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January 25, 2007

VIA MESSENGER

The Honorable Magalie R. Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Re: California Independent System Operator Corporation**
**Docket No. EL07-____-000**

Dear Secretary Salas:

Attached please find the original and fourteen copies of the Petition for Declaratory Order submitted by the California Independent System Operator Corporation ("CAISO") in the above-captioned docket. As required by 18 C.F.R. § 381.302(a), along with the Petition for Declaratory Order the CAISO is enclosing a check in the amount of $19,890.00. The enclosed check is made payable to the "Federal Energy Regulatory Commission," with the approval of Troy Cole of the Commission's Division of Financial Services and based on conversations between the CAISO and Brooks Carter of Commission Staff.

Please contact the undersigned with any questions. Thank you for your assistance in this matter.

Respectfully submitted,

Sean A. Atkins

Counsel for the California Independent System Operator Corporation

**UNITED STATES OF AMERICA**
**BEFORE THE**
**FEDERAL ENERGY REGULATORY COMMISSION**

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# PETITION FOR DECLARATORY ORDER

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**BEFORE THE**
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**PETITION FOR DECLARATORY ORDER**

Pursuant to Rule 207 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.207, the California Independent System Operator Corporation ("CAISO")[1] files this Petition for a Declaratory Order. As described in greater detail below, the CAISO is seeking to implement a new financing mechanism that will remove existing barriers to the efficient development of transmission facilities needed to connect to new generation resources that are constrained as a result of their location, relative size and the immobility of their fuel source (referred to hereinafter as "location constrained resources"). This is an important and pressing issue that requires timely resolution and the adoption of an innovative solution such as that proposed herein. The solution proposed herein is a modest variation of the Commission's default interconnection policies that constitutes an appropriate independent entity variation or regional differences variation. The CAISO requests that the Commission: (1) provide general conceptual approval for the financing mechanism proposed herein, and (2) provide additional guidance regarding the eligibility criteria that should apply for the financing mechanism. Following issuance of a Commission order, the

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[1] Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A to the ISO Tariff.

CAISO would commence a stakeholder process and develop (and file) tariff language to implement the new financing mechanism.

## I. EXECUTIVE SUMMARY

The potential exists today for the development of significant quantities of location constrained resources, including renewable resources such as wind, geothermal and solar resources, in certain regions of California that are not readily accessible to the CAISO transmission grid (referred to hereinafter as "Energy Resource Areas"). The development of these resources and the transmission infrastructure necessary to access such resources in an efficient manner is a matter of some urgency because: (1) additional generation resources are needed in California to meet its growing energy demand, and (2) California has accelerated from 2017 to 2010 its Renewable Energy Portfolio Standard ("RPS") requirement that 20 percent of the energy to serve California customers must come from renewable resources.

However, significant barriers exist to the efficient development of the transmission infrastructure that is needed to connect location constrained resources to the grid. For example, the Energy Resource Areas in which location constrained resources are located are often remote from the grid and load centers and, as such, require the construction of relatively long (and expensive) high-voltage interconnection transmission lines. Further, the pattern of resource development in Energy Resource Areas is such that multiple individual generation projects will be developed by multiple competing developers, the individual generation resources will generally be smaller than typical fossil fuel

projects, and the generation resources will come on-line in relatively small increments over a period spanning many years. The Commission's current default interconnection policy -- which is incorporated in the CAISO's current interconnection procedures and which requires a generation developer(s) to pay for the cost of generation tie ("gen-tie") lines -- constitutes a barrier to the efficient development of transmission necessary to connect these locational constrained resources to the grid. As such, transmission lines to access location constrained resources have not been built -- and are not being built -- even though the potential power supplies that could come from such resources are significant. Location constrained resources will not be developed to their full potential until the barriers that exist to the financing and construction of transmission facilities necessary to connect such resources are removed. The CAISO believes the Commission must take advantage of this opportunity to grant a modest variation from its default interconnection policies and provide for a creative new and innovative financing mechanism that facilitates needed transmission investment and recognizes the unique circumstances associated with the transmission infrastructure required to connect location constrained resources.

To this end, the CAISO proposes herein to create a new mechanism that will facilitate the financing and development of transmission facilities designed primarily to connect multiple location constrained resources in an Energy Resource Area to the CAISO-Controlled Grid (referred to hereinafter as "Multi-User Resource Trunklines"). Specifically, the CAISO proposes the following rate

treatment for Multi-User Resource Trunklines constructed by existing or new Participating Transmission Owners ("PTOs"):

(1) PTOs that construct Multi-User Resource Trunklines will be permitted to reflect in their Transmission Revenue Requirement ("TRR") and in the CAISO's Transmission Access Charge ("TAC") the costs of trunkline facilities which are not being directly recovered from generation resources.

(2) As new generation resources are constructed and interconnected to a Multi-User Resource Trunkline, the costs of the capacity required by those resources will be directly recovered from such resources, thereby reducing the impact on transmission ratepayers by reducing the costs of the Multi-User Resource Trunkline included in the PTOs' TRR and the TAC.

(3) When all of the capacity of the Multi-User Resource Trunkline is utilized and paid for by generators, transmission ratepayers would no longer face any cost responsibility for these facilities.

The CAISO proposes the following eligibility criteria for the proposed rate treatment for Multi-User Resource Trunklines:

(1) The costs of the Multi-User Resource Trunkline -- which is a non-Network facility -- would not otherwise be eligible for inclusion in the CAISO's transmission Access Charge ("TAC");

(2) The transmission project must provide access to an Energy Resource Area in which the potential exists for the development of a significant amount of location constrained energy resources;

(3) The transmission project must be turned over to the CAISO's Operational Control;

(4) The transmission project must be a high-voltage transmission facility designed primarily to serve multiple location constrained resources that will be developed over a period of time;

(5) To be eligible for the financing treatment proposed herein, a transmission project would have to be evaluated and approved by the CAISO in the context of a prudent CAISO transmission planning process, thereby ensuring that the project will result in a cost-effective and efficient interconnection of resources to the grid;

(6) To limit the cost impact of the proposal on ratepayers, there would be an aggregate cap on the total dollars associated with Multi-User Resource Trunklines that could be included in TAC rates. Specifically, the total investment in Multi-User Resource Trunklines that can be included in TRRs and the TAC cannot exceed 15 percent of the sum total of the net high-voltage transmission plant of all PTOs, as reflected in their TRRs and in the TAC; and

(7) To limit the risk of stranded costs due to abandoned investment, the transmission project must demonstrate adequate commercial interest by satisfying the following two-prong test before actual construction can commence: (a) a minimum percentage of the capacity of the new Multi-User Resource Trunkline -- an order of magnitude or 25 to 30 percent -- must be subscribed pursuant to Large Generator Interconnection Agreements ("LGIAs"); and (b) there must be a tangible demonstration of additional interest in/support for the project -- an order of magnitude of 25 to 35 percent -- above and beyond the capacity covered by LGIAs.[2]

By this Petition for Declaratory Order, the CAISO seeks a determination that, upon the satisfaction of the aforementioned criteria or other criteria that the Commission may adopt, the proposed rate treatment of the costs of Multi-User Resource Trunklines would constitute an appropriate independent entity variation or regional differences variation from the Commission's default generator interconnection policies as authorized by Order No. 2003[3] or that the proposed rate treatment would otherwise be just and reasonable. The benefits of this proposal will be significant. First, it will remove the barriers that currently exist to connecting location constrained resources, in particular renewable resources, to the grid. This will promote supply diversity and competition in the marketplace, as well as provide access to new sources of supply that will be available to all

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[2] The specific percentages that the CAISO would propose in item (7) would be developed through the stakeholder process that will precede the tariff filing, but the CAISO anticipates that these percentages should be in the range specified above.

[3] *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 68 Fed. Reg. 49846 (Aug. 19, 2003), FERC Stats. & Regs., Regs. Preambles ¶ 31,146 (2003) ("Order No. 2003), *order on reh'g*, Order No. 2003-A, 69 Fed. Reg. 15932 (Mar. 26, 2004), FERC Stats. & Regs., Regs. Preambles ¶ 31,160 (2004) ("Order No. 2003-A").

load-serving entities ("LSEs"). The Commission has recognized on numerous occasions that additional generation is needed in California, and approval of this proposal will facilitate access to such resources. Second, the proposal will provide access to renewable supplies that LSEs need in order to comply with State-mandated RPS requirements. Third, the proposal will promote the efficient, cost effective development of transmission infrastructure. Fourth, the proposal will ensure that transmission lines intended to connect location constrained resources become part of and are effectively integrated into the CAISO Controlled Grid.

The CAISO recognizes that some parties have expressed concerns about the cost impact of the instant proposal and the risk of stranded costs. However, the CAISO's proposal includes several features to mitigate these concerns, to limit the cost impact on ratepayers, and minimize the risk to ratepayers: (1) as generation resources come on-line, a proportionate share of the costs of the Multi-User Resource Trunkline will be directly recovered from these resources, thereby reducing the costs of the Multi-User Resource Trunkline included in the TRR and TAC and the cost impact on transmission ratepayers; (2) the amount of costs of Multi-User Resource Trunklines that can be included in the TAC is subject to a cap; and (3) construction of a Multi-User Resource Trunkline cannot commence until a minimum percentage of the line is accounted for under LGIAs and there is a clear demonstration of interest for some additional portion of the project beyond the amount covered by LGIAs. The CAISO submits that the burden of the capped costs that are expected to be borne temporarily by

transmission customers are outweighed by the significant benefits that will result from the proposal. Accordingly, the Commission should conceptually approve the CAISO's proposal and provide any appropriate guidance regarding the specific elements of the proposal that should be included in the subsequent tariff filing.

## II. THERE IS A PRESSING NEED FOR A FINANCING MECHANISM THAT WILL FACILITATE THE EFFICIENT CONNECTION OF LOCATION CONSTRAINED RESOURCES TO THE GRID

### A. Background

Over the last few years, many stakeholders have brought to the CAISO's attention the significant barriers that exist to the development of resources that are constrained by the nature of their technology, their relative size, or the location and immobility of their energy source, and particularly to the development of the transmission infrastructure necessary to connect such facilities to the transmission grid. For example, the optimal locations for the production of electricity through wind, geothermal, solar and other renewable technologies are often in geographical regions with very little nearby load but with the vast potential for energy supply. Unlike fossil fuel generators, these generation resources cannot transport their "fuel source" to the generating unit site. Rather, the location constrained resource has no choice where it can locate; it must locate where the fuel source is located. As discussed in greater detail below, this location limitation and other factors -- including the Commission's default interconnection policy -- constitute a significant barrier to the development of these resources.

These issues were highlighted by an earlier filing before the Commission. On March 24, 2005, Southern California Edison ("SCE") petitioned the Commission in Docket No. EL05-80-000 for a declaratory order related to the Antelope project, three proposed transmission segments needed to interconnect future wind projects in the Tehachapi Mountains area of California. SCE categorized segments 1 and 2 as high-voltage "network upgrades" and segment 3 as a high-voltage, bulk transfer generation intertie line. In its petition, SCE sought: (1) rolled-in rate treatment for costs incurred for all three segments, (2) full recovery of all prudently-incurred costs for each segment, regardless of whether the wind generation develops or SCE abandons the projects, and (3) the creation of a new category of "trunkline" transmission facilities that would allow rolled-in rate treatment.

On July 1, 2005, the Commission rejected rolled-in rate treatment for segment 3 of SCE's proposed transmission project and denied SCE's request to establish a new category of transmission facilities.[4] In doing so, the Commission declined, at that time, to alter its traditional rate treatment of generation-tie facilities, which precludes the costs of those facilities from being rolled-into transmission rates. Significantly, (1) the Commission found it important that the CAISO had not determined whether it would assume Operational Control of the facilities; (2) Commissioner Brownell stated "I believe that this proposal would have satisfied the independent entity variation standard in Order No. 2003, had it been made by the CAISO," and (3) Chairman Wood dissented stating that "[a]lthough I would have granted the request on Segment 3 today, and therefore

[4] *Southern California Edison Co.*, 112 FERC ¶ 61,014 (2005).

dissent on our denial of such a ruling, I would have preferred to address this issue in the context of a California ISO Section 205 filing to establish a region-wide cost allocation policy."[5] It is important to note that, unlike the CAISO's proposal, the SCE proposal did not provide for the direct assignment of a proportionate share of trunkline costs to generation resources as they come on line. Accordingly, SCE's proposal previously denied by the Commission comprised a much greater departure from existing Commission policy and would have a much greater impact on the ultimate cost responsibility of transmission ratepayers than does the CAISO's proposal.

### B. Current Policies and Market Mechanisms Are Inadequate To Overcome the Barriers That Exist To the Development Of Transmission Infrastructure For Location Constrained Resources.

As discussed in greater detail below, there are significant barriers to the efficient development of transmission infrastructure necessary to connect location constrained resources to the grid. At the CAISO Board meeting on October 18, 2006, several industry representatives stressed that barriers to the entry of remotely located renewable generation exists today and indicated support for the CAISO's attempt to remove such barriers.[6] Further, as discussed

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[5] Compared to SCE's proposal, the CAISO's proposal will have a significantly smaller rate impact on transmission ratepayers because a proportionate share of the costs of the Multi-User Resource Trunkline will be directly recovered from generators as they come on-line, thereby reducing the impact of the CAISO's proposal on the TAC. Further, unlike SCE's proposal, the CAISO's proposal includes features that will (1) limit the amount of costs associated with Multi-User Resource Trunklines that can be included in the TAC and (2) mitigate the risk of stranded costs. Finally, the CAISO proposes to require that Multi-User Resource Trunklines qualifying for the proposed rate treatment must be placed under the CAISO's Operational Control and evaluate such trunklines under the CAISO's transmission planning process.

