



# Comments of Pacific Gas & Electric Company

Department of Energy Request for Information on Transmission Permitting  
[OE Docket No. RRTT-IR-001]

Submitted by	Company	Date Submitted
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Pacific Gas & Electric Company (PG&E) appreciates the opportunity to respond to the questions from the Department of Energy (DOE) in its Request for Information (RFI) related to the permitting of transmission lines. The RFI lists six (6) questions, several of them with subparts. PG&E responds to the questions sequentially as they are listed in the RFI.

As discussed in more detail below, increased alignment across the federal, state and local agencies for permitting and improved planning coordination would improve the development time for transmission and generation. Improved focus on planning would result in a more orderly, timely and cost-effective process for transmission and generation additions.

## **ROLE OF PG&E**

PG&E is a public utility operating in northern and central California. PG&E engages in the businesses of electricity and natural gas distribution, electricity generation, procurement and transmission, and natural gas procurement, transportation and storage. PG&E serves approximately 5.2 million electricity distribution customers and approximately 4.3 million natural gas distribution customers, and generated revenues of approximately \$15 billion in 2011. PG&E is regulated primarily by the California Public Utilities Commission (CPUC), and the Federal Energy Regulatory Commission (FERC).

## **CLARIFICATION OF CATCH-22**

In the RFI, in the Supplementary Information Section, it states “[w]hile most types of electric generators can be developed within a few years, developing the transmission necessary for that

generation may take longer. The differential in development times between generation and transmission creates a Catch-22 that inhibits the development of both. (Of course if a load serving entity is developing both the generation and transmission for its own customers, then no such Catch-22 exists.)” PG&E would like to clarify that load serving entities (LSEs) in California, including PG&E, are still subject to the same permitting and approval requirements that independent developers of transmission and generation face, and therefore face the same Catch-22 for any generation or transmission they seek to build. Specifically, developing the transmission may take longer than developing the generation due to different permitting timelines. Additionally, due to the FERC’s non-discriminatory transmission access requirements, and PG&E’s implementation of those rules, PG&E’s generation business has no interconnection advantage over independent power producers.

## **RESPONSES TO QUESTIONS IN THE RFI**

***(1) The development timelines for generation and attendant transmission are often not coordinated or run concurrently. Because of the lengthy time to obtain regulatory reviews, permits and approvals (collectively “Regulatory Permits”), major new transmission lines can take significantly longer to develop than some types of generation to which the transmission would connect. This Request for Information will refer to the difference in development times between generation and transmission as “Incongruent development timelines.”***

***a. Describe the challenges created both by the timeline for obtaining Regulatory Permits for transmission and by the Incongruent Development Times.***

Renewable energy development faces significant challenges in California, including lengthy and costly permitting and environmental review delays. The lengthy timeline for obtaining regulatory permits for both transmission and generation can drive Incongruent Development Timelines. However, in California, it is generally the case that uncertainties in transmission approval and permitting have more often been the cause for delays. Incongruent Development Timelines can be driven by agencies at the state or federal level, and PG&E therefore encourages greater coordination, not only among federal agencies, but between state and federal entities.

We commend the Department of Energy in coordination with the U.S. Department of the Interior Bureau of Land Management for the programmatic renewable energy and transmission planning that is currently underway for solar energy facilities on public lands in the western United States. PG&E supports the proposed Solar Energy Program and the creation of solar

energy zones on public lands where renewable energy development may be expedited. We believe the creation of zones will help create certainty for more effective and efficient transmission planning. Furthermore, PG&E supports the highly coordinated integration of solar energy zones and the renewable energy zones that are being evaluated in the collaborative federal and state planning process for the Desert Renewable Energy Conservation Plan (DRECP). The federal government should ensure that the two processes are highly coordinated such that they present an integrated and consistent approach to guiding development toward appropriate locations within the southern California deserts, while also providing a road map for transmission planning in these regions.

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

Given the importance of sufficient transmission for the reliable operation of the grid and for the integration of renewable generation in California, it is unlikely that transmission upgrades determined to be necessary will not be built at all. The Transmission Planning Process (TPP) at the California Independent System Operator (CAISO) evaluates the need for new transmission on an annual basis, and will continue to be the first step toward approving a given upgrade in the CAISO balancing authority area. However, a more streamlined transmission permitting process may enable assets to be developed more quickly after they are determined to be needed in the TPP, and therefore could reduce the uncertainty around when new transmission will come online.

A more streamlined permitting process has the potential to reduce costs for both transmission and generation assets by reducing uncertainties and risks that lead to higher cost of capital and longer lead-times.

***c. What are the primary risks associated with developing transmission vis-a`-vis the timeline for obtaining Regulatory Permits as well as the Incongruent Development Times?***

PG&E has identified the following risks associated with permitting timelines:

- Lead agencies at the federal and state level have different permitting processing timelines. For example, a federal lead agency approving a renewable energy generation project will often finalize its approval ahead of the approval for a transmission interconnection project that is subject to approval by a state lead agency (e.g. a public

utilities commission, in the case of PG&E). Coordination between federal and state jurisdictions is just as important as coordinating timelines between generation and transmission among federal agencies only.

