.

Transmission corridor planning and preservation can help prevent costly permitting delays, ensure that optimal routes are used to reduce environmental impacts, avoid or mitigate land use conflicts, consider possible alternatives to meet project reliability or economic goals, and ensure that corridors are available when needed. Within a designated transmission corridor, proponents will have greater certainty that projects meeting state objectives and public interests can be permitted in a timely manner. (Source: <http://www.energy.ca.gov/sb1059/index.html>) The California Energy Commission has also developed the Planning Alternative Corridors for Transmission (PACT) decision tool through its Public Interest Energy Research (PIER) Program. The PACT tool is a Geographic Information System-based model that assists in the evaluation and presentation of alternative routes associated with a proposed transmission corridor.

Executive Order # S-14-08 mandated the development of the Desert Renewable Energy Conservation Plan (DRECP), a major component of California's renewable energy planning efforts. The DRECP, when completed, is expected to further these objectives and provide binding, long-term endangered species permit assurances while facilitating the review and approval of renewable energy projects in the Mojave and Colorado Deserts in California. To oversee the implementation of the DRECP, a Renewable Energy Action Team (REAT) was formed consisting of the California Energy Commission, California Department of Fish and Game, the U.S. Bureau of Land Management, and the U.S. Fish and Wildlife Service. Memoranda of Understanding (MOUs) were signed by the participating agencies. Others joining the team include the California Public Utilities Commission (CPUC), the California State Lands Commission, the California Natural Resources Agency, California Independent System Operator (California ISO), the National Parks Service, the U.S. Environmental Protection Agency, and the U.S. Department of Defense. (Source: <http://www.drecp.org/about/index.html>)

California's Renewables Portfolio Standard (RPS) target, established in 2002, was expanded in 2011 to 33 percent by 2020. To support that target, Governor Brown's Clean Energy Jobs Plan set a goal of adding 20,000 MW of renewable generating capacity by 2020, including 12,000 MW of localized electricity generation – small, on-site residential and business systems and intermediate-sized energy systems close to existing consumer loads and transmission lines – as well as 8,000 MW of large-scale

wind, solar, and geothermal energy systems. In addition, renewable energy is also a key strategy in achieving greenhouse gas (GHG) emission reductions. In October 2011, the California Air Resources Board adopted final cap-and-trade regulations as part of the state's Assembly Bill 32 *Climate Change Scoping Plan*. Under Governor Brown's direction, the Energy Commission is preparing a renewable plan to "expedite permitting of the highest priority generation and transmission projects." In December 2011, the Energy Commission released the *Renewable Power in California: Status and Issues* report, which identifies high-level strategies to support renewable development. These strategies will be the basis for a comprehensive renewable strategic plan that will be developed as part of the *2012 Integrated Energy Policy Report Update*. The *2011 IEPR* features a summary of the *Renewable Power in California: Status and Issues* report, including issues that must be addressed to ensure that California meets its renewable energy goals. Issues include environmental sensitivities, planning, and permitting; transmission; renewable integration at both the grid and distribution levels; investment and financing; cost; research and development; environmental justice; coordination with local governments; and workforce development.

State energy and environmental agencies are joining forces with the California ISO to expand cooperation as they advance carbon-cutting innovation and green job creation. By further collaboration on important state energy policies, California's Clean Energy Future points the way toward new investments in transmission, energy efficiency, smart grid applications, and increased use of renewable resources.

The California Air Resources Board, CPUC, Energy Commission, and California Environmental Protection Agency are partnering with the California ISO to ensure California's continued leadership in clean technology over the coming decade. By increasing transparency and accountability, California's Clean Energy Future will bolster achievement of the state's 2020 energy policy goals. (Source: <http://www.cacleanenergyfuture.org/>)

In November, 2011, the Energy Commission published a report that focuses on the potential for developing renewable distributed generation – onsite or small energy systems located close to where energy is consumed – on state-owned properties to contribute toward the goal of installing 20,000 megawatts of renewable generation by 2020. In addition to distributed generation, the report explores the potential for developing utility-scale renewable on state properties.

On January 13, 2012, Secretary of the Interior Ken Salazar and Governor Edmund G. Brown Jr. signed an agreement to expand a state and federal partnership that has, over the last two years, paved the way for more than a dozen utility-scale solar energy projects and more than 130 renewable power projects in California. The partnership expedites state and federal environmental reviews of proposed solar, wind and other renewable energy projects. The new agreement expands the partnership to include the building of transmission lines.