[6] *See* Transcript of relevant portion of the October 18, 2006 CAISO Board Meeting, Attachment A hereto, statements of California Energy Commission Chairman J. Geesman, Attachment A at 92-97; SCE representative W. Williams, Attachment A at 97-100; PPM Energy representative J. Caldwell, Attachment A at 102-10; Pacific Gas & Electric Company

in greater detail in the CAISO Market Surveillance Committee ("MSC") *Opinion on Alternative Treatment of New Generation for Interconnection of Renewable Generation* ("MSC Opinion"), the MSC identified three features of renewable generation technologies that, in the absence of Commission intervention, could create a market failure that will ultimately increase the cost to California of meeting RPS goals.[7]

One barrier to the development of transmission for location constrained resources is the fact that the production of electricity through wind, solar, geothermal and other technologies is generally limited to certain geographical regions that are remote from the grid and load centers.[8] For example, wind resources can be developed in the Tehachapi region, and the Salton Sea; the Medicine Lake areas can support geothermal resource development; and solar resources can be developed in the Mohave Desert region.[9] Generation resources in these remote regions typically require long, high-voltage transmission lines to interconnect to the transmission grid. The CAISO notes that the renewables trunkline proposed in SCE's petition for declaratory order was comprised of a 25-mile-long, 500 kV segment and a 9.4 mile-long, a 220 kV

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representative E. Eisenman, Attachment A at 110-12; American Wind Energy Association representative C. Ellison, Attachment A at 113-20; and California Public Utilities Commission representative L. Chaset, Attachment A at 120-125.

[7] The MSC Opinion is provided as Attachment B hereto.

[8] As shown on the map included as Attachment C, the areas that can support the development of wind and geothermal resources are often remote from load and the grid. At the October 18, 2006 Board Meeting at which the CAISO Board authorized filing of the instant Petition, two representatives of the wind industry also noted the remote location of their resources. *See* Attachment A at 103-06, 115-16. At the October 18, 2006 Board meeting, the representative from PPM Energy noted that its resources will be 30 to 40 miles from the grid. Attachment A at 105.

[9] The CAISO's interconnection queue also identifies renewable generation resources currently under consideration that are located in remote areas. *See* www.caiso.com/14e9/14e9ddda1ebf0.pdf.

segment.[10] As reflected in SCE's Certificate of Public Convenience and Necessity filing with the California Public Utilities Commission ("CPUC") in Docket No. A. 04-12-008, the cost of the so-called Segment 3 trunkline proposed by SCE was estimated to be in the range of $72.7-$150.5 million depending on the configuration. In contrast, because fossil-fuels can be transported to Generating Units, Generating Units that "run" on fossil fuels typically require only short gen-tie lines of 230 kV and below to interconnect with the transmission grid.[11] The factors affecting the cost of tie lines include length, voltage, location and terrain. Under these circumstances, the costs of constructing a trunkline to connect location constrained resources are significantly greater than the costs of constructing the typical gen-tie line to an individual fossil-fuel generator because such trunklines generally will be longer and of higher voltage.[12] Also, such transmission projects are more likely to be constructed in more "challenging" terrain. Moreover, as the MSC noted, the cost of the transmission interconnection facilities for the typical wind or solar project is a much larger fraction of the cost of constructing the individual generation facility, thereby

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[10] *See* SCE Petition For Declaratory Order at 16, Docket No. EL05-80-000, March 23, 2005.

[11] MSC Opinion at 1. The MSC noted that the typical gen-tie line is less than five miles long. *Id.* Further, a review of a sample of 37 gas-fired generation projects in the CAISO Generation Queue showed the following: (1) one project with a 60kV gen-tie line of approximately 0.10 miles in length; (2) two projects with 70 kV gen-tie lines averaging approximately 0.10 miles in length; (3) eleven projects with 115kV gen-tie lines averaging approximately 0.71 miles in length; (4) 22 projects with 230-kV gen-tie lines averaging approximately 2.57 miles in length; and (5) one project with a 500 kV gen-tie line of 0.5 miles.

[12] As a general rule, developers of natural gas generators who can have their "fuel" delivered to their generation site will seek to locate their plants close to the grid so that they can minimize their costs of interconnection. On the other hand, the developer of a location constrained resource cannot transport its "fuel" source; it must locate the generating plant where the "fuel" source is located. As discussed above, such locations are often remote from the grid, thereby requiring a longer, and hence more costly, tie line.

placing potential developers of renewable generation at a severe financial disadvantage.[13]

A second barrier is the development pattern of location constrained resources. In that regard, unlike fossil-fuel plants, renewable resource development typically involves a number of projects, and individual renewable resource projects tend to be smaller than typical fossil fuel projects.[14] Moreover, unlike fossil-fuel plants that come on line at a single point in time, renewable resources in the same region typically are developed and come on-line in small increments over a period that can span a number of years. The construction time for new wind generation facilities, however, can be less than one year which is a problem when transmission facilities often take five years or more to design and build. Further, development in a renewable resource area typically involves multiple project developers;[15] whereas fossil-fuel resource development typically involves a single developer. Moreover, these renewable resource project developers are competing with each other for contracts with LSEs.[16] Because

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13 MSC Opinion at 2.

14 Attachment D provides information regarding the historical and proposed future development of wind and solar resources in California. This information clearly shows that renewable resources in a given region tend to be developed in increments over many years. A review of the CAISO's interconnection queue also shows that that the renewable projects currently under consideration in various regions are designed to come on-line over a period spanning several years. A review of the CAISO interconnection queue also shows that wind and geothermal resources are generally smaller than resources fueled by natural gas. At the October 18, 2006 Board meeting, a representative of the American Wind Energy Association noted that the relative size of a renewable project compared to the size of the transmission project that is necessary to connect the renewable project to the grid serves as a barrier to obtaining necessary financing. *See* Attachment A at 115. The MSC also recognized that the typical renewable project is significantly smaller than competing fossil fuel plants, and there are likely to be many individual renewable projects in a given remote location. MSC Opinion at 2.

15 For example, the representative of PPM indicated at the October 18, 2006 CAISO Board meeting that PPM was one of 25 companies who had "expressly put an interest in development of projects in Tehachapi" and that "[m]ost of these companies own, or have an interest in or are developing multiple projects." Attachment A at 104.

16 *Id.* at 105.

certain remote regions can have a vast potential for renewable energy supply, the transmission capacity necessary to serve all, or even a subset, of the renewable generation projects that could efficiently locate in such a region would far exceed the transmission capacity only required to interconnect the first or second project. For example, Tehachapi Pass has 608 MW of wind generation currently, but no single project is larger than 85 MW.[17] Further, several thousand more MWs are planned in this region (there are over 4,000 MW of generation currently in the CAISO interconnection queue for the Tehachapi region).

Third, the Commission's default gen-tie policy that requires the costs of all gen-tie facilities to be borne by the generator that is connecting to the transmission grid make it difficult to develop the transmission necessary to connect location constrained resources.[18] The small size of individual location constrained resource projects restrict the ability of a single developer to fund of the necessary interconnection facilities while timing (and other) issues discussed herein effectively preclude joint efforts.

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17 *See* http://www.awea.org/projects/california.html.

18 For example, in its petition for declaratory order in Docket No. EL05-80-000, SCE stated that the rule requiring generators to fund tie lines up front is a barrier to the development of wind resources which are located in remote area with little load. SCE Petition for Declaratory Order at 15, Docket No. EL05-80-000, citing December 1, 2004 Technical Conference in Docket No. AD04-13-000, John Krajewski, Municipal Energy Agency of Nebraska, Tr. at 113-14; John Meyer, Reliant Energy, TR at 220. At the October 18, 2006 Board meeting, the representative from the American Wind Energy Association, Chris Ellison, indicated that the current CAISO Tariff and Commission policies constituted a transmission barrier to entry. Attachment A at 115. The representative from PPM Energy, Jim Caldwell also stated that for the past 17 year Tehachapi, a world class wind resource within 40 miles of the grid has not been fully developed because of the lack of an effective policy. *Id.* 106. He also noted the need exists in places other than just Tehachapi. *Id.* Mr. Caldwell also noted that these issues are arising in other states as well, and indicated that the Commission needs to set a workable policy. *Id.* at 110. Finally, the MSC noted how the CAISO's current interconnection policies, which reflect the Commission's default policies, can result in market failure with respect to the interconnection of renewable resources. MSC Opinion at 2-4.

There are a couple of alternative approaches to building transmission to the remote regions where the potential exists to develop location constrained resources: (1) build a new interconnection line or upgrade an existing interconnection line(s) every time a new generation resource comes on-line; or (2) build a large trunkline that can accommodate all of the resources that are expected to be developed in an Energy Resource Area. The first alternative is neither an optimal nor a practical approach. It would be relatively expensive and financially risky for an individual generation developer to build a separate line for each resource in the area that comes on line (or even to build a line that could accommodate just its current and future needs), especially because renewable resources tend to come on-line in small increments, and long transmission lines would be needed to connect the remote area to the grid. Further, as the MSC has recognized, this type of sequential construction of the necessary interconnection facilities would result in a total cost for transmission to access the remote area that exceeds the cost of building a single interconnection facility that can accommodate all of the resources that are expected to be developed in the region at the time the first generator comes on-line.[19] Moreover, a sequential approach to interconnection could result in an unnecessary proliferation of transmission connector lines to a given region, assuming that the developers would even be able to get such facilities sited. Clearly, this is not an efficient or cost-effective approach to transmission development. The end result would be increased costs to consumers to access renewable energy, as well as inefficiently designed additions to the transmission system.

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[19] MSC Opinion at 3.

The second approach is clearly a much more rational and optimal approach to efficient transmission development. In particular, because of economies of scale, it would be more economically efficient from a discounted present value perspective to construct transmission with the capacity to serve all of the potential generation from a region rather than build only the capacity needed to serve the initial project and then add more capacity or separate transmission lines as additional projects require interconnection.

However, there are significant logistical and economic impediments to the development of interconnection trunklines that will accommodate multiple generation developers whose resources will come on-line in small increments over a period spanning several years. That is why the chances of a consortium of generation developers financing and building such trunklines are minimal. Indeed, practical experience in Tehachapi and elsewhere around the country has confirmed that renewables developers generally have not been able to finance trunkline facilities themselves.[20]

Because a region with significant expected renewable energy potential generally will be developed over a period of years, it is extremely difficult to finance the necessary, large-scale transmission infrastructure up front because only a small percentage of the expected resources will be on-line (and earning revenues) on Day 1, *i.e.*, the cost of transmission is disproportionate to the amount of generation that will be connected to it initially. As the MSC recognized,[21] under the CAISO's existing interconnection policies, coordination

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20 *See* Attachment A at 106.

21 *See* MSC Opinion, Attachment B, at 3.

among potential entrants is difficult because initial entrants would have to ask potential future entrants to share the cost of a single large transmission line to the remote location despite the fact that they do not yet have a revenue stream (and may not even have started developing their projects). This is a risk that potential future entrants are unlikely to be willing to undertake. Under these circumstances, the first resource that comes on-line would essentially have to "subsidize" the costs of the entire capacity of the line until the line is fully subscribed. That is prohibitive and risky for a renewable generator.[22] In that regard, the sole source of revenue for the transmission line would be the generation resources that are connected to the line; there would be no rate base treatment for the line, and thus no transmission revenues would be collected from the line.[23] The long timeline for generation development in a Energy Resource Area, the large number of generation developers that may be involved, and the fact that these developers are competing with each other add to the complexity of a project and make it difficult for a consortium of generation developers to finance and build a trunkline to an Energy Resource Area.[24]

Another impediment to the development of transmission lines to Energy Resource Areas by location constrained generation developers is the fact that location constrained generation projects generally do not proceed without a contract in place for their energy output. Many, if not most, location constrained resources are renewable resources. The need for renewable resources is expected to increase on an incremental basis over a long time-frame, as LSEs

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22 Attachment A at 105.
23 Attachment A at 107-08.
24 *Id.*

need increasing amounts of renewable energy to meet mandated renewable energy goals and reductions in greenhouse gas emissions requirements. This will result in such resources being developed incrementally in step to meet renewable energy demand levels which, under a RPS requirement based on load levels, will increase relative to the overall increase in demand levels. Therefore, as the MSC points out, a significant portion of the potential renewable generation capacity at a remote location may be unlikely to be able to obtain forward market supply arrangements at the time the initial renewable generation entrant at that location is able to sign one.[25] This decreases the ability of project developers to coordinate the development of a single transmission line.

A related problem is that getting a long-term power purchase contract requires generation developers to know what their transmission costs are going to be,[26] yet resource developers need to spend substantial development capital over a long period of time to determine whether the transmission interconnection line is feasible and what the total cost of the line would be. Stated differently, potential developers of location constrained resources are compelled to commit considerable funds to develop a transmission plan and construction cost estimate with no contract and no rate base to recover these sunk costs if the project is ultimately not approved. Add to this the facts that location constrained resources are typically developed in small increments and that developers of such resources are competing with each other for limited contracts (and may be reluctant to act in concert with each other due to antitrust concerns).

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25 *See* MSC Opinion, Attachment B, at 3.

26 Attachment A at 118-19.

Furthermore, renewable developers typically do not have the transmission development experience necessary to design, finance and build a long, high voltage transmission line.

The MSC observed the following regarding this "market failure":

> This logic implies the potential existence of a market failure that is common to many forms of infrastructure that benefit a large number of individuals or firms, such as bridges and highways. Even though the total benefits received by all the users of a facility exceeds the total cost of constructing and operating the facility, if the cost of coordinating the many potential users of the facility and extracting sufficient payments from them to pay for the facility are sufficiently high, no private party will find it profitable to construct the facility. Provision by a centralized public entity that has the legal right to extract payments from each beneficiary can drastically lower coordination costs.[27]

The CAISO can serve as the "centralized entity" envisioned by the MSC and plan for the efficient development of a supply trunkline that achieves economies of scale, ensures the optimal development of transmission interconnection facilities, accommodates multiple generation resources (not just the first resource that is on-line), and mitigates the impact of up-front transmission cost payments by permitting generators to pay for the costs of the facility as they come on-line. However, the Commission's current default interconnection policy prevents the CAISO from fulfilling that role. Under the default Order No. 2003 policy currently reflected in the CAISO Tariff, generators pay the cost of additional transmission facilities (as opposed to transmission upgrades) necessary for interconnections. This is logical in the context of a traditional gen-tie line which is typically short in distance, not subject to the CAISO's Operational Control and designed to transmit the output of a single Generating Unit which comes on-line at a single

[27] MSC Opinion, Attachment B, at 2.

point in time. Where there is no reason, economic or otherwise, to size a line in excess of that needed to support the output of a single known generator, the existing interconnection policy is unlikely to impose an undue burden on generation developers.

