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VIA ELECTRONIC MAIL

March 6, 2006

United States Department of Energy
Office of Electricity Delivery and Energy Reliability, OE-20
Attention: EPACT 1221 Comments, U.S. Department of Energy
Forrestal Building, Room 6H-050
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Re: Considerations for Transmission Congestion Study and Designation of National Interest Electric Transmission Corridors Comments of the California Energy Commission

In response to the Notice of Inquiry ("NOI") published by the Department of Energy's Office of Electricity Delivery and Energy Reliability ("OE") on February 2, 2006, (71 Fed. Reg. 5660) relating to DOE's plans for an electricity transmission congestion study and possible designation of National Interest Electric Transmission Corridors ("NIETCs"), pursuant to section 1221(a) of the Energy Policy Act of 2005 ("EPAct-05"),[1] the California Energy Commission ("Energy Commission") submits its comments, below.

Communications concerning the Energy Commission's comments should be addressed to the following:

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## I. INTRODUCTION

The Energy Commission[2] 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

[1] Section 1221 of the EPAct-05 provides, in part, that designated NIETCs be subject to "backstop" siting authority by the Federal Energy Regulatory Commission ("FERC") for facilities located within these designated corridors.

[2] The California Energy Commission is also known by its formal name, State Energy Resources Conservation and Development Commission, and is an organizational unit within the State of California Resources Agency.

any thermal power plant with a generating capacity of 50 MW or greater requires 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.

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. The Energy Commission also has siting jurisdiction for thermal power plants of 50 megawatts (MW) or greater and related transmission facilities. As the result of the Energy Commission's long-standing participation and developed expertise in the area of transmission corridor planning and electricity infrastructure siting, we are pleased to provide comments on DOE's proposed implementation of EPAct-05 Section 1221(a) relating to NIETCs.

Beginning in the late 1970s and early 1980s, the Energy Commission became an active participant in the 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 (Energy Report)* and *Strategic Transmission Investment Plan (Strategic Plan)* to improve transmission corridor planning and permitting in California.

Finally, 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 EPAct-05. 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.

In California, the construction and operation of any thermal power plant with a generating capacity of 50 MW or greater requires 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").

## II. GENERAL COMMENTS

Before responding to specific areas for comment outlined in the NOI, we have several issues and concerns, outlined below:

### The Importance of State Laws and Policies in the Designation of National Interest Transmission Corridors

The Energy Commission believes it is important to explicitly address state energy laws and policies relating to transmission corridor planning to ensure that DOE's designation of transmission corridors of national interest both complements these efforts and leverages state expertise. Although the NOI states that DOE's initial study pursuant to EPAct-05 section 216 may include "enabling larger transfers of economically beneficial electricity to load centers, or enabling delivery of electricity from new generation capacity to distant load centers"[3] in its recitation of questions for public comment,DOE appears to be too narrowly focused on addressing congestion alone and needs to adequately consider the other important transmission planning objectives faced by California and other states. The need for transmission corridor planning in California is a long-running issue for the Energy Commission.

In 1988, recognizing both the growing importance of transmission with the interconnection of independent power producers and the escalating conflicts between transmission-owning and transmission-dependent utilities, the California Legislature passed Senate Bill (SB) 2431 (Section 1457, Statutes of 1988), which contained the following findings concerning the role of transmission in California's future development:

(a) The Legislature finds and declares that establishing a high-voltage electricity transmission system capable of facilitating bulk power transactions for both firm and nonfirm energy demand, accommodating the development of alternative power supplies within the state, ensuring access to regions outside the state having surplus power available, and reliably and efficiently supplying existing and projected load growth, are vital to the future economic and social well being of California.

(b) The Legislature further finds and declares that the construction of new high-voltage transmission lines within new rights-of-way may impose financial hardships and adverse environmental impacts on the state and its residents, so that it is in the interests of the state, through existing licensing processes, to accomplish all of the following:

    (1) Encourage the use of existing rights-of-way by upgrading existing transmission facilities where technically and economically justifiable.

    (2) When construction of new transmission lines is required, encourage expansion of existing rights-of-way, when technically and economically feasible.

    (3) Provide for the creation of new rights-of-way when justified by environmental, technical, or economic reasons, as determined by the appropriate licensing agency.

    (4) Where there is a need to construct additional transmission, seek agreement among all interested utilities on the efficient use of that capacity.

[3] 71 Fed. Reg. 22 at 5661.

In directing the Energy Commission to conduct an investigation and prepare a report outlining recommended policies and actions, SB 2431 plainly stated that the purpose of the report was to facilitate effective, long-term transmission line corridor planning.[4] One of the major findings of the report was that utilities should take appropriate mitigation measures to reduce the environmental impacts of approved projects.[5] The report also identified the absence of coordinated transmission and land-use planning as a major impediment to transmission development in California, and called for a process to identify environmentally sensitive areas, acceptable areas, and areas where urban encroachment into transmission rights-of-way could pose problems.[6] The basic principles and policies expressed in this effort formed a sound foundation for assessing and designating transmission corridors then, and are still persuasive today, nearly 20 years after they were first articulated.

In 2002, in highlighting the importance of reliable energy supplies, the California Legislature again concluded that state government has an essential role in ensuring that a reliable supply of energy is provided, consistent with protection of public health and safety, promotion of the general welfare, maintenance of a sound economy, conservation of resources, and preservation of environmental quality. As a result, SB 1389 (Bowen and Sher), Chapter 568, Statutes of 2002, requires that the Energy Commission adopt an *Energy Report* every two years. In preparing the *Energy Report*, the Energy Commission was directed to evaluate energy trends and issues facing California and develop and recommend policies to ensure reliable and economical energy supplies. Other state agencies with energy responsibilities are required to use the Energy Commission's assessments and forecasts to ensure consistency in the information that forms the foundation of California's energy policies and decisions.