## **Energy Commission's Experience with Generation and Transmission Incongruent Development Times**

The passage of the California policy mandate of 20 percent RPS by 2010 (signed into law in 2002) required the state to take steps to ensure greater coordination and time synchronicity between renewable generation development and associated transmission expansion projects. The effort became even more urgent when California's 33 percent RPS by 2020 became law in 2011. Senate Bill No. 2X (Simitian, 2011-2012 1st Ex. Sess.), signed into law by Governor Brown on April 12, 2011, increases California's RPS to 33 percent of all retail electricity sales by 2020.

In the *2008 Integrated Energy Policy Report Update*, the Energy Commission assessed major transmission barriers to achieving the state's renewable energy and greenhouse gas emission reduction goals. The report states that "most notable is the lack of a fully coordinated and effective statewide transmission planning process that includes broad stakeholder support and targets the most cost-effective and environmentally acceptable transmission additions and upgrades to access renewables." In response, the *2009 Strategic Transmission Investment Plan* emphasizes the need for statewide coordinated transmission planning and effective ways to resolve environmental and land-use conflicts that emerge when permitting transmission lines.

### **Facilitating the Timely Development of Renewable Resources in California**

#### Example #1: Tehachapi Study Group

Purpose: Collaborative effort facilitated by the state to identify the transmission upgrades needed to ensure the timely interconnection of up to 4,500 MW of remote renewable generation in the Tehachapi wind resource area by 2020.

Participants: California Energy Commission, CPUC, utilities and stakeholders

Products/Results: Developed a transmission plan and permitting timeline for 11 segments of transmission upgrades that when completed, would enable access to 4,500 MW of renewable generation before 2020 for the Tehachapi area.

#### Example #2: Desert Renewable Energy Conservation Plan (DRECP)

Objective: The DRECP is a proposed multispecies Habitat Conservation Plan and Natural Communities Conservation Plan intended to conserve threatened and endangered species and natural communities in the Mojave and Colorado Deserts of Southern California, while also facilitating the timely permitting of renewable energy projects.

Participants: Renewable Energy Action Team (REAT) agencies (California Energy Commission, California Department of Fish and Game, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California State Lands Commission, the CPUC, the California State Lands Commission, the California Natural Resources Agency the California ISO, the National Parks Service, the U.S. Environmental Protection Agency, and the U.S. Department of Defense).

The DRECP effort also includes environmental and recreation stakeholders, local governments, renewable energy developers, utilities, Native American representatives, and others.

Products/results: Under the leadership of the REAT, the DRECP identifies areas most suitable and acceptable for renewable energy development and areas most suitable for regional multispecies and habitat conservation, with input from renewable energy developers, California local government agencies, and environmental and wildlife organizations. The DRECP Transmission Technical Group recently developed a transmission scenario that will be used in the DRECP Environmental Impact Report/Environmental Impact Study to support impact analysis. The DRECP is expected to provide binding, long-term endangered species permit assurances while facilitating the review and approval of renewable energy projects in the Mojave and Colorado Deserts in California.

### **Transmission Planning/Permitting Streamlining via Coordinated Land Use and “Wires” Planning**

The California Energy Commission staff provided land use information used in creating renewable development scenarios for transmission planning by the CPUC in its Long Term Procurement Planning process, which then feeds into the California ISO’s annual Transmission Planning Process. This approach provides a bridge between renewable generation development locations and “wires” planning, fosters environmental protection, and can reduce timelines because it increases permitting certainty.

### **Responses to Select Requests for Information**

#### **Question (1) a. Describe the challenges created both by the timeline for obtaining Regulatory Permits for transmission and by the Incongruent Development Times.**

The complexity of the transmission Regulatory Permit process creates uncertainty in the overall costs for transmission development. For example, if a local entity disputes a finding/approval from the state, this can extend the overall timeline for the transmission implementation, thereby extending the Incongruent Development Times and increasing the overall project costs to the utility, agencies, stakeholders/intervenors, and ratepayers.

Another challenge created by the Incongruent Development Times is the uncertainty in the ability to meet state policy or energy security goals. California has statutory RPS deadlines to meet, so the greater the length of Incongruent Development Times, the more difficult it will be to meet these deadlines.

The lack of certainty over the availability and timing of adequate transmission to interconnect and deliver remote renewable generation to customers can make it increasingly difficult for generation developers to meet their current contract requirements. As a result, the developer may be forced to renegotiate less favorable terms to fulfill their contract obligations.

**Question (1) b. To what extent do the Incongruent Development Times hamper transmission and/or generation infrastructure development?**

**and**

**Question (1) d. How is the financing for developing the attendant transmission influenced by its lengthy development time and by the (incongruent) Development Times?**

The approval and construction of generation projects ahead of the approval and construction of transmission projects increase the possibility of stranded generation and create uncertainty for the financial community. However, recent developments to improve the coordination between the California ISO's generator interconnection process and annual Transmission Planning Process are anticipated to minimize the risk of stranded generation and minimize duplicative and/or suboptimized transmission planning.