However, this default policy simply does not work for location constrained resources that are located in areas remote from the grid, come on-line in small increments over a period of years and typically involve multiple developers in a region. In essence, the policy perpetuates the market failures that MSC identified. The requirement that the entire cost of the transmission facilities must be paid initially by the first increment of generation creates a "chicken and egg" problem. Assessing the full costs of a line that could efficiently handle the output from multiple power plants likely to be developed in the region to the first generation developed in the region is too great an impediment to development; moreover, it would not be fair.[28] Requiring that generators pay for a tie line does not promote -- and can even inhibit -- the efficient development of location constrained resources because of the combination of the high initial cost of the transmission facilities necessary to connect to the grid and the incremental nature of the generation development.

The MSC recognized that the Commission's default policies currently reflected in the CAISO Tariff perpetuate the market failures and pointed to the

[28] On the other hand, the CAISO could plan for the efficient development of a supply trunkline that achieves economies of scale, ensures the optimal development of resources, accommodates multiple generation resources (not just the first resource(s) that is on-line) and mitigates the impact of the up-front transmission cost payments.

potential resolution that could be achieved by a proposal such as that discussed in this Petition:

> [I]f the total costs of such a large interconnection facility were charged to the first entrant, it may be so high as to prevent development at all. The [CAISO] can serve as the centralized public entity that eliminates the need for suppliers to incur these coordination costs by allocating the cost of constructing and operating the large least-cost interconnection facility using the mechanism described in the [CAISO's] proposal for a new category for transmission interconnections. Note that this same problem of coordinating transmission investment amongst multiple firms who may benefit from a network enhancement provides much of the justification for the current treatment of 'network' investments.[29]

The CAISO agrees that the market failures identified by the MSC militate strongly against the continued application of current interconnection pricing policies to the development of location constrained generating resources and that adoption of innovative mechanisms -- such as that proposed herein -- that recognize the unique circumstances associated with such resources are necessary in order to promote the construction of transmission facilities to connect such resources.

The Commission has previously recognized that modifying its transmission policies to address the unique circumstances of particularly types of generators does not constitute undue discrimination, but may indeed be necessary to remedy the discriminatory effect of treating dissimilarly situated generators, such as certain renewable resources, in the same manner as traditional generators. In Order No. 661, the Commission, in order to avoid undue discrimination, issued "just and reasonable terms for the interconnection of wind plants [that recognize] the technical differences of wind generating technology, and benefits customers by removing unnecessary obstacles to

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[29] MSC Opinion at 3.

further development of wind generating resources while ensuring that reliability is protected."[30] Similarly, the Commission approved the CAISO's Participating Intermittent Resource Program, in which the CAISO, *inter alia*, modified the settlement of uninstructed deviations for intermittent resources.[31] The Commission recognized that the CAISO proposed the program to address "special operating characteristics of intermittent energy resources" that "can act as a barrier to those resources participating in the [CAISO] energy market."[32] The Commission approved the CAISO's proposal because that proposal "benefits customers by addressing a major obstacle to development of new wind and other intermittent generation. Encouraging the development of intermittent generation will increase diversity in the resource base, thereby improving system reliability as a whole."[33]In this instance, the defining characteristic of location constrained facilities – their location, their relative size compared to the size of transmission that is needed to connect all individual location constrained resources in a region, and the immobility of their fuel source – sets them aside from other generators such as gas-fired generation. Undue discrimination is by definition the unjustified differential treatment of similarly situated classes.[34] Gas-fired generation, for example, is differently situated because its fuel can be transported via pipeline to a site close to load centers and existing transmission lines.

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30 *Interconnection for Wind Energy*, Order No. 661, 111 FERC ¶ 61,353, at P 1 (2005).

31 *California Independent System Operator Corp. et al. v. Williams Energy Services Corp. et al.*, 98 FERC ¶ 61,327 (2002).

32 *Id.* at 62,376.

33 *Id.* at 62,375.

34 *See El Paso Natural Gas Co.*, 104 FERC ¶ 61,045 at P 115 (2003).

Even if there are some respects in which such generation could be considered similarly situated to location constrained generation, such similarities would not give rise to undue discrimination under the circumstances. As the Court of Appeals for the D.C. Circuit has noted, "Congress, through section 205(b), has not required absolute uniformity. The section proscribes only 'any unreasonable difference in rates' and 'any undue preference or advantage.'"[35] The concept of undue discrimination "gives rise to flexibility in interpretation by the Commission."[36] The "critical determination" is whether differential treatment is "unreasonable or undue."[37] The need to facilitate the connection of location constrained resources discussed above provide not only a reasonable, but a compelling, basis to adopt a mechanism such as those proposed in this Petition.

### C. A Variation From the Current Interconnection Policy Is Necessary To Enable LSEs To Access Resources Needed To Meet State RPS Requirements At Least Cost

The State of California has embarked on an ambitious program to promote energy independence and reduce greenhouse gases through increased reliance on renewable energy sources. Under SB 107 (Chapter 464 Statutes of 2006), California accelerated its existing renewable energy portfolio requirement of 20 percent by 2017 to a 20 percent requirement by 2010.[38] The state's investor-owned utilities, energy service providers, and community choice aggregators are required to increase by at least one percent annually the percentage of their load

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35 *Alabama Elec. Coop. v. FERC*, 684 F.2d 20, 28 (D.C. Cir. 1982).

36 *Cities of Newark, et al. v. FERC*, 763 F.2d 533, 547 (3d Cir. 1985).

37 *"Complex" Consolidated Edison Co. of New York v. FERC*, 165 F.3d 992, 1013 (D.C. Cir. 1999).

38 *See* Cal. Pub. Res. Code. § 25740.

served by eligible sources of renewable energy. For the investor-owned utilities, this is accomplished through annual solicitations for renewable energy generation and through bilaterally negotiated contracts. Publicly-owned utilities in the state are responsible for implementing and enforcing a renewable portfolio standard that recognizes the intent of the State Legislature to encourage renewable resources, but are given flexibility in how those standards are designed and implemented.[39]

Governor Schwarzenegger has endorsed this accelerated schedule and has set a goal of achieving a 33 percent renewable energy share by 2020 for the state as a whole; the state's *Energy Action Plan II* identifies required actions to achieve this goal. Implementation of these requirements is underway. As shown in the following chart, as LSEs procure to the 20 percent renewable portfolio requirement, development of significant quantities of wind, solar, and geothermal resources will need to occur in a relatively short period of time. Additional resources will likely be needed just to maintain a 20 percent level, and even more resources will be needed to meet the 33 percent goal by 2020.

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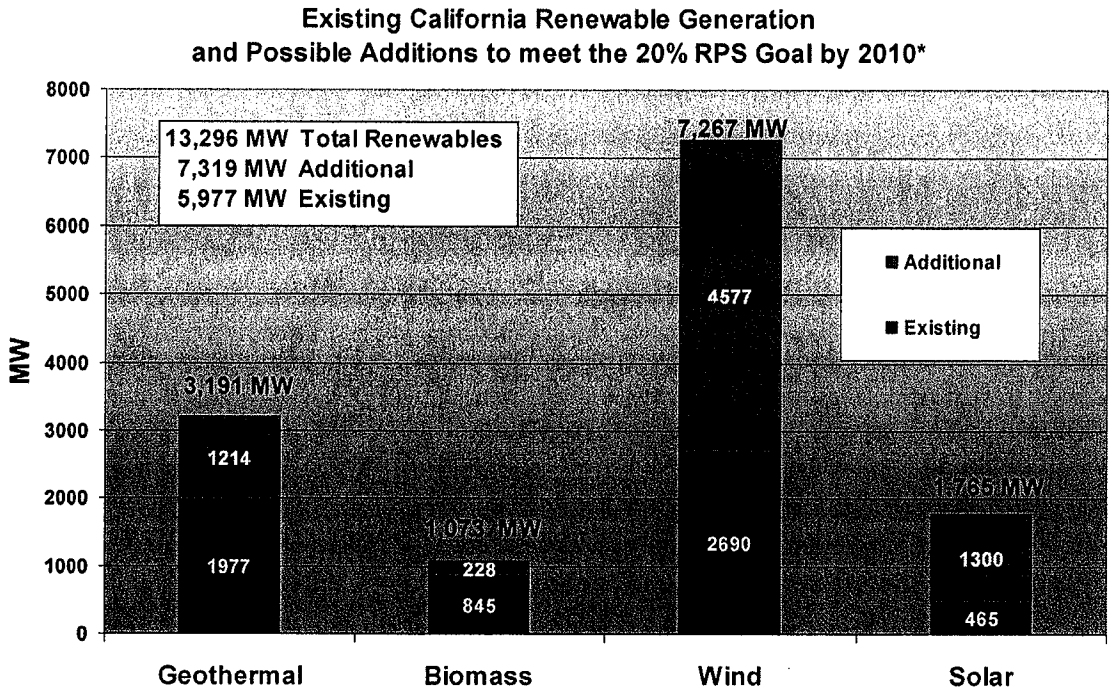
[39] *See* Cal. Pub. Util. Code § 387.




* Data on additional renewable resource are based on current California Energy Commission ("CEC") studies on renewables. Potential retirements of existing resources and repowering projects are not included.

A revision to the Commission's existing generator interconnection policy, as applied by the CAISO, is necessary to promote the development of the transmission infrastructure that will be needed to connect the resources that LSEs need in order to comply with the State's RPS requirements. Application of the existing interconnection policy to location constrained resources will continue to act as an impediment to the least cost, efficient development of the transmission infrastructure necessary to connect the renewable resources needed by LSEs to meet RPS requirements. On the other hand, a new policy such as that proposed herein by the CAISO will facilitate the efficient development of the transmission infrastructure that is needed to allow LSEs need to meet RPS requirements. 2010 is fast approaching, so it is imperative that the

Commission act now and implement a new policy that will remove the barriers to the development of the transmission infrastructure that can access renewable resources in remote areas.

The CAISO also notes that the Federal government has made major commitments to the development of renewable energy resources. As just one recent example, the Energy Policy Act of 2005 included production incentives for renewable electric generation projects,[40] minimum renewable energy purchase requirements for the Federal government,[41] preferential standing in obtaining rural and remote communities electrification grants,[42] numerous research and demonstrations projects,[43] and the direction of a National Academy of Sciences Study regarding the development of renewable resources on Federal land and the outer continental shelf.[44] Indeed, the Commission itself has recognized:

> The development of renewable sources of energy, including wind resources, brings benefits to energy customers by providing environmental benefits and supports increased reliability by increasing the diversity of energy supplies. Wind energy can satisfy certain federal and state-mandated programs for the development of renewable energy.[45]

Further, the CAISO notes that, on June 11, 2006, the Western Governors Association ("WGA") passed a policy resolution backing the development of clean, diversified energy resources and encouraging policies that eliminate

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40 42 U.S.C. 13317(a).
41 Sec. 203 of the Energy Policy Act of 2005 ("EPAct").
42 Section 609 of EPAct.
43 *See, e.g.,* Sec. 931 of EPAct and Sec. 2606 of the Energy Policy Act of 1992.
44 Sec. 1833 of EPAct.
45 *Imbalance Provisions for Intermittent Resources: Assessing the State of Wind Energy in Wholesale Electricity Markets*, Docket No. RM05-10-000, 111 FERC ¶ 61,026, at P 53 (April 14, 2005) ("Intermittent Resources NOPR").

barriers to greater utilization of clean energy resources across the West. A copy of this WGA policy resolution is attached hereto as Attachment E.

A new policy that facilitates the interconnection of location constrained resources to the grid is thus not only consistent with these Federal and regional policies, it is also necessary if renewable resources are to be developed to their full potential and connected to the grid in a least cost and efficient manner.

## III. PROCEDURAL BACKGROUND

In light of the problems identified above, and in response to stakeholder concerns and the Commission's order in *Southern California Edison*, CAISO management sought and received approval from the CAISO Board on June 13, 2006, to proceed with a stakeholder process directed toward the filing of a Petition for a Declaratory Order regarding a proposal to address the market failures that were interfering with the efficient development of renewable resources. On June 28, 2006, the CAISO posted a White Paper, which it followed with a stakeholder meeting on July 7. The CAISO subsequently received written comments from the American Wind Energy Association, California Energy Commission, National Grid, Pacific Gas & Electric Company ("PG&E"), and SCE generally supporting the concept of a "third category" of transmission and efforts to amend eventually the CAISO's tariff to implement this concept. Comments from the California Department of Water Resources/State Water Project, California Municipal Utilities Association, Metropolitan Water District, and Northern California Power Agency either generally opposed or raised specific concerns about the concepts for alternative treatment of certain

transmission facilities. The CAISO notes that, in response to parties' comments, the CAISO made a number of changes to its proposal to minimize the financial impact of the proposal on transmission ratepayers and the potential for stranded costs, namely (1) use of an aggregate cap on the amount of cost associated with Multi-User Resource Trunklines that can be included in the TAC, and (2) adoption of a two prong-test that must be satisfied before physical construction of a Multi-User Resource Trunkline can begin.

The CAISO discussed the matter with the MSC on May 31, August 8, and September 18, and issued a revised White Paper on September 22, 2006.[46] A stakeholder conference call occurred on September 25, and stakeholders submitted additional comments on the proposal on October 5, 2006.

The CAISO management provided a memorandum to the CAISO Board regarding the details of the proposal on October 12, 2006[47] and the Board approved the submittal of the Petition for a Declaratory Order on October 18, 2006. As reflected in Attachment A, the statements at the Board meeting show strong support and clear need for, and importance of, the instant proposal. In particular, commenters at the Board meetings emphasized that the proposal is needed to remove the significant barriers that exist today to the development of transmission to connect location constrained resources to the grid.

## IV. PROPOSAL FOR A THIRD CATEGORY OF TRANSMISSION FACILITIES

The CAISO requests a Commission determination that the following principles would provide the basis for a new, distinct category of trunkline

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46 The September 22, 2006 White Paper is attached hereto as Attachment F.

47 The October 12, 2006 memorandum to the Board is attached hereto as Attachment G.

transmission facilities -- Multi-User Resource Trunklines -- that would connect location constrained resources to the CAISO Controlled Grid: (1) the capital and operating costs of the trunkline would initially be reflected in the applicable PTO's TRR and in the TAC as described below; (2) as generation resources are interconnected to the line, a *pro rata* share of such costs would be directly recovered from the project developer(s), thereby reducing the costs of the Multi-User Resource Trunkline included in the PTO's TRR and the TAC; (3) once the capacity of the trunkline is fully utilized by interconnected generation, the PTO's TRR and the TAC would no longer be impacted by trunkline-related costs. The CAISO notes that nothing in this filing affects the CAISO's evaluation of networked transmission facilities, the CAISO's ability to take Operational Control of such facilities, or the ability of PTOs to recover the costs of those facilities pursuant to the prevailing TAC methodology and Commission precedent.

