

To: Department of Energy (congestion09@anl.gov)
From: Southern California Edison Company
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**Comments of Southern California Edison Company
on the Department of Energy
2009 Congestion Study**

I. Introduction

In April 2010, pursuant to the Energy Policy Act of 2005 (EPAct 2005) and the American Reinvestment and Recovery Act of 2009 (Recovery Act), the Department of Energy (DOE or Department) issued its 2009 National Electric Transmission Congestion Study (Study). The Department has invited public comments on all aspects of the Study, but noted that comments will be particularly useful to the extent they address the accuracy of the DOE's congestion analysis and designations, and the methodology for defining and identifying the impacts of congestion, particularly on a going forward basis. Southern California Edison Company (SCE) appreciates the opportunity to provide its views on the issues raised by the DOE in the Study. SCE is an electric utility with customers, both business and residential, located in the State of California. SCE constructs, owns, and maintains transmission facilities, and as such, has a substantial interest in all aspects of the Study.

SCE's comments while addressing the questions highlighted by the Department, (and providing some factual corrections to the information included in the Study), will also focus on the issues that have been highlighted by the Recovery Act as the key issues facing the Department and the nation as a whole today — the development of renewable

generation and associated transmission facilities that are needed to support the nation's electrical infrastructure in the future.

II. Background

A. The 2006 Congestion Study and Electric Corridor Designations

The first congestion study was published in 2006, under auspices of the EPAct 2005. The 2006 Congestion Study identified and classified areas of congestion around the country. In 2007, based on the findings in the 2006 Congestion Study, the DOE designated two National Interest Electric Transmission Corridors (NIETCs), including the Southwest corridor that encompasses the Southern California region – a region that the Department classified as a Critically Congested Area.

B. The 2009 Study and the Need for Development of Renewable Resources

In the 2009 Study, DOE again “identifies areas that are transmission constrained” (Study at p. vii.), discusses the causes and the consequences of such constraints, and also notes that the Study does not currently propose to change any NIETC designations. (*Id.*) Additionally, the Recovery Act required the DOE to “include an analysis of potential sources of renewable energy that are constrained in accessing appropriate market areas by lack of adequate transmission capacity and explain why adequate transmission capacity has not been developed.” (Study at pp. vii-viii.) As such, the Study undertakes a comprehensive analysis of various renewable resources across the country, and considers why transmission capacity to support the growth of such resources has not been sufficiently developed.

Although SCE takes issue with certain aspects of the Study, SCE strongly agrees with the DOE's renewed designation of Southern California as an area of Critical Congestion, and the DOE's conclusion regarding the negative impact that the lack of adequate transmission and generation development could have on system reliability in Southern California. SCE also commends the DOE for its focus on the transmission expansion required to support renewable resources. SCE strongly urges the DOE to take a more active role in promoting the development of transmission that serves renewable resources, including supporting and encouraging the Federal Energy Regulatory Commission to put in place financial assurances necessary to ensure such transmission will be timely built.

III. Discussion

A. The Study Correctly Identifies Congestion in the Western Interconnection

The Study correctly identifies Southern California as a Critical Congestion Area. As the DOE notes “although the state of California has shown national leadership in moderating electric load growth and increasing distributed generation, the Southern California region remains challenged. New transmission and generation in Southern California have barely kept pace with load growth over the past few years . . . [s]low development of new generation and transmission facilities could compromise near-term grid reliability in Southern California, despite growing demand response and smart grid capabilities.” (Study at pp. xii; 85.) As such, “the Department concludes that Southern California remains a congested area and should continue to be identified as a Critically Congested Area.” (Study at p. 87.) SCE agrees that, given the increase in load, the need for new transmission and generation, and particularly the challenges in siting and

permitting of both generation and transmission in California, there is no question that the Department properly remains concerned about grid reliability in Southern California. For the same reasons, SCE fully supports and requests that the DOE retain in place the Southwest NIETC designation.

SCE also commends the DOE for noting that build-out of transmission capacity (either to address congestion related issues or to provide for access of renewable generation to markets) faces significant regulatory obstacles and delays. SCE, however, is concerned that some of the assertions made by the Department in the Study might be taken out of context. For example, the DOE states that it “has not found examples where legal challenges filed at the state and federal level are clearly delaying construction of transmission needed to access renewable energy.” (Study at p. 26.) The possibility that renewable transmission projects do not face greater legal challenges than other transmission projects is, in SCE’s view, far from comforting. Given that transmission projects take years to build or cannot be built at all due to substantial regulatory, legal and siting delays, the lack of additional legal challenges to renewable projects does not seem particularly meaningful or promising for future growth of renewables.