- There is significant uncertainty in determining which transmission projects will be needed due to uncertainty of when and where new generation will be developed. Abandoned plant treatment authorized by FERC can help temper the risk of potentially stranded costs associated with the early development work of multiple transmission projects to accommodate several potential renewable portfolio scenarios.

***d. How is the financing for developing the attendant transmission influenced by its lengthy development time and by the Dissonant Development Times?***

Lengthy development time combined with permitting uncertainty adds risk to financing a transmission project, which ultimately leads to a higher cost of capital. FERC's willingness to authorize "abandoned plant treatment" tempers the risk of stranded costs making the financing of transmission projects more feasible. PG&E urges that FERC continue to provide Order 679 incentives to reduce the financial risk associated with the development of transmission lines

***e. How if at all, do development timelines and the Incongruent Development Times affect the decisions made in utilities' integrated resource planning, if applicable?***

PG&E supports transmission development to accommodate interconnection and delivery of power from multiple resource areas in California. PG&E believes that greater transmission availability enables competitive markets by providing procurement options in high potential areas that can generate power at the lowest cost. Given that the cost of generation has a bigger impact on the overall cost of delivered power than the cost of transmission, enabling access to the most economic resource can help reduce the overall cost of energy.

Identification of zones for renewable generation and related transmission upgrades will provide greater certainty to utilities about which resources are most likely to be viable. This will result in more orderly, rational, timely, and cost-effective state and regional planning for transmission and generation additions.

***f. How do development timelines and the Incongruent Development Times affect the ability of parties to enter into open seasons or power-purchase agreements?***

PG&E has a competitive procurement process by which it solicits offers for power purchase agreements (PPAs) and selects which PPAs to execute. In addition to price, PG&E considers the viability of each project. PG&E seeks to select projects that are attractively priced, and that stand the best chance of reaching commercial operation by the date offered by the developer.

Projects that score the highest on project viability will:

- Be proposed by developers with a proven track record.
- Use commercially proven technology in a location with proven resource potential (e.g. solar insolation).
- Have received appropriate permits. Projects that have received permits score highest. Projects that have applied for permits score higher than those that have not yet applied for permits.
- Have approved transmission upgrades that are complete and interconnection is imminent. Projects score higher after each stage of the interconnection process is achieved (e.g. application, preliminary study, final study, Interconnection Agreement executed). Projects that require smaller transmission upgrades score higher than projects requiring large transmission upgrades. In general, the more certainty that the Seller can provide to PG&E regarding the interconnection timeframes and costs, the lower the perceived risk of whether the Seller will be able to meet its contractual commercial online date.

Although the permitting process for a developer may be time consuming, transmission permitting and construction is more of a constraint on the feasibility of a project due to the longer lead times. The interconnection process at the CAISO takes about two years from the time the application is submitted to the time the interconnection agreement is finalized. Once the interconnection agreement is finalized, some transmission upgrades might have estimated lead times of up to seven years for permitting and construction to be completed.

***(2) Besides improving the efficiency of permitting and approving transmission, are there any other steps the federal government could take to eliminate the barriers created by the Dissonant Development Times?***

The federal government should encourage the alignment of FERC and the Western Electricity Coordinating Council (WECC) regional transmission planning with state-level transmission planning. Likewise, transmission planning at the state level should align with federal goals.

While the federal government has undertaken transmission corridor planning through the West Wide Energy Corridor designation process, the Section 368 energy corridors were only approved on federal lands, and lack incentives and approvals necessary for development on lands outside the jurisdiction of the federal government. As stated above, the federal government should continue to engage in collaborative planning processes that integrate transmission planning with renewable energy, land use, and habitat conservation planning.

***(3) What strategies can the Federal government take to decrease the time that Federal agencies require for evaluating Regulatory Permits for transmission? What other steps can the Federal government take to address the challenges created by Incongruent Development Times?***

As noted above, the federal government should continue to engage in existing collaborative planning processes for renewable energy planning. Transmission planning should specifically be incorporated into these processes and appropriate areas for transmission should be identified along with areas set aside for renewable energy development. Specifically, we recommend that collaborative planning processes for renewable energy:

- Recognize the downstream upgrades and impacts to high voltage electrical transmission systems and recognize that transmission network upgrades and additions will be needed to safely and reliably interconnect renewable energy resources from remote areas of the state to population centers.
- Aim to site new transmission lines within or adjacent to existing rights-of-way and utility corridors and analyze the amount of new rights-of-way or corridors that might be needed to transmit energy into the load centers while adhering to the North American Electric Reliability Corporation (NERC) and WECC reliability criteria.
- Facilitate contiguous corridor designation on public and private lands that serve renewable zones or multiple projects. Inter- and intra-state corridors should be seamless, consistent, sized strategically, and durable in term.
- Include an evaluation of land and permitting impacts of new and potential upgraded transmission line corridors to deliver power from each renewable energy zone under consideration while meeting the most current NERC and WECC reliability criteria.