In 2004, noting both the lack of an official state role in transmission planning and the failure of existing processes to consider broader state interests, SB 1565 (Bowen), Chapter 692, Statutes of 2004, added Public Resources Code (PRC) Section 25324:

> The [Energy] commission, in consultation with the [California] Public Utilities Commission, the California Independent System Operator [CAISO], transmission owners, users, and consumers, shall adopt a strategic plan for the state's electric transmission grid using existing resources. The strategic plan shall identify and recommend actions required to implement investments needed to ensure reliability, relieve congestion, and meet future growth in load and generation, including, but not limited to, renewable resources, energy efficiency, and other demand reduction measures. The plan shall be included in the integrated energy policy report adopted on November 1, 2005, pursuant to subdivision (a) of Section 25302.

With passage of SB 1565, the California Legislature acknowledged the importance of the state's role in the transmission planning process and recognized the Energy Commission as the

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[4] Energy Commission, *Transmission System and Right of Way Planning for the 1990's and Beyond*, March 1992, Publication P700-91-005, p. 1.
[5] Ibid, p. 7.
[6] Ibid, p. 15.

state agency best suited to undertake and accomplish this effort. The *Strategic Transmission Investment Plan (Strategic Plan)*[7] creates a blueprint for the development of an efficient and reliable bulk transmission system for California. The *Strategic Plan*, adopted by the Energy Commission in November 2005, identifies five prospective transmission projects needed in the near-term to provide strategic benefits to California's electricity grid through improvements to system reliability, reduced congestion, and/or interconnection to renewable resources. These are:

- Palo Verde-Devers No. 2 500kV Project (reduces congestion on lines connecting California and Arizona).

- Sunrise Powerlink 500kV Project (allows interconnections with renewable resources located in California's Imperial Valley, reduces congestion and improves system reliability).

- Tehachapi Transmission Plan Phase I - Antelope Transmission Project (allows interconnections with wind energy generated in the Tehachapi area of Southern California).

- Imperial Valley Transmission Upgrade (provides interconnection with renewable energy resources, to meet future load growth, and provide reliability benefits).

- Trans-Bay Cable Project (provides reliability benefits to the San Francisco Peninsula and CAISO control area).

The Energy Commission believes that the DOE process for designating transmission corridors of national interest should explicitly recognize the critical need for these projects. The *2005 Energy Report* also recommended that the Energy Commission actively participate in federal corridor planning processes, enacted as part of the EPAct-05.[8] In following through on this recommendation, the Energy Commission is pleased to provide comments and be an active participant in this DOE proceeding.

**Applying Broad Principles in Assessing the Need for Transmission Corridors of National Significance**

Establishing the need for transmission corridors is necessarily a flexible process that needs to consider regional differences in operational characteristics, planning considerations, and energy policies within California and across the Western U.S.. In order for designated "national interest" transmission corridors to blend seamlessly into state and regional energy strategies, it is critical that DOE processes adequately recognize critical transmission investments – identified by California and other states – that we believe are expressly allowed under federal law. In identifying the principles that underlie the need for transmission corridors of national

[7] The Strategic Plan may be accessed through the Energy Commission's website at [http://www.energy.ca.gov/2005publications/CEC-100-2005-006/CEC-100-2005-006-CMF.PDF]
[8] The 2005 Energy Report may be accessed through the Energy Commission's website at [http://www.energy.ca.gov/2005publications/CEC-100-2005-007/CEC-100-2005-007-CMF.PDF]

interest, DOE should employ a broad set of definitional criteria, instead of engaging in a narrow modeling effort focused merely on relieving congestion.

California and federal policies addressing the need for additional transmission infrastructure investments can be fairly easily reconciled. The EPAct-05 (Subtitle B – Transmission Infrastructure Modernization) Section 1221 lays out a broad framework that designates interstate electric transmission corridors of "national interest." It directs the Secretary of Energy to do the following:

1. Conduct a study, in consultation with affected states, of electric transmission congestion.
2. Issue a report designating areas experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers.
3. Conduct the study and issue the report in consultation with appropriate regional entities.
4. Designate a national interest electric transmission corridor that considers whether:
   - (A) The economic vitality and development of the corridor, or end markets served by the corridor, may be constrained by lack of adequate or reasonably priced electricity.
   - (B) i. economic growth in the corridor, or the end markets served by the corridor, may be jeopardized by reliance on limited sources of energy; and,
     ii. diversification of supply is warranted.
   - (C) The energy independence of the United States would be served by the designation.
   - (D) The designation would be in the interests of national energy policy.
   - (E) The designation would enhance national defense and homeland security.

The NOI correctly recognizes that investment in new transmission facilities has not kept pace with the increasing economic and operational demand for transmission services. The Energy Commission shares this concern and identified three urgent transmission issues in its *2005 Energy Report*:

- The state lacks a well-integrated, proactive transmission planning and permitting process. Overlapping and often conflicting roles and responsibilities between state and federal agencies cripple California's ability to effectively secure the investments needed to address dramatic increases in congestion costs and serious threats to electric system reliability.
- California urgently needs a formal, collaborative transmission corridor planning process to identify critical transmission corridors well in advance of need so that utilities can identify and retain needed lands and easements, and local governments can flag incompatible land uses.
- California needs major investments in new transmission infrastructure to interconnect with remote renewable resources in the Tehachapi and Imperial Valley areas, without which it will not be able to meet its Renewable Portfolio Standard (RPS) targets.[9]

DOE should explicitly include furthering key state energy policies and laws as a fundamental criterion when designating transmission corridors of national interest. The Energy

[9] *2005 Integrated Energy Policy Report*, Energy Commission, November 2005, pp. 88-89.