Likewise, the Study “refrains from addressing the issue of whether transmission expansion would be the most appropriate solution to relieve congestion because any transmission expansion “might simply move a constraint from one point on the grid to another”, be more expensive than the costs of underlying congestion, or may be less “economic” than alternative “such as increased local generation”, energy storage or energy efficiency. (Study at pp. vii-viii; see also p. 8.) SCE appreciates the DOE’s general concerns regarding the challenges to identifying an appropriate solution to

relieving congestion, and aggress that cost-effectiveness and congestion impacts of any new transmission are obviously important factors in evaluating any specific transmission project, and transmission planning in general. Likewise, SCE recognizes that new technology solutions will likely be an important part of the future of system growth. However, new transmission development in Southern California specifically, and the Southwest NIETC in general, is – given the DOE’s findings above – absolutely necessary to avoid congestion and reliability problems. SCE, therefore, urges the Department to take the lead in working to advance the building of transmission lines in the Southern California region, and work with the necessary federal, state, and regional organizations to resolve any issues that delay the construction of needed transmission.

B. The Study Should Make Clear the Link Between Renewable Energy and Grid Reliability

The Recovery Act charged the DOE with conducting a comprehensive review of renewable resources across the country and the obstacles that serve to delay the development of such resources. Specifically, the Recovery Act required that the Study include an analysis of “significant potential sources of renewable energy that are constrained in accessing appropriate markets by lack of adequate transmission capacity. . . reasons for failure to develop the adequate transmission capacity . . . recommendations for achieving adequate transmission capacity” and an examination of the “extent to which legal challenges filed at the State and Federal level are delaying the construction of transmission necessary to access renewable energy.” (Study at p. 11.)

The Study has determined that the development of renewable resources requires transmission growth because “[i]n many cases transmission access makes the

difference between an economic and uneconomic project” (Study at p. ix.). As the DOE explains, one of the key reasons as to why “adequate transmission capacity has not been developed in some areas with large amounts of potential renewable resources” is that “long-distance transmission is expensive, large transmission projects are very costly and difficult to finance and build for individual, independent renewable project developers.” (Study at pp. 24-25.).

The Study, thus, confirms a basic principle that SCE has consistently understood to be true and advocated before regulatory authorities – the development of renewable resources is severely hampered when renewable generators are faced with uncertain, expensive and prolonged regulatory processes for development of the transmission lines that are needed to bring their power to load. In fact, a group of California stakeholders, including SCE, recently sent a letter to FERC requesting that the Commission make it possible for transmission owners to promote renewable resources by providing upfront financing – which cannot be done without assurance of 100% abandoned cost recovery – to construct transmission projects that will bring renewable generation to load.

“As California has worked to increase renewables, it has found that building transmission is one of the most difficult hurdles to accessing areas rich in renewable generation. Typically, under the Commission’s generator interconnection policies, the generator is responsible to finance the upfront cost of the transmission network upgrades associated with interconnecting its plant, although the Participating Transmission Owner may choose to finance these costs in place of the generator. This approach to limiting customer exposure to generator development risk had worked reasonably well in the case of conventionally-fueled generation, which has great flexibility in location and can easily be sited closer to existing transmission in order to limit interconnection costs. However, the model has proven problematic for most renewable generation since these resources are typically found far from California’s load centers and existing transmission and may require extensive network upgrades with

their attendant high costs. It is very difficult for renewable generation developers to obtain financing for both the generating project and significant transmission. However, in order for the transmission owning utility to finance these projects in a way that makes commercial sense, the utility must have reasonable assurance of cost recovery if the project has to be abandoned for reasons outside of the utility's control.

The clearest path to cost recovery assurance for large renewable interconnection transmission projects is Commission approval of the 100% abandoned plant incentive available under Section 219 of the Federal Power Act. Approving 100% abandoned plant allows the transmission owner to finance the project while providing the generator with the assurance that it will not have to finance the costly upgrades. Providing such assurance of rate recovery early in the process is the clearest way to overcome the "chicken and egg" problem of which comes first – transmission or renewable generation."

Simply put, the growth of renewable resources cannot take place without the building of transmission lines to serve such resources because new transmission is needed to ensure the reliability of the grid and reduce congestion caused by the interconnection of new generation. The construction of the necessary transmission lines, however, is best served by providing Section 219 incentives to the utilities that are willing to support this nation's commitment to renewable resources by undertaking to finance transmission projects that will ensure reliability and reduce congestion by bringing renewable generation to markets.