Set forth below is a description of eligibility criteria that would apply for Multi-User Resource Trunklines and the proposed rate treatment for such Multi-User Resource Trunkline facilities.

### A. Eligibility Criteria For Multi-User Resource Trunklines

The CAISO proposes the following eligibility criteria for the proposed new category of Multi-User Resource Trunklines:

1. The transmission project must not otherwise be eligible for rate treatment that allows costs to be incorporated into the transmission Access Charge, *i.e.*, the project would not meet the definition of a network facility under Commission precedent.

2. The transmission project must permit wholesale transmission access to an area that is not otherwise accessible and in which there is a significant amount of energy resources that are not transportable. To qualify for the treatment proposed herein, a line must connect to the following types of resources -- wind, solar, biomass, geothermal, photovoltaic, hydroelectric, fuel cells using renewable fuels, digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal or tidal current -- in addition to meeting the other criteria specified herein. The CAISO contemplates relying on state entities such as the California Public Utilities Commission or California Energy Commission to identify and assess areas where non-transportable energy resources present the best opportunities for practical development. It is conceivable that once the Multi-User Resource Trunkline is contemplated (or constructed), other types of generation could be sited in these remote regions and connect to the supply transmission line. Such generation would be treated in the same manner as other generation in the region and allocated their capacity ratio share of the annual revenue requirement of the facilities. Stated differently, non-locationally and developmentally constrained resources could not be used to qualify a trunkline for the rate treatment proposed herein, but once a line is qualified, other resources that connect to the line would have non-discriminatory access to the line and would be expected to pay for their pro rata share of the line.

3. The transmission project must be turned over to the CAISO's Operational Control.
4. The transmission project must be a High Voltage Transmission Facility (as defined in the CAISO Tariff) designed to serve multiple generation resources that will be developed over a period of time.[48]
5. To be eligible for the financing treatment proposed herein, a Multi-User Resource Trunkline project would be evaluated and approved by the CAISO in the context of a prudent CAISO transmission planning process and ultimately must receive CAISO Board approval, just as the CAISO evaluates and obtains approvals for Reliability and Economic projects as part of a transmission planning process. The CAISO anticipates that the planning process would involve the CAISO, the CEC, the CPUC, PTOs, generation developers and other interested stakeholders and would be coordinated within the CAISO's overall transmission plan. To that end, in the near future, the CAISO expects to finalize details of a robust and comprehensive transmission planning process that assesses transmission projects based on cost-effectiveness in connection with surrounding projects and facilities. This process will include transmission planning analysis of conceptual resource development scenarios based on resource forecasts developed by knowledgeable stakeholders such as the CEC and generation developers. is the CAISO expects that these resource

[48] The proposed financing treatment would be available to "wires" only facilities and not to generation facilities.

forecasts will include geographic areas located remotely from the bulk transmission system which have high concentrations of renewable development. These areas would be expected to "trigger" trunkline projects as the most cost-effective for connecting resources in the area. A Multi-User Resource Trunkline project eligible for this alternative rate treatment would be subject to cost-effectiveness principles adopted as part of this comprehensive transmission planning process. For example, the CAISO would conduct an analysis to determine whether the costs associated with meeting future demand requirements[49] are expected to be lower over time with the project than without. The planning process would also be designed to accommodate the full development of location constrained resources in a region in a least-cost manner using economies of scale. This will result in the most efficient interconnection of these resources to the grid.[50] Further, the Multi-User Resource Trunkline would be evaluated in the context of future firm and conceptual CAISO transmission plans. This will ensure that the Multi-User Resource Trunkline is fully integrated in the current and future planned CAISO grid in the most effective and efficient manner possible.[51] This process will ensure that

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[49] Future demand requirements would include meeting RPS and other renewable requirements.

[50] In particular, it will avoid ad hoc interconnections to the grid, which would be inefficient and ultimately increase costs to consumers.

[51] For example, the CAISO would make an assessment of where the terminus of the trunkline should be located in order to optimize the integration, operational and system flexibility benefits of the trunkline. Because the trunkline would be evaluated in the context of an integrated transmission plan, the CAISO would also evaluate whether a trunkline connecting the region could be "networked" in the future.

trunklines are built to regions which provide the most benefits (both now and in the future). In conclusion, with analysis of proposed Multi-User Resource Trunkline projects being part of the CAISO's integrated planning process, the economic tests, reliability evaluation, cost modeling, integration and operational considerations typical to the grid planning process will serve as a "gatekeeper" to ensure appropriate use of the proposed financing mechanism.

6. To mitigate the short-term cost impact on ratepayers, the total aggregate plant investment of all Multi-User Resource Trunklines qualifying for the proposed rate treatment (*i.e.*, not being recovered directly from generators) cannot exceed 15 percent of the total net high-voltage physical transmission plant investment of all of the PTOs that utilize high-voltage transmission plant investment to calculate their TRRs, as reflected in their TRRs and in the TAC.[52] The CAISO believes that use of a percentage-based cap is more appropriate than use of a fixed dollar cap, because it will allow changes over time in the total net high-voltage transmission plant figure to be taken into account. This will allow the cap to track changes in transmission investment patterns over time. If the total TRRs recovered through the TAC decrease due to the full recovery of the capital costs of older

[52] Initially, as reflected in the White Papers, the CAISO contemplated adopting a per-project cap. However, after further considering input from stakeholders, the CAISO has modified its proposal to instead place an aggregate cap on the total costs associated with Multi-User Resource Trunklines that can be included in rates. Unlike a per-project cap, an aggregate cap will serve to limit the total cost impact on ratepayers. The CAISO believes that a 15 percent cap reasonably balances the need to facilitate the development of trunklines to access vast quantities of location constrained resources with the desire to limit the cost impact on transmission ratepayers.

transmission facilities, the applicable cap will go down. Conversely, if the total TRRs in the TAC increase due to new investment in high-voltage transmission facilities, the applicable cap will increase. Also, an asset-based cap will be easy to calculate and to track.

In Attachment H to the instant filing, the CAISO provides an illustrative analysis of the proposed asset-based cap based on the total net high-voltage transmission plant investment of the following PTOs: PG&E, SCE, and San Diego Gas & Electric Company ("SDG&E").[53] The CAISO's illustrative calculations indicate that the total net high-voltage transmission plant investment of these PTOs currently is $3,199,765,286.[54] Applying the 15 percent cap to that amount would result in an "aggregate cap" amount of $479,964,793 under current circumstances. Further, by applying the general rule of thumb in the electric industry that the annual fixed (carrying) cost for plant is approximately 20 percent of the cost of plant capital,[55] the attached illustrative analysis shows that the maximum rate impact of the CAISO's proposal could have under the current level of net high voltage transmission plant would be an increase in high-voltage TRRs of $95,992,959, *i.e.*, an increase of approximately 16.04% over the current CAISO high-voltage TAC. As the total amount of net high

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[53] Each of the other PTOs (Trans-Elect NTD Path 15, LLC and the Cities of Anaheim, Azusa, Banning, Pasadena, Riverside, and Vernon) appear to calculate their TRRs without reference to high-voltage transmission plant investment.

[54] Attachment H to the instant filing contains all of the calculations that are described in the paragraph above, and also shows the means of calculating the net high-voltage transmission plant for PG&E, SCE, and SDG&E. The CAISO emphasizes that these calculations are for illustrative purposes only.

[55] *See Western Systems Power Pool*, 55 FERC ¶ 61,099, at 61,325 (1991).

voltage transmission plant included in the PTOs' TRRs change, the level of the 15 percent aggregate cap likewise will change.

7. In order to avoid stranded costs due to abandoned investment, the transmission project must demonstrate adequate commercial interest among multiple generation developers. The CAISO proposes a two-prong test for purposes of determining whether a particular project has sufficient commercial interest. The two prongs of this test would have to be satisfied before construction of the project could commence. First, the CAISO would require that a minimum percentage of the capacity of the new trunkline -- an order of magnitude of 25 to 35 percent -- be "subscribed" pursuant to executed Large Generator Interconnection Agreements prior to commencement of construction of the Multi-User Resource Trunkline.[56] Second, the CAISO would also require a showing of additional interest in the project before construction could commence, *i.e.*, a showing that there is interest in the project above and beyond the percentage of capacity that is covered by executed LGIAs. There are several possible ways in which interest in or support for the project could be shown including, inter alia, formal declarations of interest, the number of MW in the CAISO interconnection queue that could be served by the project, responses

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[56] Because location constrained resources in a region typically are developed and come on line in small increments over a number of years, requiring a high percentage of the capacity of the Multi-User Resource Trunkline to be "subscribed" before construction of the line begins would defeat the whole purpose of the instant proposal and would essentially result in a *de facto* continuation of the existing gen-tie policy. Stated differently, unlike a traditional gen-tie, all of the location constrained resources that will eventually use a Multi-User Resource Trunkline will not come on-line on Day 1.

to an open season and/or CEC studies showing the potential MW that could be developed in a region. The CAISO proposes to require a minimum additional showing of interest in the range of 25 to 35 percent. In connection with the preparation of tariff language to implement this proposal, the CAISO would undertake a stakeholder process to determine: (1) the minimum percentage of capacity that should have executed LGIAs before construction commences, and (2) the minimum percentage of demonstrated "additional interest" that should be required.

**B. Rate Treatment for Multi-User Resource Trunkline Facilities.**

Under the CAISO's proposal, when the CAISO identifies a transmission line that qualifies for treatment as a Multi-User Resource Trunkline and if a PTO (either an existing PTO or an entity that intends to build a trunkline and become a PTO) is willing to bear the up-front costs of the facilities, the PTO, subject to Commission approval, will initially include the costs in its TRR. The PTO will have flexibility as to how it will actually include these costs (net of any generator revenues) in its TRR, including whether to include these costs in base rates as part of a Commission rate case, or as part of a single issue rate surcharge mechanism. Once included in the PTO's TRR approved by the Commission, the costs will consequently be reflected in the CAISO's TAC.

As each new resource developer interconnects to the facility, it will reimburse the PTO for the going forward costs in proportion to the ratio of the capacity required for the developer's project to the total transmission capacity of

the project. Once the facility is fully subscribed, the revenues received from generators will cover the costs of the trunkline facility so that transmission ratepayers will no longer have any the cost responsibility for the facility. Thus, the CAISO's proposed alternative cost treatment is consistent with the Commission's existing policy in that the costs of the interconnection facility would be directly recovered from the generation resources interconnecting to the line. The difference is that a PTO would finance the costs initially through its Commission-approved revenue requirement, and generators would bear responsibility for their share of the annual revenue requirement as they come on-line and use the facilities. Thus, unlike SCE's prior proposal, where the costs of the entire line would be recovered through the TAC from transmission ratepayers, under the CAISO's proposal, an appropriate portion of the costs would be recovered from the generation that is interconnected. As such, the CAISO's proposal should have less of a cost impact on the TAC and will be more consistent with cost causation principles. Importantly, however, the CAISO proposal should facilitate the financing and efficient development of transmission lines to connect location constrained resources to the grid. Unlike the Commission's existing default interconnection policy, the CAISO's proposal will permit the allocation of the costs of supply trunklines to multiple generators connecting to the same large interconnection facility over a period of time.

An illustrative example of the proposed cost allocation is set forth below. Conceptually, the pro-rata share of costs is a/b; where "a" represents the physical transmission rights of the generation project in question on the line and

"b" represents the full rated capacity of the transmission line under normal operating conditions. Consider the following simplified example of a project that costs $1,000,000 and uses straight-line depreciation over its 10-year life. Further assume this project's cost of capital is 10 percent (For ease of illustration, this example ignores such costs as O&M, A&G and other TRR components).

The annual revenue requirement would be:

| | Depreciation Expense | Return | Revenue Requirement |
|---|---|---|---|
| Year 1 | $100,000 | $10,000 | $110,000 |
| Year 2 | $100,000 | $9,000 | $109,000 |
| Year 3 | $100,000 | $8,000 | $108,000 |
| Year 10 | $100,000 | $1,000 | $101,000 |

A generator (G1) that interconnects in Year 1 with a 33% percent capacity share of the line would pay 33 percent of $110,000 = $36,300; the remaining portion (67 percent) of the revenue requirement ($73,700) would be covered through TAC. Another generator (G2) that interconnects to the facilities in Year 3 also with a 33 percent capacity share of the line would pay 33 percent of $108,000= $35,640, which is the same payment required of G1 in Year 3. G2 would not be required to reimburse TAC ratepayers for its share of the Year 1 and Year 2 return and depreciation expense ($72,600) in this example. Past carrying costs that reflect the time value of money and the stranded-cost risk will not be assessed to the generation resources.

PTOs would retain ownership of the facilities. Generators would receive transmission rights proportional to their share of the going-forward costs of the non-networked trunkline. As long as the line remains a non-network facility, these transmission rights should protect against potential congestion costs.

If the qualifying transmission project evolves into a network facility at a later time, the generators would be relieved of their respective share of the revenue requirement on a prospective basis upon conversion to a network facility. The going forward revenue requirement associated with qualifying transmission facilities that is not recoverable from generators would be borne by all ratepayers through the transmission Access Charge. Transmission rights for the non-network facility would expire, so that transmission rights to the newly designated network line would be available under the CAISO's capacity allocation procedures.

## V. THE PROPOSED RATE TREATMENT IS JUST AND REASONABLE

As discussed above, the CAISO's proposed rate treatment of Multi-User Resource Trunklines differs from the treatment of interconnection facilities set forth in Order No. 2003 and its successors. In promulgating Order No. 2003, however, the Commission stated, "[w]hile RTOs and ISOs are required to submit compliance filings, they may submit LGIP and LGIA terms and conditions that meet an 'independent entity variation' standard that is more flexible than the "consistent with or superior to" standard and the regional differences standard."[57] Later, the Commission explained that it considered this a balanced approach that took into account the fact that an RTO's or ISO's operating characteristics may

[57] Order No. 2003 at P 26.

differ according to size and location and that an RTO or ISO is less likely to act in an unduly discriminatory manner than a market participant Transmission Provider. The Commission wished to provide an RTO or ISO with greater flexibility to customize its interconnection procedures and agreements to fit regional needs.[58] The Commission also permitted individual public utilities to justify deviations from the Order No. 2003 interconnection policies based on regional differences.