Commission believes that state and federal transmission interests, as articulated in both federal and state laws and policies, can reinforce one another as long as they are carefully coordinated so as to avoid unnecessary overlap, duplication of efforts, or delay and to allow transmission infrastructure investments to be made in the near term..

While provisions of federal law have as their goal "designating areas experiencing electric energy transmission *capacity constraints or congestion* that adversely affects consumers," (Subsection 1221(a), emphasis added) the Energy Commission does have concerns that DOE has outlined an overly narrow focus on congestion alone in the NOI. The process outlined in the NOI envisions a "congestion study" that, as currently drafted, appears to be a precursor to designating transmission corridors of national interest. The Energy Commission believes that identifying transmission congestion is an important element of establishing the "need" for transmission infrastructure investments; however, it should not serve as the sole basis for such assessments. Relieving "capacity constraints," as expressed in the EPAct-05 (Subsection 1221(a)), conveys a much broader meaning than merely addressing existing or forecasted transmission congestion. This broader interpretation is necessary to meet other provisions in the law relating to "adequate and reasonably priced electricity," "diversification of supply," and "energy independence" (Subsection 1221 (a)(4)).

California's energy policy heavily emphasizes the need for the state to diversify its electricity supply. California's growing dependence on natural gas as a fuel source for power generation, from 30 percent of power generation in 1999 to 41 percent in 2004, is a primary driver of the state's energy policy.[10] In recent years, with extremely high and volatile natural gas prices, reducing natural gas dependence is foremost in the minds of California's energy policy-makers. A centerpiece of the state's strategy to diversify electricity supplies is the development of renewable resources.[11] RPS, which requires 20 percent of energy deliveries in the state to be sourced from renewable power generation by 2010, is the state's primary vehicle to ensure development of renewable resources in California. Long-term contracts with renewable resources, which have no ongoing gas price exposure, are not only environmentally preferable in California, but also economically attractive because they serve as a true hedge against long-term natural gas prices. In addition, the RPS will be a prominent feature of California's Climate Action Team strategies to reduce greenhouse gas emissions to meet Governor Schwarzenegger's aggressive climate change goals.[12]

The lack of transmission access to the state's most promising renewable resources, which are frequently in remote locations including the Tehachapi and the Imperial Valley areas, is one of the most significant near-term barriers to achieving California's RPS goals.[13] In order to build sufficient transmission capacity to access these renewable resources, it is vital that "reasonably priced," "diversity of supply," and "energy independence" needs identified in federal law (Subsection 1221(a)(4)) are elevated and prominently featured in DOE's assessment of

[10] *2005 Integrated Energy Policy Report*, Energy Commission, November 2005, at pp. 60-62.
[11] In this context, "renewable resources" represents power generation fueled by alternative energy sources, such as wind energy or geothermal steam, among others.
[12] *2005 Integrated Energy Policy Report*, Energy Commission, November 2005, at pp. 162-163.
[13] Ibid, at p. 90.

transmission capacity constraints, congestion, and the subsequent designation of corridors of national interest.

DOE efforts to study and "model" congestion are highly sensitive to the data and assumptions upon which they are based. Natural gas price assumptions are an extremely important driver of congestion modeling results. Thus, to a large extent the results of these models are simply products of natural gas price forecasts and assumptions of future generation resource types and locations, as well as assumptions of incremental transmission additions. In its *2005 Energy Report*, the Energy Commission concluded that it needs to investigate alternative natural gas price forecasting methods in addition to traditional models based upon "equilibrium models" that rely on market fundamentals.[14] The Energy Commission determined that current "equilibrium models" fail to capture the discrepancy witnessed over the last several years between the production costs of natural gas and actual prices paid in the marketplace, the latter of which reflect substantial scarcity rents. The large uncertainty about where natural gas prices are headed in the future brings into question the whole notion of DOE's heavy reliance upon such modeling for the primary determinant of transmission corridor needs.

The Energy Commission's *2004 Energy Report Update*[15] also concluded that current transmission modeling fails to capture important "strategic benefits" that are not easily quantified and fails to adequately account for the long-lived nature (30 to 50 years) of transmission facilities. Among the important strategic benefits are "diversity of supply" and "energy independence" reflected in federal law (Section 1221 (a)(4)). In our view, this and other short-comings call into question the validity of recent congestion forecasts for most years beyond the fairly near term, and DOE's apparent over-reliance upon congestion modeling to identify transmission needs.

As highlighted by the CAISO in our *2005 Energy Report* proceeding, the existing transmission planning process for investor-owned utility (IOU) transmission systems operated by the CAISO in California (which is authorized under FERC tariffs) is overly reactive and insufficiently forward looking. While the CAISO announced development of a new "proactive" planning process in mid-2005, it has yet to design and implement such a system. For now, the DOE's corridor designation process will be similarly hampered by the current state of tools and planning techniques. In recognizing these limitations we urge DOE to view modeling as only illustrative. Designations of national interest transmission corridors should be based primarily on current factual information, consistency with state and federal policy, and common sense judgment of where transmission is most needed, with appropriate emphasis on accessing renewable resources currently constrained by transmission limitations. Such an approach will be consistent with the phrase "capacity constraints" as used in the EPAct-05, Section 1221(a)).