The Study's discussion on what it takes to develop wind generation is quite instructive in this regard:

"The match between actual wind development and strong wind resources has occurred primarily where there has been adequate transmission capacity to interconnect the new wind generators and deliver their energy to loads or in areas in which there is a willingness to build new transmission capacity quickly without charging the full cost to new wind producers (as in ERCOT and California). Where there is high wind resource potential but little new wind development, those gaps occur principally because there is neither adequate transmission capacity to

deliver wind generation, nor an expeditious way to build new transmission for that purpose.” (Study at p. 18.)

SCE strongly urges the DOE to use the Study (and to take all other steps) to support SCE’s efforts to finance and build transmission aimed at bringing renewable generations to load. By supporting Section 219 incentives, and in particular 100% abandoned plant recovery for renewable transmission, the Department has the opportunity to play a key role in removing obstacles to the growth of renewable generation in this country.

Additionally, SCE urges the DOE to issue recommendations in the Study and to provide policy guidelines to assure that when construction of transmission needed to interconnect renewable resources appears to be jeopardized by other federal policies and regulations, such as for example, the laws regarding the protection of endangered species or lands, the development of renewable resources is given the appropriate level of priority. Specifically, as the DOE acknowledges “transmission lines needed to serve them may cross multiple states and federal lands, requiring lengthy, costly, and potentially contentious and litigious environmental and regulatory permitting processes.” (Study at p. 25.) It is, therefore, essential that the DOE take a leading role, on behalf of renewable assets, to resolve the environmental and regulatory requirements imposed by the various bodies involved in siting renewable projects, in a manner that prevents lengthy delays and disputes from unduly impacting or shutting down such projects.

C. DOE Should Place Appropriate Emphasis on Future Congestion

SCE believes that transmission planning is appropriately done at the interconnection or regional level. Regional entities are usually most familiar with the needs of the areas they serve and are best positioned to perform the technical studies required. Therefore, it is appropriate that DOE rely on analyses from regional planning

entities, rather than reinventing the wheel. However, for the Western Interconnection, DOE's methodology consisted largely of analyzing existing studies of historical congestion from the Transmission Expansion Planning Policy Committee (TEPPC).

For the 2012 Congestion Study, we urge DOE to include in its analysis forecasts of congestion, along with the usage of historical data. Given DOE's assessment that it takes between five and fifteen years to plan, route, and construct a new transmission line¹, it is apparent that analysis of future congestion is also necessary to accommodate transmission planning going forward. DOE has already taken a step in this direction by providing funding under the Recovery Act to WECC to conduct interconnection-wide electric transmission planning studies for the Western Interconnection. SCE commends that effort and urges DOE to include such forward-looking data in its next congestion study.

D. Certain Factual Statements Should be Updated

SCE would like to provide some factual corrections and/or clarifications to the information included in the Study. First, with respect to the DOE's discussion on the status of SCE's Devers-Palo Verde 500 kV transmission project (Project), as SCE explained before, SCE is committed to find a way to proceed with permitting the Arizona portion of the Project when need has been demonstrated, likely as a result of generation interconnection requests.

Second, in the DOE's discussion of the Tehachapi Renewable Transmission Project referenced an expected in-service date of the "first phase" (Segments 1-3) is sometime in 2010. (Study at p. 83) Actually, Segments 1-3 were operational by December 31, 2009. The DOE labeled the remaining Tehachapi

¹ Study at page 14.

Renewable Transmission Project as the “second phase” of the project. This “second phase” consists of eight transmission segments (segments 4-11), and was granted a CPCN from the California Public Utility Commission in December 2009 with varying in-service dates anticipated between 2012 and 2015.

Finally, SCE would like to correct the Source description of Figure 5-8. The DOE stated that “[a]lthough this map shows the planned Palo Verde–Devers No. 2 transmission line stretching all the way to the Palo Verde power plant, SCE has withdrawn its permit application for the Arizona portion of the line.” (Study at p. 84) The map was not intended to show the Palo Verde–Devers No. 2 transmission line, but rather to highlight a 505 MW short-term upgrade that occurred in 2006 on the existing Devers-Palo Verde and the Southwest Power Link. The reference to the Palo Verde – Devers No. 2 transmission line should be removed from the Source description of Figure 5.8.

E. Conclusion

SCE appreciates this opportunity to provide input on the Study. SCE urges the Department to take the steps recommended in the comments above to address congestion issues in Southern California and promote the growth of transmission needed to serve renewable generation.