The CAISO submits that its proposal is supportable under either the "independent entity variation" standard or "regional differences" standard. First, the CAISO is an independent entity, and as such, is authorized to propose variations from the Commission's default terms and conditions for generator interconnections.[59] In addition, California has numerous areas remote from the existing transmission grid that would support the development of vast location constrained resources. Because the Commission's default interconnection policy hinders the development of these resources and the transmission infrastructure needed to connect such resources, a new policy is needed, in particular a new policy that will facilitate the financing of such transmission facilities. California has a legal and regulatory commitment to renewable energy with requirements that must be met by the California's utilities. Likewise, other States in the West have adopted RPS standards or, at a minimum, have expressed support for the increased development of renewable resources. Thus, a revised interconnection

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58 *Id.* at P 827.

59 *See California Independent System Operator Corp., et al.*, 112 FERC ¶ 61,010, at P 1 (2005) (finding that "CAISO's Board, as currently constituted, meets the independence requirements of Order No. 888 and Order No. 2000").

policy that promotes the efficient and cost-effective interconnection of location constrained resources is not only appropriate, it is necessary. Because of these regional circumstances, the CAISO believes the rate treatment it has proposed for Multi-User Resource Trunklines is appropriate. In any event, given the significant benefits that will result from implementation of the CAISO's proposal, the CAISO submits that its proposal is just and reasonable under any standard.

Rolled-in rate treatment for the cost of supply facilities is not a new concept at the Commission. The Commission has often approved rolled-in rate treatment for the costs of new natural gas pipeline facilities designed to connect the pipeline system to new supplies and supply regions. For example, the Commission has found that the costs of supply lateral and associated facilities designed to access new sources of gas supply could be rolled in because such facilities, *inter alia*, provide increased flexibility for shippers to access new supplies and provide increased reliability.[60] This precedent provides further support for the CAISO's proposal. The CAISO's limited roll-in proposal is not unreasonable under these circumstances.

Supply conditions in the electric industry have changed in recent years and even more dramatic changes are expected in the future, and these changes

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[60] *See, e.g., Rocky Express Pipeline, LLC,* 116 FERC ¶ 61,272 at PP 52-53 (2006). The CAISO also notes that supply laterals that meet the requirements for prior notice procedures or automatic construction under the blanket certificate regulations qualify for a presumption in favor of rolled-in pricing. *See Tennessee Gas Pipeline Co.,* 93 FERC ¶ 61,332, at 62,131 (2000) ("*Tennessee*") ($14,985,000 supply lateral and appurtenant facilities qualify for presumption of rolled-in rate treatment). The Commission recognized that the supply lateral would provide shippers on the pipeline system with access to new gas supplies and support the pipeline's current and future natural gas development and production activities. *Id.* Under the Commission's blanket certificate regulations, for 2006, a natural gas pipeline can construct a supply lateral with no further Commission authorization if the cost of the project is less than $8.2 million and pursuant to prior notice procedures if the cost of the facility is less than $22.7 million. *See* 18 C.F.R. Part 157.201, *et seq.* The presumption of rolled-in pricing applies to supply lateral facilities constructed pursuant to these procedures.

support approval of the limited roll-in of costs proposed by the CAISO. These new conditions include: (1) open access and the separation of transmission and generation functions (such that significant quantities of generation are being built by entities other than transmission owners), and (2) a shift to resources other than natural gas, which trend is increasing. Up until now, the Commission has primarily dealt with issues relevant to fossil-fuel generation in the context of open access because that has been the main source of generation.[61] For the most part, the Commission has not had to confront the barriers to the development of transmission for location constrained generation resources that the CAISO has identified herein. However, the Commission must address those issues now given the need for new generation, the adoption of RPS requirements, and the impending boom in the development location constrained resources. It is appropriate -- and necessary -- for the Commission to adjust to these new circumstances and approve a modest variation of its interconnection policy that reflects the realities of transmission planning and financing associated with location constrained resources.

Although the Multi-User Resource Trunklines are not network facilities, rolled-in rate treatment of that portion of supply trunkline capacity that has not yet been directly assigned to generators is justified for reasons similar to those that the Commission identified as the basis for rolling-in the costs of network upgrades required for interconnection with the transmission systems of non-

[61] For example, a traditional gen-tie line is typically used by only a single generation developer, but a line to a renewables region can be expected to accommodate multiple generation developers.

independent transmission providers (even if only the interconnection customer benefits from the upgrade). As the Commission stated:

> [I]n assessing the benefits of the Network Upgrades needed to interconnect new generating capacity, the Commission's approach to interconnection pricing looks beyond the direct usage related benefits usually associated with transmission system enhancements. That is, our approach also recognizes the reliability benefits of a stronger transmission infrastructure and more competitive power markets that result from a policy that facilitates the interconnection of new generating facilities. This approach was fully supported [by the D.C. Circuit], which said "[t]he Commission's rationale for crediting network upgrades, based on a less cramped view of what constitutes a 'benefit,' reflects its policy determination that a competitive transmission system, with barriers to entry removed or reduced, is in the public interest."[62]

Multi-User Resource Trunkline interconnection facilities that open up entire new areas to generation development not only enhance competitive power markets, but can also improve system stability.

In many ways, rolling in (on what is expected to be a temporary basis) the costs of Multi-User Resource Trunklines presents fewer concerns than rolling in the costs of network upgrades required for interconnection with non-independent transmission providers, as set forth in Order No. 2003 and its successor orders. In Order No. 2003, the Commission noted:

> [P]roviding [reimbursement] to an Interconnection Customer for the cost of Network Upgrades that would not be needed but for the interconnection of the new Generating Facility mutes somewhat the Interconnection Customer's incentive to make an efficient siting decision that takes transmission costs into account, and it provides the Interconnection Customer with what many view as an improper subsidy, particularly when the Interconnection Customer chooses to sell its output off-system.[63]

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62 Order No. 2003-A at P 584 (citation omitted).

63 Order No. 2003 at P 695.

These are not concerns raised by the CAISO's proposal. The locational nature of the renewable resources largely moots economic issues regarding siting, and the CAISO's criteria (and the fact that transmission projects will be evaluated under the CAISO transmission planning process) will ensure that only locations that can support the development of significant resources and permit efficient, cost-effective interconnection will be eligible for participation. There will be no subsidies because once generators undertake projects, they will assume their pro rata share of costs of the transmission facilities. Potential developers will not have an incentive to delay projects in order to obtain a subsidy because, as noted by the MSC, the demand is limited; and the potential developer would be displaced by another.

The CAISO recognizes that the Commission might have concerns about rolling-in the costs of Multi-User Resource Trunklines because of the potential cost impact on transmission ratepayers. However, as discussed above, the significant benefits that ratepayers will receive from the CAISO's proposal far outweigh the limited costs that they will bear. Under these circumstances, the CAISO's proposal is just and reasonable.

First, the development of Multi-User Resource Trunkline facilities will promote fuel supply diversity.[64] Second, they will provide access to new sources of supply that will be available to all LSEs and, importantly, will facilitate LSEs' ability to meet RPS requirements.[65] Third, they will improve system flexibility,

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[64] Intermittent Resources NOPR at P 53.

[65] The CAISO notes that, in accepting the transfer of the facilities of the Cities of Anaheim and Riverside to the CAISO's Operational Control, the Commission recognized as a particular benefit that the facilities would provide California Market Participants with access to new

especially if the terminus of the trunkline is located in an area that is highly dependent on imports or if additional resources are needed in the area where the trunkline will terminate. This could improve local system reliability, offer more choices for LSEs to fulfill their Local Capacity Requirement obligations, and enhance operational flexibility. Fourth, because Multi-User Resource Trunklines will be evaluated under the CAISO's transmission planning process, the proposal will ensure the most efficient, cost effective infrastructure development for purposes of connecting location constrained resources.[66] In turn, consumers will benefit because the proposal will allow RPS requirements to be met in the most cost effective manner. Fifth, the facilities will become part of and will be effectively integrated into the CAISO grid and will be operated by the CAISO. Further, because such facilities will be evaluated under the CAISO's transmission planning process, the CAISO will ensure that such facilities are developed in a cost effective manner and in a manner that considers future system needs (including the possibility of load being served off of such lines). In other words, the lines will be designed so that they might be "loopable" in the future and able

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competitive supplies of energy. *See California Independent System Operator Corp.*, 107 FERC ¶ 61,150, at P 14 (2004). The renewable resource portfolio requirements of California law and regulations have created an analogous need for load-serving entities, *i.e.*, access to new sources of renewable energy. This need is just as great as the need for access to new competitive supplies of energy: The capacity of Multi-User Resource Trunkline facilities will fulfill that need. All load-serving entities and power marketers will benefit from the Multi-User Resource Trunkline because they will provide them new options to negotiate long-term contracts with potential project developers in order to fulfill their renewable portfolio obligations.

[66] The proposal will encourage the efficient development of renewable resources by providing a mechanism for transmission project developers (Participating TOs) to obtain full cost recovery for the transmission facilities without unduly burdening the development of renewable generation and by ensuring potential project developers: (1) that interconnection facilities will be in place when they initiate an interconnection request and (2) that they only pay for their proportional share of the full cost of those facilities up front as a direct assignment charge. Efficient, cost-effective interconnection will also be served by the fact that, under the CAISO's proposal, interconnection customers will not receive payments or credits.

to be converted to network facilities if the need arises in the future.[67] Sixth, the lines will attach supplies that can bid into the CAISO's Energy markets, thereby providing a source of imbalance energy available to all LSEs. Seventh, the attachment of additional resources will promote competition in the marketplace in general and, in particular, will increase competition among renewable resources. Eighth, the proposal will provide environmental benefits by supporting the development of renewable resources.[68] Thus, the benefits from the CAISO's proposal will be significant.

The CAISO further submits that its proposal is just and reasonable because the proposal contains several features to mitigate the cost impact on transmission customers and the potential risk of stranded costs. Specifically, the CAISO's proposal contains the following features to limit ratepayer cost

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[67] Because of the anticipated length and capacity of Multi-User Resource Trunklines, many could eventually become network facilities. In such cases, the CAISO's proposal will have served to reduce the costs to CAISO transmission users.

[68] In the *Intermittent Resources NOPR* (P 53), the Commission recognized that the development of renewable resources provide environmental benefits to energy customers. Indeed, on numerous occasions, the Commission has permitted rolling-in the costs of facilities that were intended to provide environmental benefits or comply with state or federal environmental laws. *See, e.g., Trunkline Gas Co., LLC*, 115 FERC ¶ 61,119 (2006) (replace a compressor unit in order to meet federal and state air quality standards mandated by the Texas Commission on Environmental Quality);*Tennessee Gas Pipeline Co.*, 111 FERC ¶ 61,436 (2005) (new compressor units installed to meet state NOx standards and federal Clean Air Act requirements);*Transcontinental Gas Pipe Line Corp.*, 106 FERC ¶ 61,319 (2004) (installation of facilities intended to reduce NOx emissions thereby bring Transco into compliance with Clean Air Act Amendments and State plans for implementing such amendments); *see also Transcontinental Gas Pipe Line Corp.*, 111 FERC ¶ 61,093 (2005); *ANR Pipeline Co.*, 99 FERC ¶ 62,033 (2002). The CAISO also notes that in other instances, the Commission has recognized environmental benefits in approving projects. *Egan Hub Partners, L.P.*, 95 FERC ¶ 61,395, 62,471 (2001) (approving storage field expansion, in part, because to the extent the new demand served by the project consists of service to electric generators, the project will promote clean air objectives); *Central New York Oil and Gas Company*, 94 FERC ¶ 61,194, 61,716 (2001) (issuance of certificate will have clean air benefits). Thus, it is appropriate for the Commission to take environmental benefits into account in evaluating the justness and reasonableness of the CAISO's proposal. Because the trunkline facilities will provide similar environmental benefits to the facilities proposed in the aforementioned cases and promote compliance with the goals contained in State legislation, the Commission should permit the limited roll-in of costs contemplated by the CAISO's proposal.

exposure: (1) under the proposal, as generation resources come on-line the costs of the Multi-User Resource Trunkline will be directly recovered from the generators, thereby reducing the TRR and TAC and the cost impact on transmission ratepayers, and once the capacity of the trunkline is fully "subscribed" by generators, the cost responsibility of transmission ratepayers will cease; (2) there will be an aggregate cap on the amount of costs of Multi-User Resource Trunklines that can be included in the TAC; and (3) in order to minimize the risk of stranded costs there will be a requirement that construction of a Multi-User Resource Trunkline cannot commence until at least 25 to 30 percent of the line is accounted for under LGIAs and there is a tangible demonstration of interest for some portion of the project beyond the amount covered by LGIAs. Thus, the CAISO's proposal effectively balances the need to promote the development of transmission that can connect to location constrained resources with the need to limit the cost impact on ratepayers.

## VI. COMMUNICATIONS AND SERVICE

Communications regarding this filing should be addressed to the following individuals, whose names should be placed on the official service list established by the Secretary with respect to this submittal:[69]


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The CAISO has served copies of the Petition for Declaratory Order, and all attachments thereto, on the California Public Utilities Commission, the California Energy Commission, the California Electricity Oversight Board, and all parties with effective Scheduling Coordinator Service Agreements under the ISO Tariff. In addition, the CAISO is posting the Petition for Declaratory Order and all attachments on the ISO Home Page.

## VII. ATTACHMENTS

The following documents are being submitted in support of the instant filing:

Attachment A Transcript of October 18, 2006 CAISO Board Meeting

[69] The CAISO respectfully requests waiver of Rule 203(b)(3) of the Commission's Rules and Regulations to permit each of the persons listed above to be included on the service list in this proceeding.

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|---|---|
| Attachment B | Opinion on Alternative Treatment of New Transmission for Interconnection of Renewable Generation, Market Surveillance Committee of the California ISO, October 6, 2006 |
| Attachment C | Map of Renewable Generation Regions in California |
| Attachment D | Past and Future Wind and Solar Projects |
| Attachment E | Western Governors' Association Policy Resolution 06-10 |
| Attachment F | September 22, 2006, White Paper, entitled Proposal to Remove Barriers to Efficient Transmission Investment |
| Attachment G | October 12, 2006 Memorandum to the CAISO Board |
| Attachment H | Illustrative calculations relating to the use of a 15 percent cap on total aggregate plant investment of Multi-User Resource Trunklines |
| Attachment I | Notice of filing of this Petition for a Declaratory Order, suitable for publication in the Federal Register |

## VIII. CONCLUSION

For the reasons above, the CAISO requests that the Commission determine that the CAISO's proposal, or some variant thereof, is an appropriate independent entity variation or regional differences variation from the pricing of generation interconnections under Order No. 2003, and provide any necessary policy guidance for implementation of such a proposal.