**Federal Delegation and Coordination with Other Federal Transmission Efforts**

The lack of timely permitting for transmission in California continues to be of concern to the Energy Commission. While the state will not easily cede its sovereignty over land-use

[14] Ibid, p. 133-134.
[15] See website: [http://www.energy.ca.gov/reports/CEC-100-2004-006/CEC-100-2004-006CMF.PDF]

decisions relating to transmission development in California, there may be specific cases where federal back-stop siting authority might be justified and welcomed on a case-by-case basis. DOE should focus its efforts on how such a process would be coordinated with state and regional entities.

In addition, the assessment, planning and environmental review involved in designating a NIETC will be enhanced by drawing upon the expertise of state agencies well-versed in the established planning processes and unique environmental characteristics of their respective states. DOE should consider federal delegation or at a minimum, coordination, of planning and environmental review to the states. This delegation can be modeled on the long-standing and successful federal-state relationship practiced by the U.S. Environmental Protection Agency (EPA). For decades, the EPA has relied upon state agencies toconduct environmental reviews under federal program standards. DOE should also address other issues of federal-state cooperation, such as cost allocation (which is an issue under the regulatory oversight of the Federal Energy Regulatory Commission), which continues to delay or restrain renewable and interstate transmission development in California.

The Energy Commission is already a cooperating agency in federal energy corridor designation efforts. EPAct-05, Section 368, requires DOE, BLM, and the U.S. Forest Service (USFS), in cooperation with the Departments of Agriculture, Commerce, Defense and Interior, to designate new right-of-way corridors on federal lands for electricity transmission and distribution facilities, and oil, gas, and hydrogen pipelines. The DOE, BLM, and USFS will prepare a West-Wide Energy Corridor Programmatic Environmental Impact Statement (PEIS) to evaluate issues associated with the designation of energy corridors on federal lands in 11 Western states. Public scoping meetings for the West-Wide Energy Corridor PEIS were held in California on November 1, 2005, and the public scoping comment period ended November 28, 2005. Based upon the information and analyses developed in the PEIS, each federal agency would amend its respective land use plans by designating appropriate energy corridors.

On November 10, 2005, because of the substantial energy-related information developed through the Energy Commission's *2005 Energy Report* and *Strategic Transmission Investment Plan*, the State of California Resources Agency requested that the Energy Commission represent California in the federal PEIS effort. In this role, the Energy Commission is ensuring that the state's energy and infrastructure needs, renewable generation policy goals, and environmental concerns are considered in the PEIS.

The Energy Commission then notified cities, counties, investor-owned and municipal utilities, and multiple state agencies of the need to submit comments on the PEIS. To date, the Energy Commission has received over 1,500 comments from individuals and organizations on the scope of the PEIS. On December 12, 2005, BLM and DOE designated the Energy Commission as a cooperating agency. Since that time, the Energy Commission has been working with an interagency team of federal and state agencies to review proposals to designate new and/or expand existing energy corridors and examine alternatives to these corridors on federal lands in California.

The Energy Commission also believes that important lessons learned in California, pursuant to SB 2431, should be incorporated into DOE's implementation of the EPAct-05.[16] The Energy Commission called for a process to identify environmentally sensitive areas, acceptable areas, and areas where urban encroachment into transmission rights-of-way could pose problems. In comments on the Section 368 federal energy corridor process, several California environmental and wilderness interests identified sensitive lands – including state and national parks, federal and state designated wilderness and wilderness study areas, and critical inventoried roadless areas in national forests – which they believe are not appropriate locations for energy corridors.[17] The list of identified sensitive lands forwarded to the Energy Commission by these organizations is included as Appendix A, below. The Energy Commission strongly recommends that DOE develop a process to identify lands, including those identified in the Section 368 process, that are unsuitable for transmission corridors as part of its NIETC efforts.

The Energy Commission, through its Public Interest Energy Program (PIER program), is funding the development of a web-based siting decision analysis tool called Planning Alternative Corridors for Transmission (PACT). PACT will assess proposed transmission corridors through comparing environmental, health and safety, community, engineering and economic values. Research goals for the project include: 1) assembling and involving appropriate technical and stakeholder committees to determine metrics and weighted factors for each discipline to populate the model, 2) expanding current capabilities of the framework to include a broader range of disciplines, and 3) improving the usability of the framework to all appropriate stakeholders. This effort may prove helpful as we move forward with ongoing transmission corridor assessment and transmission infrastructure permitting.

In addition, Section 925 of the EPAct-05 requires DOE to develop a five-year plan that establishes a comprehensive research, development and demonstration program to ensure the reliability, efficiency and environmental integrity of electrical transmission systems. The establishment of this plan should be coordinated with the Energy Commission's transmission R&D program plan that has identified specific activities to develop advanced grid reliability planning and monitoring tools, advanced energy delivery technologies and technologies to enhance existing grid components.[18] Technological development in the transmission areas need to be adequately considered in efforts to improve California's and the nation's transmission systems.

**Resolving Renewable and Interstate Cost Allocation Issues**

Securing sufficient investments in new transmission in California has been problematic, especially in light of the dilemma that faces renewable generation projects that need access to transmission, including interstate transmission, primarily because of financial/cost allocation

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[16] *Transmission System and Right of Way Planning for the 1990's and Beyond*, March 1992, Energy Commission, Publication P700-91-005, p. 15.

[17] February 15, 2006 letter to California Energy Commission Chairman Joseph Desmond from the California Wilderness Coalition, Californians for Western Wilderness, Center for Biological Diversity, Defenders of Wildlife, Environment California, Sierra Club, Sierra Nevada Forest Protection Campaign, and Nations Parks Conservation Association.