As noted above, the lack of certainty over the availability and timing of adequate transmission to interconnect and deliver renewable generation to customers can make it increasingly difficult for generation developers to meet their current contract requirements. As a result, the developer may be forced to renegotiate less favorable terms to fulfill contract obligations.

**Question (5). In your experience, how long does it take to design, permit, and build transmission?**

As noted above and in the *2011 Lead Commissioner Report on Renewable Power in California: Status and Issues*, it can take as much as six years to plan, design, and permit new transmission within California. For example, the California ISO transmission planning process takes 16 months to finalize a comprehensive transmission plan and seven months to select project sponsors, if applicable. The subsequent utility project development process can take more than two years. These two timelines are essentially sequential because the California ISO planning process focuses only on wires planning, and the identification of routing issues and constraints begins after the wires approval.

The construction time needed for a large transmission project is typically two years, for a total of roughly six years from project planning to commercial on-line date.

**Question (6). Assume that Federal, state, Tribal and local governments sought to set a goal for the length used for completing the Regulatory Permitting process for transmission projects so that the development times between generation and transmission were more commensurate, what goal should that be?**

The Energy Commission staff declines to advise the Department of Energy on a goal for the appropriate length of time to complete the Regulatory Permitting process. However, the Energy Commission staff believes the following actions will help decrease the overall time from transmission project concept to permit decision, while also increasing the likelihood that project concepts can result in permittable transmission facilities based on effective, early stakeholder involvement/buy-in:

***Ensure coordinated, consolidated transmission planning***

Coordinate effort among affected agencies, utilities, and developers. "The key to implementing a consolidated transmission planning process for California is to link existing transmission planning entities and activities together in a manner that emphasizes each entity's roles and responsibilities while building in efficiencies and streamlining whenever possible." (2009 Strategic Transmission Investment Plan, p. 2)

***Shorten the planning and permitting process***

"The greatest opportunity for shortening planning and permitting processes and increasing the quality of decisions lies with coordinating land-use and transmission ("wires") planning. For example, the California ISO transmission planning process takes 16 months to finalize a comprehensive transmission plan and seven months to select project sponsors, if applicable. The subsequent utility project development process can take more than two years. These two timelines are essentially sequential because the California ISO planning process focuses only on wires planning, and the identification of routing issues and constraints begins after the wires approval. The construction time needed for a large transmission project is typically two years, for a total of roughly six years from project planning to commercial on-line date. However, Southern California Edison (SCE) identifies communication "touch points" with agencies through which it can achieve a shorter processing and approval time frame for CEQA/NEPA licensing and cooperating agency permits." (2011 Lead Commissioner Report on Renewable Power in California: Status and Issues, p. 78)

To improve the coordination between land use and "wires" decisions, earlier this month, the California Energy Commission provided land use information as an input to the creation of renewable development scenarios for transmission planning by the CPUC in



its Long Term Procurement Planning process, which then feeds into the California ISO's annual Transmission Planning Process.

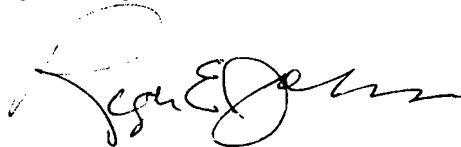
***Plan for and designate transmission corridors ahead of need***

The transmission corridor designation process is to promote public involvement in the transmission planning processes and to link transmission planning processes with transmission permitting to assure the timely permitting and construction of needed transmission facilities." (2009 Strategic Transmission Investment Plan, pp. 6-7) "...early outreach now to local governments and other land use agencies is an important part of the transmission planning process." (2009 Strategic Transmission Investment Plan, p. 7)

The Energy Commission recommends that the Department of Energy explore ways to effectively use the Section 368 corridor designations.

- o Section 368 corridors need to be consistent with state plans (e.g., SB 1059 transmission corridor designation process).
- o Use Section 368 corridors in collaboration with state designations (DRECP).
- o Develop a PACT (Planning Alternative Corridors for Transmission) model for identifying federal and nonfederal lands that can be designated as future transmission corridors

Respectfully submitted,



ROGER E. JOHNSON  
Deputy Director  
Siting, Transmission  
and Environmental Protection Division

## Resources/Bibliography

### **Relevant Energy Commission Policy and Research Reports**

California Energy Commission, 2011. **2011 Integrated Energy Policy Report.**

Publication Number: CEC-100-2011-001-CMF.