Respectfully submitted,

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Dated: January 25, 2007

# ATTACHMENT A

M. Smith Thank you, and as far as number nine goes, number nine is the proposal in front of you to treat this third element of transmission a little bit differently. FPL Energy sees enormous potential for renewable development in the state of California that is untapped. We think the proposal that's in front of you right now will allow some of that generation to find its way to market.

In particular, we think that the process that's been suggested in the context of the memo to each of you, as the board, lays out a process in which the fundamental value proposition of this proposal is placed in front of FERC before the long and arduous tasks of developing the detailed tariff language are presented to the stakeholders. Now I would say that later this afternoon, you will not hear a single person saying that the proposal, as it stands, is detailed to the point where anyone can offer unconditional support for the proposal, as it is. I know my company cannot do that. There are fundamental details that need to be worked out. But I want to boil up to the point to say what we need first, from our perspective as FPL Energy, is a wink and a nod or an affirmation from FERC that the value proposition combined in that proposal is a reasonable first step. Once we

get that, we can go to the hard work of developing the product very specifically.

Thank you very much and I'd be happy to answer any questions.

M. Willrich — Thank you, Mr. Smith. Any questions from the board? Thank you.

C. Carine — Carolyn Carine for the California Manufacturers and Technology Association and Energy Users Forum. I won't be speaking on number nine. But I will be speaking on number eight and another issue.

Number eight, as the previous speaker mentioned, is the PIRP issue, and to be more clear, the export of PIRP power. We just wanted to say and thank Keith Johnson and all the staff for the excellent job that they did in that process. It was a difficult issue and they came up with a solution that caps the exposure to rate pairs and is fair to everybody and fits with state policy. Thank you for that one.

The second item I wanted to discuss is one that you've already heard a lot about today, but I wanted to add the end user perspective on long-term transmission right revenue allocation. It's going to be brief, not to the

M. Willrich — Any questions? Thank you very much.

R. Ferguson — Good afternoon, Mr. Chairman, governors, staff, management. I apologize. I have to make a comment on item nine now because I, unfortunately, set up another appointment later on, so I'm going to have to leave. I'm the research director at CEERT and I came before you once before. I've been helping facilitate the planning for the attach-B project, both at the PUC and here at the ISO. Item nine is a very important question for us.

M. Willrich — Your name is Mr. Ferguson, right?

R. Ferguson — Correct. I'm sorry.

M. Willrich — Just for the record, so that everybody knows who's speaking.

R. Ferguson — Right. Rich Ferguson. There's no doubt that we're going to have to expand the transmission grid to accommodate the state's renewable goals. Every time I turn around, it seems like there's one or two new laws on the books that promote those goals and raise the bar. There were two this year

that John White mentioned, AB-32 and SB-107. But as you're all well aware, there's a chicken and egg problem with how you fund those improvements and basically there's sort of three pots where money can come from. There's the TAC. There are the generators. And now we have a new one, at least ostensibly a new one at the PUC, what they're calling the backstop mechanism where basically cost could flow through to retail ratepayers.

The issue that this addresses in particular is the so-called communal gen ties or trunk lines or whatever. We're not talking about individual gen ties to individual projects and we're not talking about network facilities. We're talking about the in between part. The problem is that there's a pretty fuzzy line there. It gets especially important when we're talking about expanding the grid.

The question that arises is, what cost or even risks of cost are appropriate for the TAC? That's the question that we need answers to. I've been involved with discussions with many of the stakeholders and many of your staff about how to try to find the answer to that question. Basically it boils down into sort of two options. One is, you can make a tariff filing for FERC and sort of take your best shot at it. This is something like Edison

did a year or two ago with their trunk line filing. Basically just send it in and see what they have to say. I have to admit; recently I was in that camp. The idea of sort of going to FERC with a declaratory order and asking for some kind of policy guidance seemed so wishy-washy and vague and we probably may not get anything very useful back. I was … let's figure out what we think we need and go for it.

As a result of discussions with CMUA and a lot of the other stakeholders, I have come to admit that I just don't think that's the most efficient way to proceed. I have come around where I think asking for FERC for help of where you draw this line and this fuzzy boundary is a good idea. We're certainly prepared to help with all the stakeholders and participate in the next process, which we see as developing a tariff filing that's consistent with whatever FERC, in their wisdom, provides us with guidance in the declaratory order. I urge you to support for the request to file the request for declaratory order at FERC to try to get this guidance and we'll deal with all the issues about what the tariff filing should look like down the road rather than to try to mash our teeth over that now. I ask your support for the request to file a request for declaratory order at FERC. Thank you.

M. Willrich Thank you very much. Any questions? Thank you very much.

All — Aye.

M. Willrich — Thank you, Ken. Thank you very much, Keith.

Keith — Thank you.

M. Willrich — And now we have our decision called Removing Barriers For Efficient Transmission Development; that's a nice opaque title for an exciting subject. I have here a list of speakers and we heard quite a few already address it due to their time who have excused themselves. So who I have on my list, first John Geesman, Commissioner of the California Energy Commission and you've been waiting very patiently, John, and welcome to the California Independent System Operator. It's a pleasure to see you.

J. Geesman — Thank you, Governor Willrich. I must say that I enjoy attending your board meetings a lot more sitting in the audience than I did when I was sitting behind the podium. I'm here to convey the Energy Commission's support for your management's proposal to petition FERC for guidance on a financing mechanism that removes what we've identified before as a barrier to entry for remotely located renewable generation resources.

I know there has been some debate as to what the appropriate strategy in approaching FERC should be. We're happy to defer to your management's judgment as to whether declaratory order or direct TERA filing is most appropriate.

I should say, as I think most of you know, we're not ordinarily shy about second guessing the judgment of others, but in this circumstance we think that you're in the best situation to determine the appropriate way to approach FERC and frankly, your track record lately has been quite good and inspires confidence that you'll make the right choice in that regard.

We're cognizant that the role that the staff proposal envisions for the Energy Commission in designating areas that qualify for the special financing mechanism offered by the proposal. It's logical for you to ask well, how will we discharge that role or that function and I can't give you much clarity. We recognize it is likely to involve a resource commitment on our part. We're prepared to make that.

The Governor signed SB1059 last month, which will take effect January 1st and calls for us to be designating corridors for future transmission expansion, which is expansion of the land use function we perform in

planning the generation system. We haven't determined yet whether we will actually adopt regulations to implement that statute or not. If we do adopt regulations, that may be a vehicle by which to address the role that we would play under your staff proposal.

We also under existing law every two years compile something called a strategic transmission investment plan. We've done that once before. We've attempted to entwine our land use and environmental function with your analytic planning process. We would envision doing that in the future as well and that may lend itself to addressing our function under your staff proposal.

I think from our standpoint we would like to work further with your staff, possibly after receiving some direction from FERC to determine how best the Energy Commission can be of help to you in carrying out this proposal. I do want to say we view our role and also some of the conservatisms embedded in your proposal as making certain that this is not simply a blank check for any particular developer to have the rest of the rate payers subsidize his or her transmission obligations.

Frankly, when we look at the renewable resources likely to be developed in the next several years, we believe many, if not most, of those transmission requirements are likely to be met with network facilities. I don't think that there's any question about that and as a consequence this proposal really ought not to be oversold.

At the same time, beyond a few years out the crystal ball gets a lot murkier. We can't tell you with complete confidence what types of resources are likely to be successful bid winners in the RPS program. Consequently, we can't tell you what the location will be. So I think the conservatism that your staff has built into the proposal and the role that we would expect to play in identifying resource areas that could benefit from the proposal is likely to make certain that this is not an approach used for every single project and certainly does not represent a blank check for new transmission.

We look forward to working with you and I'm pleased to say the Public Utilities Commission in jointly supporting this approach to FERC. We think that it's an important part of state energy policy; it's certainly consistent with recommendations that we've been making since 2003 in

terms of altering the existing approach to planning and permitting and building and financing new transmission.

Thank you for the opportunity to address you.

M. Willrich Thank you.

M I have a curious question. I've had some people argue that we ought to also be considering offshore wind, that is, five-megawatt turbines located over the horizon. And the interesting point of that from the point of view of the ISO is that really changes the transmission requirements. They are underwater cables and they'd come in on the other side of our major load centers. So, hopefully, you're looking at that in your process as well.

J. Geesman We had taken a preliminary look at that two years ago in some discussion with the European offshore wind industry. The most optimistic any of them could get as to actual depth that they thought would be commercial was 50 meters below the surface of the ocean.

So what we did was apply that 50-meter criterion to the wind maps that we have and we saw really three areas offshore California that might potentially be candidates at some point in time.

One is on the western edge of the offshore islands in Southern California; pretty remote to onshore loads, but as you mentioned underwater DC cables may redefine what we characterize as remote.

The second was off the Farallon Islands west of the Golden Gate; that's a national marine sanctuary, probably not a likely candidate.

And the third was off the far northwest coast of California, currently remote from existing loads, probably would require some type of development like an underwater DC cable that ordered access. But it is something that we do keep an eye on and expect to monitor in the future.

M. Willrich — Next on my list is Wes Williams from Southern California Edison.

W. Williams — Thank you, Chairman Willrich, and good afternoon, Governors. My name is Wes Williams. As indicated I'm with Southern California Edison Company. My purpose in speaking this afternoon is to add Edison's

support to the proposed petition for declaratory order that is being put forth on this alternate method of handling transmission editions.

Although there are details to be worked out still, Edison does support the general concepts that are contained in the ISO's proposed alternative treatment. As you know transmission has been identified as a major constraint in meeting our state RPS goals and we view this proposal as being a helpful step towards meeting those goals.

The proposal enables the appropriate sizing of transmission facilities to interconnect multiple generating facilities in a given area. It also helps to preserve the economies of scale that are necessary to make these facilities cost effective. We also think that these help to remove the financial barriers to renewable resource development.

In addition to this we also believe that the proposed rate treatment appropriately allocates the upfront costs and the costs of any unsubscribed capacities very broadly to all entities that use the ISO grid that will benefit from having access to new renewable resources.

And, finally, the ISO proposal improves on the proposal that you may recall Edison made at FERC about two years ago in 2004. And the current proposal improves on the principles of cost allocation in that while under the ISO's proposal generators would pay their proportionate share of the annual revenue requirement of the facilities that they actually use and only the upfront costs and the costs of any unsubscribed portions of this line would actually be broadly borne by the payers of the transmission access charge.

So Edison believes that the time is right for FERC to adopt a third category of transmission facilities that meet the unique requirements of renewable resources and we're confident that by going through this process that we can and will be able to work through a stakeholder process to work through all of the details that are required to ultimately get to a TERA filing at a later date.

So, with that, thank you for the opportunity to address you and if there are any questions for Edison I would be happy to entertain those.

M Do you agree with Commissioner Geesman's assessment that in the near term at last that most of the needs for wind power transmission will be met

by network facilities, I guess Tehachapi being a good example and that there may be limited need for this third category?

W. Williams — I think the jury is still out on that. That very well may be. As you know in Tehachapi we're still looking at what is the final arrangement and there have been significant discussion between the ISO, Edison and other parties. It does look like the vast majority of those facilities will be network, but I don't believe the final arrangement has been approved yet.

W — I had a non-ISO question, but now that we're closing in on the end of 2006 how is it looking for meeting the deadline?

W. Williams — The deadline?

W — I'm just curious.

W. William — With regard to RPS standards? I think Edison has indicated that it's going to be very difficult for us to get to the 20%. We're currently at about 17%, but as load grows and some generators' contracts drop off we're finding it's going to be very difficult to get to the 20% by 2010.

W — Yes, and I actually was not saying that with any prior knowledge or trying to put you on the spot, but it's one of those things where there are so many other considerations in California with getting permitting and transmission lines built and then the actual generation built and demand growth not going down. So good luck, really.

W. Williams — Thank you.

M — Since you're here, Palo Verde's Devers II still on schedule for 2009?

W. Williams — We still plan to have it there. We're waiting for the certificates from the Public Utilities Commission; hope to have that shortly and also from the Arizona Corporation Commission.

M. Willrich — Other questions? Thank you very much, Mr. Williams. Next is Hap Boyd from General Electric.

H. Boyd — For the record, my given name is Robert, but Hap is what people call me.

M. Willrich — I didn't mean to be familiar.

H. Boyd — I certainly appreciate the opportunity to come here and speak to you. I'm going to be very brief. I'm with General Electric. We're a manufacturer of generation equipment and we run the whole gamut from solar to nuclear so I have no particular ax to grind.

We do thank the staff for their hard work and I think excellent effort on developing their paper. I would say just one thing that I would like to see is that declaratory order and the tariff be done at the same time or worked on at the same time because of the problem that we have with the RPS that we have to meet a goal in 2010.

So if that's possible, we'd love to see it. Thank you.

M. Willrich — Thank you very much, Mr. Boyd. Any questions from the Board here? We'll certainly take your comment into account. Thank you. Next is Jim Caldwell from PPM Energy.

J. Caldwell — My name is Jim Caldwell and I'm with PPM Energy and I'm also the Vice Chair of the Transmission Committee for the American Wind Energy Association, so I'm also here representing them, although we have our attorney in the queue here to also speak for the Association.

I'd like to cover two points. One is the need for this type of treatment and number two is to put it into context about what's going on elsewhere in the country. But before I do that I want to make sure that we set the context about what this applies to and although we've heard about this applying to wind and renewables, that's not what the tariff is about.

It's applied to resources that are remote, that are locationally constrained and the size of those resources, the generation of resources is generally much smaller than the size of the appropriate transmission investment to service those resources so that there are multiple projects using one single resource.

And although that tends to apply disproportionately to renewables, it's not exclusive for renewables, doesn't need to be and I suspect will not be as this type of program rolls out across the country, not simply here in California.

So with that context the need for the proposal, and in order to do that I guess I'd like to get fairly specific about our own company's position in Tehachapi. It's obviously the thing we talk about; it's obviously the best

near-term example, but I don't want to generalize it. I think being specific will help.