[18] *Five-year Transmission Research and Development Plan*, California Energy Commission, November 2003, Publication No. 500-03-104F, [http://www.energy.ca.gov/reports/2003-11-25_500-03-104F.PDF].

issues. The new provisions of EPAct-05 should be interpreted to help address these questions in an integrated manner. We welcome the interest of the federal government in designating transmission corridors of national interest as a way to overcome obstacles to needed transmission infrastructure development.

Most new transmission projects involve multiple jurisdictions, markets, regions, and beneficiaries for which traditional rate base approaches may no longer be adequate. There is a need to research new approaches for assessing benefit streams, beneficiaries, and the quantification of benefits for cost allocation and cost recovery for new transmission investments. While reliability-related transmission investments are moving forward, projects that are viewed as serving an economic, market or policy objective – for example the Tehachapi transmission project – have no clear process for moving forward, in part due to issues relating to cost recovery and cost allocation. Consequently, it is important to review and document existing transmission approval processes, frame policy issues, and outline policy options for cost allocation and cost recovery. Without certainty in these areas, investors are reluctant to commit funds necessary for the construction of these needed facilities.

Last year FERC rejected an innovative proposal from Southern California Edison (SCE) to develop a renewable resource trunk line, operated by the CAISO, which would have interconnected a large concentration of potential renewable generation. The trunk line concept included several linked segments in the Tehachapi area and would have allowed SCE, Pacific Gas and Electric (PG&E), San Diego Gas and Electric (SDG&E), and other CAISO grid users access to as much as 1,100 Megawatts (MW) of wind resources. The renewable resource trunk line concept could also have provided access other remote renewable resources such as geothermal and central station solar. Despite support from California's primary energy agencies, FERC did not approve this application. The FERC ruled that the third segment SCE identified as a renewable resource trunk facility was ineligible for rolled-in rates since the segment resembles more of a generation tie than a network upgrade. This illustrates the need for improved coordination between state and federal energy regulators and policy makers to achieve workable solutions to real world problems.

The advanced planning and construction of transmission facilities is essential to transmission development to access renewable resources. Renewable projects cannot secure contracts under RPS procurement procedures without knowing whether existing or future transmission will be able to accommodate them; at the same time, utilities are wary of investing in transmission to capture renewable power without assurance of cost recovery, which is premised on the renewable generation being built. This poses a major impediment to the achievement of state policy goals.

Even when a renewable developer requests new transmission capacity, the present system assigns the bulk of the costs to the developer who first requests an interconnection requiring system upgrades, regardless of when those upgrades are to go into service and whether system upgrades required by later-in-time requesters will go into service first. Transmission upgrades would be much more efficiently built through a plan that anticipates phased-in development of future renewable generation instead of additions of relatively small, individual projects.

However, phased-in development requires pre-building portions of transmission lines, currently not allowed under FERC regulation.

The September edition of the Natural Gas & Electricity Journal makes very important observations about the implications of FERC's decision on the Tehachapi renewable trunk line with which we agree. In its denial of SCE's renewable resource trunk line FERC failed to recognize the benefits access to Tehachapi wind resources would bring to users of the CAISO-operated transmission system. In the case of Tehachapi "numerous potential wind developers are poised to provide renewable energy to any and all users of the grid system, many of whom need access to the wind energy to meet their renewable portfolio standards (RPSs), the systemwide benefits of all the facilities needed for interconnection should have been apparent." Therefore, it appears surprising that although California clearly recognized these benefits, FERC did not. In addition, if the Segment 3 of Tehachapi were built without rolled-in rate treatment authorized by FERC, the retail ratepayers of SCE would bear all of the costs of those facilities, which may be used primarily to meet the RPS requirements of other California utilities.[19]

The *2005 Energy Report* recommended changes in the CAISO's FERC-approved tariff not only to allow recognition of transmission needs for reliability and economic projects, but also for access to renewable projects to meet RPS goals. FERC has already allowed tariff changes relating to transmission planning and expansion which suggest further refinements are needed in the CAISO tariff. For example, the Southwest Power Pool (Oklahoma, Kansas, parts of Arkansas, Louisiana, New Mexico, and Texas) is permitted by FERC to engage in a transmission study process which provides four-month "open seasons" for generator interconnection requests and the aggregation of the requests received for group processing. Moreover, FERC takes into account whether a new transmission line will increase fuel diversity when deciding whether these transmission costs will be allocated broadly or narrowly. See, *Southwest Power Pool, Inc.*, 110 FERC ¶ 61,028 (January 21, 2005); Southwest Power Pool, Inc., 111 FERC ¶ 61,118 (April 22, 2005) *Order on Rehearing and Compliance Filing*, Southwest Power Pool, Inc., 112 FERC ¶ 61,319 (September 20, 2005). See also, Midwest Independent Transmission System Operator, Inc. 114 FERC ¶ 61,106 (Februrary 3, 2006).

This provides a good example of where state and federal cooperation would further the public interest in development of environmentally-benign renewable resources that reduce our dependence on natural gas. If DOE can help remove cost-allocation barriers to transmission investments by changing cost allocation rules at the federal level, it will go a long way toward promoting adequate investment in new transmission and relieving capacity constraints and congestion.

The Energy Commission, through its Public Interest Energy Research (PIER) program is conducting research designed to address these questions, learn from case studies and best-in-class examples of transmission approval processes, and develop a framework to guide cost allocation and cost recovery, based upon a range of benefits of different transmission projects. The Energy Commission will continue to work with DOE and other federal agencies on these cost-allocation efforts.