<http://www.energy.ca.gov/2011publications/CEC-100-2011-001/CEC-100-2011-001-CMF.pdf>

California Energy Commission, 2011. **Renewable Power in California: Status and Issues.** December 2011, Publication Number: CEC-150-2011-002-LCF-REV1.

<http://www.energy.ca.gov/2011publications/CEC-150-2011-002/CEC-150-2011-002-LCF-REV1.pdf>

Anderson, Grace, Judy Grau, Mark Hesters, Don Kondoleon, Melinda Merritt, Chuck Najarian, Ean O'Neill, and Chris Tooker, 2009. **2009 Strategic Transmission**

**Investment Plan.** California Energy Commission, Strategic Transmission Planning

Office and Engineering and Corridor Designation Office. Publication Number:

CEC-700-2009-011-CMF. <http://www.energy.ca.gov/2009publications/CEC-700-2009-011/CEC-700-2009-011-CMF.PDF>

Deming, Mary Beard. 2009. **Planning Alternative Corridors for Transmission.**

California Energy Commission. PIER-Energy-Related Environmental Research Program. Publication Number: CEC-5002009-079.

<http://www.energy.ca.gov/2009publications/CEC-500-2009-079/CEC-500-2009-079.PDF>

Barker, Kevin, Jim Bartridge, Heather Raitt. 2011. **Developing Renewable Generation on State Property,** California Energy Commission. Publication number:

CEC-150-2011-001.

<http://www.energy.ca.gov/2011publications/CEC-150-2011-001/CEC-150-2011-001-LCF.pdf>

### **Relevant Coordinated In-State Efforts**

California Public Utilities Commission, 2005. **Transmission in the Tehachapi Wind Resource Area Report of the Tehachapi Collaborative Study Group,** March 16,

2005, Proceeding Number: OII-11-001.

<http://docs.cpuc.ca.gov/published/Graphics/48819.PDF>

California Clean Energy Future

<http://www.cacleanenergyfuture.org/>

State Transmission Corridor Designation Program

<http://www.energy.ca.gov/sb1059/index.html>

**Relevant Coordinated State/Federal Efforts**

Renewable Energy Action Team and Desert Renewable Energy Conservation Plan  
<http://www.drecp.org/>

Solar PEIS MOU between Energy Commission and U.S. BLM  
[http://www.energy.ca.gov/siting/solar/peis/BLM\\_CEC\\_MOU.PDF](http://www.energy.ca.gov/siting/solar/peis/BLM_CEC_MOU.PDF)

MOU between the Department of the Interior and the State of California on Renewable Energy  
<http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=274678>

**Relevant Energy Commission Comments filed at the U.S. DOE and FERC**

September 29, 2010, Notice of Intervention of the Public Utilities Commission of the State of California and Joint Comments of the Public Utilities Commission and the Energy Resources Conservation and Development Commission of the State of California  
[http://elibrary.ferc.gov/idmws/doc\\_info.asp?document\\_id=13852419](http://elibrary.ferc.gov/idmws/doc_info.asp?document_id=13852419)

February 2, 2008 Comments on Draft Programmatic Environmental Impact Statement, Designation of Energy Corridors on Federal Land in 11 Western States (DOE/EIS-0386)  
[http://www.energy.ca.gov/corridor/documents/2008-02-07\\_ENERGY\\_COMMISSION\\_COMMENTS\\_PEIS.PDF](http://www.energy.ca.gov/corridor/documents/2008-02-07_ENERGY_COMMISSION_COMMENTS_PEIS.PDF)

July 2, 2007 Comments on U.S. Department of Energy's Draft National Interest Electric Transmission Corridor Designation – Southwest Area National Corridor  
[http://www.energy.ca.gov/corridor/documents/2007-07-02\\_CEC\\_COMMENTS\\_DOE\\_DRAFT.PDF](http://www.energy.ca.gov/corridor/documents/2007-07-02_CEC_COMMENTS_DOE_DRAFT.PDF)

October 10, 2006 Response to U.S. Department of Energy's August 2006 National Electric Transmission Congestion Study: Comments of the California Energy Commission  
[http://www.energy.ca.gov/corridor/documents/2006-10-20\\_STAFF\\_RESPONSE.PDF](http://www.energy.ca.gov/corridor/documents/2006-10-20_STAFF_RESPONSE.PDF)

March 6, 2006 Considerations for Transmission Congestion Study and Designation of National Interest Electric Transmission Corridors Comments of the California Energy Commission  
[http://www.energy.ca.gov/corridor/documents/2006-03-06\\_CEC\\_FINAL\\_NIETC\\_COMMENTS.PDF](http://www.energy.ca.gov/corridor/documents/2006-03-06_CEC_FINAL_NIETC_COMMENTS.PDF)