We're one of 25 companies who have expressly put an interest in development of projects in Tehachapi. Most of these companies own, or have an interest in or are developing multiple projects. We estimate that there are approximately 70 to 80 potential wind projects in the Tehachapi service area in general, the Tehachapi wind resource area.

Of those 70 or 80 potential projects probably 20 to 25 will be constructed in order to take up for the capacity in the area. Some of those projects are overlapped either in project ownership of the same prospect or some prospects will not happen for certain reasons. At this point in time, the chicken and the egg problem that we have as a company, we have five projects in our pipeline in Tehachapi. Two of those projects happen to be number one and number two in the transmission queue.

Third and fourth projects happen to be towards the end of the transmission queue; the fifth one is not even ripe enough to even have an inter-connection request at this point. For the projects that are at the beginning of the queue what we are faced with is if we develop our own gen-tie to

the grid – because right now we're approximately 30 to 40 miles from the grid – then the appropriate size for our gen-tie makes it that the next guy who comes along behind us has to either build his own gen-tie or else somehow he had to share with ours.

And if we're responsible for the gen-tie then what you're asking us to do is to put up and finance our competitors' inter-connection. And we're competitors in a lot of different ways across time and across space and so we're not in a position where we can all get together. The other problem that we have is the timeline for the development of transmission is, for major transmission like this, is maybe five to seven years being optimistic. Whereas the time line for the specific development of a project, for the signing of a contract and the actual construction of a wind project is maybe 18 months to two years.

And so asking us to make a commitment to the transmission, which is some undefined percentage of what is the appropriate thing to do and therefore either subsidize or get subsidies from unknown competitors in unknown ways, it's just not going to happen. It won't happen.

And so the result has been for the past 17 years that Tehachapi, a world-class wind resource within 40 miles of the grid has never been developed for lack of this kind of policy. And so that is the need that we see and it's not just Tehachapi; there are other places where it would be. But, again, this is a very narrow need.

M A couple of questions on that. How do we know, as Board members, that it was simply this chicken and egg problem that was limiting that resource and the lack of an RPS standard and a long-term contract and that sort of thing? Limiting a resource is generally more expensive than a thermal alternative.

J. Caldwell Actually, that's not true. All the resources that have been coming in have been under this thing. And in history there have been other projects.

M Recently, though; not over the 17 years.

J. Caldwell I think if you go back at the 1980s and you look at the history of Tehachapi and you look at the Sagebrush Line that was constructed along these lines and you can see that the significant impediment, the principal impediment to the construction of the Tehachapi wind resource area over

time has been the lack or the inability, this chicken and the egg problem, for the extension of the grid into Tehachapi. It is not the contracts.

M — Now, why is it that five developers who have a common interest in getting that transmission built? Having competitors cooperate and compete at the same time is not a new phenomenon; you cooperate on those things where it's of common interest; you compete within the transmission line you might jointly own.

J. Caldwell — Well, the problem is the ownership of transmission lines, as you know; I mean, the reason why the ISO is here is that ownership of transmission lines is different than ownership of most other assets. The owner of the transmission asset has no right to exclude others from the use of that asset. In return for which the owner of the transmission asset is given a regulated rate of return for the revenue requirement for the construction of those.

The private construction of a generation tie, we get no revenue requirement. The sole source of revenue for us, from a transmission line investment, is the generation resource that will be connected to it. We are not allowed to collect; we have no pocket to collect a tariff from someone else.

Therefore the private transmission owner is in a very different position than a participating transmission owner in the thing, in terms of his risks that he sees. However, the private transmission owner is subject to the same open access obligations, or not the same, but similar obligations as a transmission owner.

So the result is that private transmission owners almost never can get together to construct an electric transmission line because of that. And then, as I say, then you have the time issue, the pace at which these things are developed. They're not all developed at the same time and so you have the scale problem plus you have the competitive problem of getting together that is specific to electric transmission. It's not specific to renewable resources, but it is specific to electric transmission.

M I guess over the history of the industry there are very few examples of people getting together and constructing a line that really needs to be...

J. Caldwell There's only one that I know of, which happens to be in Tehachapi; it's called the Sagebrush Line.

M How did that happen?

J. Caldwell It happened out of desperation during this 17 years. And anyone who was associated with that will tell you that that was and is and continues to be a disaster and a very, very poor way of solving the problem. And if we need to go into that I think that we can do that. It really is a pretty good case study of why this is necessary. You know it's the only example in the country and it's a terrible mess.

M Send me some information on that.

J. Caldwell Sure will. The other thing that I'd like to cover and then I can get off is that this is not unique to California. And similar proceedings are ongoing, or similar issues are ongoing in at least three places that I'm aware of; one is Texas, another is in Minnesota and another is in Colorado.

And the solutions that they came up with are unique to each of those places or are unique to those places. But the principles are essentially the same and the issues are essentially the same about who pays, how the costs are allocated and who shares the risks.

And I just have to say that I believe this proposal, or the principles that are in this proposal, is consistent with the things that are going on in those other three states. They're different because this is a different place than Texas; we don't have the same rules, we don't have the same history, but the principles are the same and this solution is consistent with our principles just like the Texas solution is consistent there. And the same thing goes for Minnesota and Colorado.

So we are not alone. And that I think is another reason that speaks to the usefulness, if not the need, for a declaratory order so that FERC can begin to set some policy in this area that works for all of us. Thank you.

M. Willrich — Any questions for Jim Caldwell? Okay. Thank you very much, Jim. Next is Eric Eisman, PG&E.

E. Eisman — Good afternoon. PG&E supports the resolution. We will file comments at FERC supporting the petition for declaratory order. We're supportive because FERC approval of the petition will facilitate expedited approval of additional transmission needed to meet the RPS requirements that PG&E faces.

We're generally comfortable with the proposed cost allocation. However, we do remain concerned about how long this process will take and when and if FERC will approve this. FERC doesn't have the best history on reviewing petitions for declaratory order so we are concerned about that. The ISO and the stakeholders who support this petition have to be diligent in working with the stakeholders who continue to have issues with the petition and just as importantly, work with FERC to make sure they understand how important the timing is of getting an order out here. We would like to see the petition be as specific as possible on some of the details here in order to get the maximum value out of the FERC order, out of the FERC ruling and that will give the ISO and stakeholders as much guidance as possible in drafting up the tariff filings some time next year.

Continuing on that theme, we would actually like to see work on the tariff start sooner rather than later, perhaps soon after the petition is filed so that the tariff amendment filing can be filed at FERC as soon after we hope a positive FERC order on the petition. The basic theme I have here is we do remain concerned about the timing.

M. Willrich Any questions of Mr. Eisman?

W Yes, in fairness how are you guys doing on RPS?

E. Eisman I was so glad Mr. Williams went first because I had some notes.

W And by the way, have you seen the PG&E commercial with the kids in child care where one has a Superman toy and the other kids says, "Oh, wind, water, solar boy" and he goes to his mom, who is picking him up and the child care provider says, "Looks like you're taking your work home with you." And the woman is from PG&E.

E. Eisman No comment.

W And apparently, the big number across the screen says that 30% of my power from PG&E comes from renewable resources, 30%, okay/

E. Eisman I'll even read right from the talking points I have: PG&E's total renewable portfolio including its large hydro system and small renewable project procurement is 30%. So that's a fact. What meets the RPS definition is about 12%. If the contracts we have signed are added in we'd be somewhere between 16% and 18% and we expect to have signed

contracts for at least 20% of the load by 2010, with some of those long lead time contracts coming on line between 2010 and 2013.

W — Okay, thank you. Look for that ad. In fact, I have TiVo and I usually fast forward through commercials, but on that I went back and watched it twice.

E. Eisman — I'll be sure to give your compliments to our ad folks.

M. Willrich — Okay. Our next speaker is Chris Ellison from AWEA.

C. Ellison — Thank you, Governor Willrich, members, management staff. I'm the aforementioned attorney speaking on behalf of the American Wind Energy Association. AWEA supports this proposal and urges your support for the proposal. I only want to make two points that have been made previously so I'm just going to touch upon them and answer any questions that you may have.

But I think two of the most important points are these. First, this is not the same proposal at all as the Edison proposal that FERC already considered and rejected. And its principal difference is that this creates a financing mechanism, but not ultimately a funding mechanism. Assuming that the

generators come on line, the generators will pay for this trunk line in the same way that they would under current ISO and FERC policy.

But the problem as Mr. Caldwell and others have mentioned is that financing these kinds of lines and solving for the chicken and egg problem is a very significant barrier to entry and so that's the difference. The Edison proposal would have rolled the charges for the trunk line into the tax, period, end of statement, and left them there.

So as a result of the changes that your staff has made in this proposal, it is much more palatable in my opinion to non-renewable stakeholders, if you will, the impact on the TAC will ultimately be much smaller than under Edison's proposal.

Secondly, it is much less of a deviation from existing FERC policy than the Edison proposal would have been. At the end of the day this trunk line will be treated very much like a gen-tie is now, but it will be financed differently. But that difference is crucial.

And that leads to my second point, which is that, and Mr. Caldwell I think made this point as well, one of the comments that you have received is a concern that in adopting this kind of proposal that the ISO has taken upon

itself some sort of resource planning or generation preference policy. We don't need that; we have lots of preferences in California law. Other agencies that have that responsibility have made it very clear, and so has the Governor, that this state has a preference for renewable resources.

We are not asking you to express any such preference here. What we are asking you to do, however, is to remove a transmission problem, to remove a transmission barrier to entry that flows directly from the current ISO tariffs and current FERC policy that is a significant barrier to the implementation of the preferences developed by other elements within the state. And that is your responsibility; that is something directly related to transmission and it is a function that happens to correlate very highly with renewable resources and I would be naïve not to acknowledge that. But it is a function of the nature of those resources and the inherent characteristics of them.

As mentioned, they are remotely located; they don't have a choice about where to locate, they have to locate where the resource is; the size of the project relative to the size of the transmission uniquely makes them very, very difficult to finance without some kind of policy such as this.

So, to sum up, and I'd be happy to answer any questions, this is a much smaller change from existing FERC policy with much less of an impact on the TAC than the Edison proposal. As you recall, Commissioner Brownell's concurrence expressly invited a proposal somewhat like this from the ISO and it's a proposal that I think properly viewed is not a renewables preference, but rather a solution for a barrier to entry for renewables that comes directly out of transmission policy.

Thank you for your attention.

M So you're identifying the financing problem as a size problem; that is, each individual project is small compared to the transmission.

C. Ellison That's right. You're not organizing five companies; you're organizing 25.

M But the financing is different; if you had a 500-megawatt project there and they put in their own gen-tie.

C. Ellison If you had a 500 megawatt project and a 500 megawatt transmission line it would be much more typical, I think, of what you see than what we typically see.

M — And they would be on the hook for that; they'd have to go out and raise the financing for that transmission project as well as the generating project.

C. Ellison — That's right. And if they'd - I'm sorry.

M — Then they would go to their customers, suppose the big LSE, and get a long-term contract that supposedly would cover the risks so that they could get the financing, don't you think?

C. Ellison — As a general principle, yes.

M — Now, if you've got a 30-mile line, what's the typical size of that line?

C. Ellison — Well, it depends on the size of the resource, not just the length of the line.

M — Suppose it comes in 50-megawatt increments, you might have 250 megawatts; five projects you've got to get together to fill a line?

C. Ellison — Well, in the case of Tehachapi you've got 4,000 megawatts there.

M Yes, we're doing that with network facility so we don't need this new third category for the bulk of that at least, right?

M We may or may not.

M Okay. Anyhow, I think you see my point that this is a change and who bears the risk on that financing? And, again, I go back to the debate I had with Mr. Caldwell that I don't; I mean the question is why can't the four or five parties needed to fill that 250 megawatt line get together, trade projects back and forth, you know, we'll fill up this one first, then go to the next area, whatever it might be to get the job done in the presence of a long-term purchase contract from Southern California Edison that says we're going to buy 500 megawatts, or 250, whatever the size is, from that area upfront so the financing is enabled by the cooperation among the generators in a long-term contract from the LSE who has to purchase it because it's RPS standard.

C. Ellison Well, there are several points to make in response and the first one I would make is that getting that long-term contract requires you to know your

costs and until you know what your transmission costs are going to be, getting that contract is in and of itself a problem.

Secondly, history is our guide on this. The Tehachapi resource has been sitting there essentially undeveloped as mentioned for 17 years and I would be the first to acknowledge that there are multiple reasons for that. But I heartily endorse Mr. Caldwell's statement that I think anybody who has really followed that history knows that the number one problem has been transmission and the inability to finance it.

We're not talking five companies; we're talking more than that. And lastly let me say that I would agree with you, that there is some risk shifting going on here, specifically the risk that the projects do not come on line and the facility is not fully subscribed. That's the risk we're talking about; it's a different risk than under the Edison proposal.

But the proposal as put forward by your management and staff has several mechanisms in it to mitigate and limit that risk. It has a cap on the amount of the TAC that can be devoted to this. It requires cost effectiveness for the transmission line and it requires some sort of open season, we still

have to work out the details, to assure that there is commercial interest in the line sufficient to justify taking the risk that we're talking about.

So I think the risk that we're talking about – although it's real; I agree with you – is bounded, is small and it's critical to removing a barrier for the development of these resources and I would say that treating everybody equally is not always non-discriminatory and Commissioner Wellinghoff the other day in a speech that I heard made the point that when you treat different situations the same way that in and of itself can be discrimination.

M Thank you.

M. Willrich Any other questions of Mr. Ellison? Thank you very much. It's been a very good exchange, thank you. Next is Larry Chaset with the California Public Utilities Commission.

L. Chaset Thank you, Governors, for the opportunity to address this very important issue with you today. I'd like to state first of all that Commissioner Diane Grunig is deeply regretful that she was not able to be here herself to

provide these comments to you so you're stuck with me, but I'll do my best.

The California Public Utilities Commission understands that transmission is desperately needed in order to bring renewable resources to load. And we know that some of those transmission lines are going to be remote and might, under existing FERC policy, look like gen-ties.

For that reason when Edison filed its proposal at FERC in early 2005 we actively supported that proposal for a trunk line for Tehachapi Segment Three that was a specific proposal, as you know, not a generic one. FERC rejected that because it was inconsistent with their established policy about gen-ties versus network upgrades.

But in her concurring opinion, as your staff points out, as my old friend Chris Ellison pointed out, Commissioner Brownell invited the ISO to file a tariff amendment of general applicability that would accomplish the kind of objective that Edison was seeking in its filing.