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[19] "*Tehachapi Wind Power Setback Has Nationwide Implications*," Natural Gas & Electricity Journal (Darrell Blakeway), September 2005, pp 3, 11. Mr. Blakeway is an attorney formerly employed by FERC for 25 years.

## III. SPECIFIC RESPONSES TO THE NOTICE OF INQUIRY

For clarity, the Energy Commission's comments on select NOI areas of interest are organized in a question and answer format, ranked in significance by their appearance below.

**Question No. 1:** *In the NOI, DOE has invited commenters to address how broadly or narrowly the Department should consider and define corridors.*

For purposes of the Section 1221 work, we strongly believe that national interest electrical transmission corridors should be defined in relation to anticipated electrical path needs, while recognizing that "capacity constraints or congestion that adversely affects customers" (Subsection 1221(a)) must include important state goals, such as the deliverability of remote renewables to load centers, as well as economic congestion. A corridor is broader than a path for a particular transmission line, and at a minimum must include not only a particular transmission path but the paths associated with competing projects that would serve the same market.

In addition, it is important to note that the term "corridor," as used in Section 1221 of the EPAct-05 is significantly different from its use in Section 368 (Energy Right-of-Way Corridors on Federal Lands). Section 368(e) states that "A corridor designated under this section shall, at a minimum, specify the centerline, width, and compatible uses of the corridor." As noted in Section 368(a)(2), the Secretaries of Agriculture, Commerce, Defense, Energy, and Interior are required to perform "any environmental reviews that may be required to complete the designation of such corridors…" Section 368(a)(3) requires local governments to "incorporate the designated corridors into the relevant agency land use and resource management plans or equivalent plans."

While the term "corridor" in Section 1221 is not defined explicitly, Federal Power Act Section 216(a)(2)[20] states that a national interest electric transmission corridor may be designated in "…any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects customers."

The NOI then notes that "The Department expects to identify corridors for potential projects as generalized electricity paths between two (or more) locations, as opposed to specific routes for transmission facilities. The Department believes that defining corridors too narrowly would unduly restrict state authorities, FERC, and other relevant parties in determining whether and how to authorize the construction and operation of transmission facilities to relieve the identified congestion."

Clearly there is a need for coordination between the Section 368 land use-centered approach toward transmission expansion and the Section 1221 electrical path-centered approach.
As noted earlier, the Energy Commission is serving as a cooperating agency in the Section 368 West-Wide Energy Corridor PEIS effort by ensuring that the state's energy and infrastructure needs, renewable generation policy goals, and environmental concerns are considered in the

[20] Section 1221 amends Part II of the Federal Power Act (16 United States Code section 824 *et seq*.) to add Section 216 entitled "Siting of Interstate Electric Transmission Facilities."

PEIS. To date the Energy Commission has held two workshops in California to seek public comments on designating corridors in California on federal land and the corridors proposed for consideration by utilities and other entities during the federal scoping period.

With respect to transmission corridors in the Section 368 effort, two types of corridors have been identified: those with existing transmission facilities already in place, and those which may be needed in the future. We assume from the proposed future corridors that these are potential land use solutions[21] to anticipated electrical path needs. However, at this time there does not appear to be an explicit link between the electrical path analyses which form the basis for the proposed land use corridors identified in the Section 368 process and the electrical path analyses being conducted for the Section 1221 work. We believe it is essential that physical corridors designated under the Section 368 work be predicated upon the results of the Section 1221 work.

**Question No. 2:** *What criteria should be used in evaluating the suitability of geographic areas for NIETC status?*

Before commenting on the specific draft criteria in the NOI, we offer three general comments:

(1) We believe the criteria must be developed and applied in an open, transparent, and collaborative manner so that parties understand the drivers for, as well as the implications of, NIETC designation. In addition to the criteria themselves and their associated metrics, it would be useful to solicit input on the relative weight that should be assigned to each criterion. For example, the NOI asks: "Are certain considerations or criteria more important than others? If so, which ones, and why are they more important?" A logical extension of these questions is: "How much more important?"

(2) The permitting of proposed transmission projects in national interest electric transmission corridors can be preempted by the federal government if state or local permitting is ineffective or not done in a timely manner. Because the federal preemption includes the ability to exercise the right of eminent domain on property not owned by the United States or a state, it should be viewed as a "last resort" option.

(3) An additional criterion not included in the NOI list is the extent to which targeted actions are needed to help affected states achieve their energy policies. See the response to Question No. 3, below, for more information.

Below, we offer specific comments on *select* criteria from the eight draft criteria contained in the NOI.

*Draft Criterion 1: Action is needed to maintain high reliability.*

> We agree that remedying existing or emerging reliability problems is an important criterion. We recognize that utilities are bound to Western Electricity Coordinating Council and North American Electric Reliability Council rules; however, we can envision the situation where there could be local supply constraints because of the unforeseen or premature retirement of

[21] Approximately 46 percent of California is federal land.

aging power plants that would be consistent with the definition of capacity constraints (Subsection 1221(a)).

*Draft Criterion 2: Action is needed to achieve economic benefits for consumers.*

The calculation of savings to consumers should reflect state energy policies, as enacted in state energy law and policies or reviews of load serving entity resource plans. Specifically, if a state policy places a high priority on acquiring renewable energy generation, or makes a judgment about natural gas price risk, or establishes a carbon adder to reflect its determination of carbon risk, DOE should assume compliance with such policies in the calculations of economic benefits to consumers. However, it is unclear to us how FERC would treat competing interests between affected states for interstate projects.