- Include in its National Environmental Policy Act (NEPA) document the transmission line required for interconnection. The NEPA document should address the state's requirements for satisfying environmental review (e.g. California Environmental Quality Act (CEQA)).

The federal government should define basic criteria for expediting or streamlining permitting and environmental review of electric transmission projects. To provide more certainty for applicants or proponents of electric transmission projects, the federal government should encourage federal agencies to adhere to their own respective timelines to process permit applications and conduct environmental reviews. Additionally, the federal government should consider developing and adopting standardized "best management practices" and/or mitigation measures that could be incorporated into the permits and approvals of electric transmission projects in exchange for greater certainty with expedited permitting and environmental review timelines.

The federal government should engage in partnerships with state, and local agencies responsible for review and approval of transmission projects. For example, memorandums of understanding (MOU) or memorandums of agreement (MOA) between, federal, state, and local agencies could accelerate permitting of transmission projects due to more streamlined coordination amongst project approvers. The federal government could also make funds available to counties for incorporation of energy corridors in local government land use plans.

***(4) One way to make the Regulatory Permit process and development times between remote generation and attendant transmission more commensurate, is to decrease the time for permitting transmission by some amount. In determining how much time can be saved, developing a benchmark may be helpful. What benchmark should be used?***

While PG&E does not propose a specific benchmark to be used, it makes note of potential improvements to existing processes:

- Federal agencies should adhere to their own statutory permitting and environmental review timelines. This would include adherence to both the timelines for the NEPA process and for processing federal permits or other entitlements. An example of where federal permitting is frequently delayed is during the Section 7 Interagency Consultation process. Under Fish and Wildlife Service (FWS) guidelines, the Section 7 process typically takes 135 days to complete. In PG&E's experience, it typically takes 9-12 months to complete consultation and issue a biological opinion. Lastly, federal agencies such as the US FWS should provide consistent guidance for how applicants address mitigation for significant impacts.

- Federal agencies should have an established permitting timeline similar to California's Permit Streamlining Act.

**a. Example—power purchase agreements as the benchmark: how far in the future do load serving entities (LSE's) seek to purchase energy or capacity from remote resources? Do energy/capacity 3 years from the signing of the PPA? 7 years? 10 years? Please explain why PPA's are signed at this time.**

The preferred online date for PG&E PPAs is dependent on California Renewable Portfolio Standard (RPS) compliance rules and when PG&E needs renewable energy to meet its compliance target as specified by the CPUC. Currently, PG&E has sufficient resources under contract to meet its RPS targets in the first compliance period (2011-2013) and the second compliance period (2014-2016). Thus, PG&E is focusing on resources with online dates in the third compliance period (2017-2020).

PG&E is currently negotiating with Sellers that were shortlisted in the 2011 RPS Request For Offer (RFO), and expects to execute PPAs mid-year 2012. Those contracts are not effective until PG&E has received final, non-appealable CPUC approval, which may take six to nine months. Assuming this schedule, the PPAs will be effective sometime in 2013.

**b. Example—development times as the benchmark: How long does it take to design, permit and build different types of remote generation?**

PG&E has no specific comments on the time it takes to design different types of remote generation. The time required for permitting will depend on the technology and the regulatory agency that has jurisdiction. Sellers typically do not begin construction until after they have an approved PPA. Given the timeline between contract execution and contract online date, the time required for construction is typically not a constraint.

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

The transmission project development cycle (including transmission planning) ranges from four to more than 10 years depending on the project.

For example, an 84 mile high-voltage upgrade which was completed in 2004 only took four years. The short timeline was enabled by: 1) broad stakeholder support of the project need



post-energy crisis, and 2) the involvement of a federal agency (Western Area Power Authority) as the lead siting agency, which resulted in streamlined siting and permitting requirements.

On the other end of the spectrum, the contemplated Central Valley Feasibility Study that would upgrade backbone transmission in Central California could take up to ten years to reach commercial operation. The lengthy development time is driven by the estimated span of the project, a complex regulatory environment, and rigorous permitting and siting requirements.

***(6) Assume that Federal, State, Tribal and local governments sought to set a goal for the length of time 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? As the length of the project and the number of governments with jurisdictions increase so will the time necessary for permitting and approvals; accordingly, consider providing a goal that could be scalable according to the length of the line.***

The federal government could incorporate specific goals for transmission project timelines into land use planning for renewable energy zones given that such zones were established after significant study of environmental impacts. This would help ensure minimization of incongruent timelines for development and transmission in those areas.