Another aspect of reliability is the consideration of forced outages of transmission because of natural disasters such as forest fires. California relies upon a significant amount of imports from the Southwestern states, and in California the season of highest fire potential typically coincides with periods of high electricity demand. While in general we advocate the efficient use of rights-of-way and existing corridors in planning for transmission expansion, there may be situations where establishing new corridors is the best option to maintain high reliability.

*Draft Criterion 3: Actions are needed to ease electricity supply limitations in end markets served by a corridor, and to diversify sources.*

We agree that actions are needed to promote the diversification of energy sources, particularly with respect to renewable resources. California is a national leader in the development of renewable resources. Over the past 30 years, California has built one of the largest and most diverse renewable generation portfolios in the world. In 2002, California established its RPS program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. The Energy Commission's *2003 Integrated Energy Policy Report* recommended accelerating that goal to 2010, and the *2004 Integrated Energy Policy Report Update* further recommended increasing the target to 33 percent by 2020.

However, many of California's best renewable resource areas are located far from load centers, requiring transmission expansion in order to meet state goals. NIETC designation, coupled with the Section 368 federal corridor designation process, could help ensure the interconnection of these resources.

As noted in our response to Draft Criterion 1, the retirement of aging power plants could create the need to increase transfer capability into affected local areas in order to ease supply limitations.

*Draft Criterion 4: Targeted actions in the area would enhance the energy independence of the United States.*

As noted in the response to Draft Criterion 3, we have a state policy objective to promote renewable resources, which could play a significant role in increasing the energy independence of the United States.

*Draft Criterion 7: The area's projected need (or needs) is not unduly contingent upon uncertainties associated with analytic assumptions, e.g., assumptions about future prices for generation fuels, demand growth in load centers, the location of new generation facilities, or the cost of new generation technologies.*

As noted in our Part II: General Comments response, we agree that this is an important criterion. To the extent that varying assumptions about natural gas prices, hydro conditions, and other critical assumptions affect the need for transmission, it is essential to consider the robustness of the results as factors in NIETC determination. In general, modeling results which demonstrate the need for transmission constraint relief over a wide range of plausible input assumptions should take precedence over results that are more sensitive to analytic assumptions. Given that the congestion study will be conducted every three years, there should be time to reevaluate the need for corridors that may not receive NIETC designation the first time.

*Draft Criterion 8: The alternative means of mitigating the need in question have been addressed sufficiently.*

We agree, and believe that this is an important criterion for all NIETC designations since a comprehensive review of alternatives may not be made for specific projects proposed within NIETCs.

For projects affecting California, CEQA requires an examination of alternatives, including no-project and non-transmission alternatives. If a proposed project is not able to demonstrate that it is the preferred alternative, it will be rejected by the state.

Federal Power Act Section 216(h)(3) states: "To the maximum extent practicable under applicable Federal law, the Secretary shall coordinate the Federal authorization and review process under this subsection with any Indian tribes, multistate agencies, and State agencies that are responsible for conducting any separate permitting and environmental reviews of the facility, to ensure timely and efficient review and permit decisions."

The Federal "backstop" permitting authority should be carried out so as to not undermine CEQA compliance determination. A comprehensive evaluation of alternatives prior to NIETC designation can help avoid conflicts at a later stage when a specific project is proposed in a NIETC.

**Question No. 3:** *Other than what are listed in the NOI, are there other criteria or considerations that DOE should consider when deciding whether to designate a NIETC? If so,*

*please explain. In this explanation, indicate how the proposed criterion would be applied, if possible, within the context of a specific area or areas that you consider suitable for designation as a NIETC. For each new criterion proposed, you should offer metrics that measure or quantify the criterion.*

As noted in the response to Question No. 4, an additional criterion not included in the NOI list is the extent to which targeted actions are needed to help affected states achieve their energy policies. In California's case, these state energy policies are laid out in the Energy Commission's biennial integrated energy report (the most recent one, the *2005 Integrated Energy Policy Report*, was adopted in November 2005), as well as the companion *Strategic Plan* (also adopted in November 2005).

**Question No. 4**: *Are certain considerations or criteria more important than others? If so, which ones, and why are they especially important?*

We believe the highest priority should be given to designation of transmission corridors that promote achievement of state energy policy objectives. Next in priority would be the designation of corridors in location-constrained generation resource areas. Lower priority should be given to the designation of corridors with contractual congestion but little physical congestion, unless there has been an evaluation which finds that solutions to contractual congestion are either not feasible or more costly than building new transmission.

**Question No. 5:** *Should the Department of Energy (DOE) distinguish between persistent congestion and dynamic congestion, and, if so, how?*

As noted in our comments in Part II: General Comments, we do not believe that congestion should be the sole basis for NIETC designation. However, to the extent that distinctions between definitions of congestion provide focus to the effort, we offer the following comments.

The term "dynamic congestion" is not defined in the NOI and does not appear to be a standard industry term. We infer from the wording of the question that "persistent congestion" is that which has shown, and is expected to continue to show, a consistent pattern of congestion on an ongoing or seasonal basis under "baseline" conditions (including generation and transmission additions and retirements), while "dynamic congestion" refers to current or possible future congestion caused by deviations from baseline conditions, such as extended multiple transmission outages or other unanticipated events that may temporarily cause congestion.

While dynamic congestion can be extremely costly to affected parties, we believe the NIETC designation process is not the appropriate mechanism for effectively addressing dynamic congestion.

**Question No. 6:** *Should DOE distinguish between physical congestion and contractual congestion, and, if so, how?*

As noted in our comments in Part II, we do not believe that congestion should be the sole basis for NIETC designation. However, to the extent that distinctions between definitions of congestion provide focus to the effort, we offer the following comments.

We believe that DOE should distinguish between physical and contractual congestion, and that findings of physical congestion that adversely affect consumers should guide the DOE's conclusions on congested paths. While contractual congestion can also adversely affect consumers, it is more appropriately addressed through institutional mechanisms. However, in the event that evaluations of contractual congestion find that institutional solutions at the state, regional, or federal levels are infeasible or more costly than building new transmission, it would be appropriate to address contractual congestion in the NIETC designation process.

## IV. CONCLUSION

In conclusion, the Energy Commission recommends that DOE address the following critical issues in assessing and designating transmission corridors of national interest:

- Explicitly address state energy laws and policies relating to transmission corridor planning, consistent with federal law (Subsection 1221(a)), to ensure that DOE's designation of transmission corridors of national interest both complements these efforts and leverages state expertise.

- Elevate and prominently feature "reasonably priced," "diversity of supply," and "energy independence" policies in federal law (Subsection 1221(a) to identify transmission capacity constraints and the subsequent designation of corridors of national interest. DOE should recognize the short-comings in existing transmission congestion forecasts and avoid over-reliance on these modeling studies to identify transmission needs.

- Focus efforts on how the DOE NIETC process would be coordinated with state and regional entities, as well as federal energy corridor efforts already underway to implement EPAct-05 Section 368. DOE should consider federal delegation of planning and environmental review to states and model it on the U.S. Environmental Protection Agency's reliance upon state agencies to implement environmental review under federal program standards.

- Assist in removing cost-allocation barriers to renewable and interstate transmission investments by working with FERC to push cost allocation rules at the federal level to promote adequate investment in new transmission and relieve capacity constraints consistent with federal transmission corridor law (Subsection 1221(a)).

Respectfully submitted,

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## APPENDIX A
## WILD PLACES AT RISK

### Bureau of Land Management Wilderness

- Black Mountain Wilderness, BLM California Desert Conservation Area
- Carrizo Gorge wilderness, BLM California Desert Conservation Area
- Chuckwalla Mountains Wilderness, BLM California Desert Conservation Area
- Coyote Mountains Wilderness, BLM California Desert Conservation Area
- Fish Creek Mountains Wilderness, BLM California Desert Conservation Area
- Kelso Dunes Wilderness, BLM California Desert Conservation Area
- Little Chuckwalla Mountains Wilderness, BLM California Desert Conservation Area
- Mecca Hills Wilderness, BLM California Desert Conservation Area
- Newberry Mountains Wilderness, BLM California Desert Conservation Area
- Nopa Range Wilderness, BLM California Desert Conservation Area
- Old Woman Mountains Wilderness, BLM California Desert Conservation Area
- Orocopia Mountains Wilderness, BLM California Desert Conservation Area
- Palo Verde Wilderness, BLM California Desert Conservation Area
- Piute Mountains Wilderness, BLM California Desert Conservation Area
- Rodman Mountains Wilderness, BLM California Desert Conservation Area
- Rice Valley Wilderness, BLM California Desert Conservation Area
- Sawtooth Mountains Wilderness, BLM California Desert Conservation Area
- Stepladder Mountains Wilderness, BLM California Desert Conservation Area
- Turtle Mountains Wilderness, BLM California Desert Conservation Area

### Bureau of Land Management Wilderness Study Areas

- Cady Mountains Wilderness Study Area, BLM California Desert Conservation Area
- Death Valley #17 Wilderness Study Area, BLM California Desert Conservation Area
- Dry Valley Rim Wilderness Study Area, BLM Eagle Lake Field Office
- Skedaddle Wilderness Study Area, BLM Eagle Lake Field Office
- Soda Mountains Wilderness Study Area, BLM California Desert Conservation Area

### National Forest Wilderness

- Cucamonga Wilderness, San Bernardino National Forest
- Desolation Wilderness, Eldorado National Forest
- Ishi Wilderness, Lassen National Forest
- Mokelumne Wilderness, Eldorado National Forest

### National Forest Inventoried Roadless Areas

- Caples Creek Roadless Area, Eldorado National Forest
- Cajon Roadless Area, San Bernardino National Forest

- Circle Mountain Roadless Area, San Bernardino National Forest
- Cucamonga Roadless Area, San Bernardino National Forest
- Dardanelles Roadless Area, Lake Tahoe Basin Management Unit
- Fish Canyon Roadless Area, Angeles National Forest
- Freel Roadless Area, Lake Tahoe Basin Management Unit
- Grizzly Mountain Roadless Area, Plumas National Forest
- Heart Lake Roadless Area, Lassen National Forest
- Ishi Roadless Area, Lassen National Forest
- Magic Mountain Roadless Area, Angeles National Forest
- Middle Fort Feather River Roadless Area, Plumas National Forest
- Mill Creek Roadless Area, Lassen National Forest
- Red Mountain Roadless Area, Angeles National Forest
- Salt Creek Roadless Area, Angeles National Forest
- Salt Springs Roadless Area, Eldorado National Forest
- San Sevaine Roadless Area, San Bernardino National Forest
- Steele Swamp Roadless Area, Modoc National Forest
- Strawberry Peak Roadless Area, Angeles National Forest
- Tragedy-Elephant's Back Roadless Area, Eldorado National Forest
- Tule Roadless Area, Angeles National Forest
- West fork Roadless Area, Angeles National Forest
- Wild Cattle Mountain Roadless Area, Lassen National Forest

**National Parks**

- Death Valley National Park
- Joshua Tree National Park
- Lassen Volcanic National Park
- Mojave National Preserve

**State Parks**

- Anza-Borrego Desert State Park