As a result of that invitation from Commissioner Brownell CPC staff has been working closely with your staff for a year now, toward the goal of

putting together the proposal that you have before you today. I just want to note as a legal matter, and I think it's in one of your memos, that FERC in its order 2003 on generator interconnection did invite the independent entity variation from FERC's default interconnection procedures, including the cost allocation procedures and you are an independent entity and the court, the DC circuit found you to be so, so I think that FERC will accept and look favorably on this request for a tariff amendment.

The CPUC is pleased that you're moving in this direction; we will support your filing at FERC. A couple of minor little points I just want to raise; first, there has been this discussion about whether this should be a two step procedure as you're proposing versus a one step procedure. Our initial thinking was that it should be a one step procedure, that you should sit down with the stakeholders and develop the tariff.

But we understand your staff's desire for a green light from FERC before the hard work of developing the tariff proposal moves forward. So we can live with that. We would agree, however, with PG&E that once this filing is made at FERC that you convene the stakeholders to start working out the tariff provision. It's going to take a long time and we'd like to get that started as soon as possible.

We also agree with Edison that the details need to be worked out. There are some rate-making issues that are not fully addressed in the white paper. There's this open season proposal that needs to be developed. So there's a lot of work still to be done. That being said, we think the conceptual proposal that your staff has put together is a very good one and we are committed to working with all the stakeholders and your staff toward the goal of putting together a tariff provision that FERC will accept.

I just want to make a couple of points about some of the concerns that we've understood the Munis to have with regard to this proposal. Number one, we think they can benefit from this proposal as well as the investor owned utilities. Recent legislation and the bill that was just signed by the Governor last month – I forget the bill number – basically imposes a renewable portfolio standard requirement on a Munis that's effectively as strong as it is on the investor owned utilities.

So we are going to work as hard as we can, we are committed to devoting the resources to addressing the Munis' concerns so that when a tariff amendment is finally ready to be submitted to FERC it will be something that the Munis can support or at least not actively oppose, because we

think there are some real benefits for them in this as well. They can access the renewable resources that this proposal would provide as well as the investor owned utilities can.

And my second point goes to the risk issue and we understand that there has been some concern that these lines may not be fully subscribed and as a result the TAC would pick up these rates or a portion of the costs of these lines for an indefinite period of time. But I would contend that the pressure exerted by the renewable portfolio standard makes that risk a very limited and hopefully hypothetical one.

I want to point out that in FERC's decision on the Edison proposal they took the unprecedented step of shifting the risk of abandoned plant recovery for the antelope sections one and two, which used to be under FERC's long established policy, 50-50 shareholder rate payer to 100% rate payer responsibility. I would contend that the risk principle, if you want to call it that, in connection with the third string proposal that your staff is putting forward is essentially the same risk principle that FERC dealt with in connection with the Edison proposal.

For that reason I'm optimistic that FERC will determine that the risk of a lack of a full subscription of these lines is sufficiently hypothetical, that it's not unreasonable for TAC rate payers to cover these rates for the limited period of time it's proposed.

With that, I'll try to answer any questions. Thank you very much for the opportunity of addressing you today.

M. Willrich — Any questions from members of the Board at this point? Thank you very much. I have no other speakers from the public or in the audience on my list and see no outraged hands go right up. Next I'd like to call on Professor Wallach to discuss with us the Market Surveillance Committee's opinion about what is being proposed.

F. Wallach — In the interest of time…

M. Willrich — Yes, there is a time interest here that I want to express on behalf of the Board. We have read your opinion.

F. Wallach — So the only thing I would say is to take a slightly different tack to a number of the issues that are just the main issue that's being discussed is

to frame this really as a case of a market failure in the sense of what would be the least cost long-term solution in terms of the interconnection facilities to reach these resources with these unique characteristics will not be implemented or is very unlikely to be implemented under the current ISO policy, which would say any new entrant must pay the entire cost of the interconnection facility.

What you could instead get under that kind of scheme is a much more expensive interconnection for the eventual resources to meet their... portfolio standards and from that perspective relative to one to an interconnection facility that takes advantage of the ISO's proposal.

So in that sense we recognize that there are the issues of coordination that Ed Chaset raised I think are very important, but I think in the opinion we outlined a number of reasons to believe that these things are fairly substantial and to at least I think raise the likelihood that what you would get is inefficient outcome that that the proposal that's on the table I think goes a long way towards making it much more likely that the efficient, in terms of least cost, interconnection facility that takes account of the economies of scale to meet this remote sizable renewable resource will be constructed and does so in a manner that at least limits the distortions as

well as guards against the potential sorts of stranded cost problems that have been discussed.

So I'll stop, since you've read the opinion.

M. Willrich — That's one long sentence from a very eloquent professor. Any questions of Frank before we move on? Next, I think we're ready for the staff report and, again, maybe we can make up a little bit of time because I think that the Governors have soaked in Greg Cook's excellent analysis and do you want to start this one off, Chuck?

Chuck — Certainly. Let me introduce Greg Cook who manages our Tariff and Regulatory Policy Development. Earlier this year we gave Greg this challenging assignment and he has really risen to the challenge and I think exercised tremendous leadership in working with the stakeholders and staff to develop this proposal and probably most importantly listen to the issues of the stakeholders and develop a framework that, quite frankly, I'm very excited about.

I think it really addresses the issues that have been raised. So, without further ado I'd like to have Greg lead us through where we've landed here with this proposal and take it forward.

G. Cook

Thanks, Chuck. Good afternoon, Chairman Willrich, Governors. The good news is for the sake of time, as requested, I will go over all this fairly quickly and be available for questions at the end. The bad news for the sake of time is that I have added three slides to my presentation so there is a new presentation that's been handed out.

First off, why is the ISO proposing this new third category of transmission? For the background a long-standing FERC policy offers two approaches; it's really kind of a black and white thing. It's network transmissions which costs are rolled fully into TAC or tie-line facilities, where the costs are fully paid by transmission plan centers.

And to determine where you fall on this spectrum, whether you're network or tie-line, there's a five part test, but essentially network facilities are where power moves in both directions on the line and they're looped into the system, whereas tie-line facilities generally power only moves one direction and radial in nature. Those are the standout features of the difference between those.

So the problem is those current interconnection policies as we've heard earlier from many people is that does impose a high hurdle and what we're worried about is that does diminish the prospects for the efficient development of renewable energy resources.

Renewable energy resources have very specific characteristics related to them, one being they must be located where their energy source is where that's often in very remote locations that are far from load. The second characteristic is the generally tend to be developed in fairly small increments, maybe 50 to 60 megawatt increments at a time and when that's leading out into a development area where we would expect over time perhaps thousands of megawatts to be developed, oftentimes the optimally sized transmission line out to those areas has not been developed in the past and that's really the hurdle we're trying to get over.

So we think in the long run this will be ultimately a lower cost way of facilitating the renewable goals of the state. So our proposed solution to this is to propose a new category of transmission to where we can facilitate capturing those economies of scale.

To do this our proposal for moving forward is, as we've all heard, is a two-step process. First, what we're doing here today is simply seeking Board approval to file a petition for a declaratory order with FERC. And this will be based on a set of principles that were provided in the Board memo and, again, the limited purpose of this first step would be seeking FERC's opinion and guidance on the policy issues that are presented in the proposal.

If we receive a positive response we would take FERC's guidance on that and proceed with a tariff filing and included in that tariff filing process, of course, would be a fairly detailed and comprehensive stakeholder process which would be needed to flesh out all the implementation details and then once we had that completed we would, again, bring it back to the Board for approval to file with FERC once that's been done.

W Okay. I'm going to jump in there for a second. Can you give me a sense of timing? I know you can't say FERC's going to make a decision on this date. Where I'm going with this is I'm trying to get a better sense of where we are with declaratory order and then tariff filing versus tariff filing, either way we get way into next year I imagine.

G. Cook

Well, and I'm cautiously optimistic that going the two-step process won't put a significant delay into this. The risk is that FERC won't rule expeditiously on our filing. I would expect that if we get approval from the Board today we would probably be able to file our petition with FERC in fairly short order, I would guess probably some time in November we would make that filing.

The issue is that FERC has no statutory time requirement to rule on the declaratory. They could sit on it for a long time or they could rule on it fairly quickly. Our indications are we've had informal discussions with FERC staff. They have indicated that going the route of the declaratory order is the way to go. We've also talked to FERC commissioners that are looking forward to receiving this proposal. I don't think the risk is that high that it's going to sit for that long.

I think they do want to act on this. And if they did we could expect an order I would guess some time hopefully, best case scenario probably Q1 of next year or maybe Q2 of next year. Once that's in place, then we would proceed with the development of the tariff filing. Not to say that we couldn't go forward at this time and anticipating that FERC may present a positive response on this, again, some of that initial work.

That being said, if we went directly with a tariff filing…

W — Hold on; so the declaratory order, let's say Q1. Then how long does it take to put a tariff together?

G. Cook — I would say this is going to take a fairly extensive stakeholder process. I would expect that we would probably; the earliest that you would be receiving a proposal would probably be late next year some time, probably Q4 next year.

W — Okay. And I guess in terms of the difference, just to kind of cut to the chase on that, is what we're talking about potentially with the delay on having a declaratory order, which may give us better feedback that will then give us better ability to write a good tariff with less stakeholder concerns is maybe three months?

G. Cook — That's my guess, three or four months.

W Okay. So in the whole context, that's what we're risking here possibly three, four months going declaratory order and then tariff versus tariff right away.

G. Cook Yes, I would say that's probably my best guess, but, again, we don't know how long…

W Yes, I'm just trying to kind of put it in context.

M Governor Lowe, I really want to just put my two cents in. Based on my experience, really, I have not seen; people can say how fast FERC will respond, in my experience things that are serious and things that are really high profile and important I actually am amazed by how fast FERC responds in spite of all they have on their plate. Those people produce on average, about a hundred orders per month. So it's just a matter of which one they do first.

I think this one is important enough and high profile and some of the Commissioners spoke publicly about how important it is to move RPS forward, not just in California, but signal to the entire country repeatedly. So I'm very optimistic that they would treat this as a high priority. When

we get details from the declaratory order it will help us to do the tariff filing even faster, but we're guided now by what comes out of the … So, I'm more optimistic that by the middle of next year, middle of '07, that we would have a clear direction, both on the … order and the tariff filing.

E. Lowe Right, and I guess what I'm saying is you may end up with no delay at all going this route, because you're getting direction from FERC back that applies not only to California, but probably the rest of the U.S. on how to go about this. With that in mind, with that support behind you in the tariff process, I would imagine that that's going to assist the stakeholder process significantly, so it may cut off three months in that process. Just throwing some numbers out.

G. Cook Yes, I think that's entirely possible, but not likely. Here is our proposal. This diagram we put out several times now, some people find it confusing, and hopefully, we hope to create clarity for this. But really, what's it's meant to show is that the spectrum that we're currently operating under from network facilities over to Gen-Ties, and where our new proposal would land on this. Really, what we're proposing is what we would consider more of a subcategory of interconnection facilities. So it's really tight over towers and generation tie lines treatment of things for

transmission. The bottom of this really describes what the allocation of costs are, whereas for network facilities, all costs are rolled into TAC rates, and for Gen-Ties, they're all paid by the generator under our proposal. There is a mixture, at least until the generation is fully developed, and we would expect all of the costs to be paid for by the generation.

E. Cazalet — As the speaker said, there's a fuzzy line between network and generator tie lines. Is there not enough fuzziness that you don't need the third category?

G. Cook — I don't know that I would call it that fuzzy. I think I would categorize it more of a fuzzy line, as opposed to as it's included in the transmission planning process, where you may be able to change a configuration to make a once Gen-Tie radio line looped into the network and make it a network line. I don't think it's really fuzzy as to whether or not it's a Gen-Tie or a network. I think it's pretty clear, from an operational standpoint, whether to make the showing where the power is only flowing in one direction, or whether it is bi-directional, and whether it's looped into the network. So I think that's pretty clear, but I think there's some ability to

change your transmission plans to try and facilitate changing what may have been a radio line into a network line.

That being said, I think what this third category does, it really provides us with another tool so that we can make the most efficient determination from a planning standpoint for connecting these types of resources to the grid.

Here are eligibility criteria for the transmission projects. The first five of these were really designed to ensure that projects that are proposed to receive this type of treatment really are projects that solve the problem that we're trying to solve in that they do provide access to remote areas that are resource rich. And that they would serve multiple power plants that are generally of smaller size than the lines that would access the area.

The last two criteria there were really added to the proposal after our initial proposal in order to try and address the stranded cost risks. This has been probably one of the greatest concerns that were raised to us, so we've added a couple of criteria here. Again, this is something that we would be looking for FERC to give us their opinion on.

The first one is to the cap on the TAC rates that no project would increase the cap rates by more than 5%. That level is something that we want FERC's opinion on. Is that too high? Is it too low? What's the right number there? It's also something you would work out with stakeholders, but this is something. We think this is a reasonable place to start and to really get FERC's opinion on.

The second one, number seven down there, is it able to demonstrate adequate commercial interest. This is a fairly contentious issue in that you don't want to recreate a barrier that we're trying to solve at this point. But, then again, we want to make sure we aren't building a line out to nowhere, where nobody is going to connect to it. That's obviously the worst scenario. So, from our standpoint, where the staff is at on this is that we think it's probably a mix where we would want some percentage of firm commercial purchase power agreements out to the area, established prior to building the line out to that area.

What level of that, what percentage of the line would be needed to be covered, I think that's another thing we would be looking for FERC to opine on. I think right now, the number we would throw out is somewhere around 30%. Other than that, the rest of the 70% would also be subject to

an open season to give a good indication of what the commercial interest is for the rest of that line over some period of time into the future.

E. Cazalet — So, this proposal, because of this requirement seven, doesn't completely solve this problem of coordinating.

G. Cook — It could possibly require minimal coordination, and again, that's where we would need input from stakeholders to see whether that was workable, whether its --

E. Cazalet — But we've changed it. Normally, if a group of gen-ers got together and co-funded a Gen-Tie, that they would have the contract with the owner of that transmission, and we wouldn't have to delve into what their commercial contracts are. Now we have the ISO trying to open up commercial contracts and say okay, this one is strong enough that we can rely on it, because there are all kinds of contingencies. Yes, there's a commercial contract, but if such-and-such happens, the contract can be revised, or changed, or delayed. So I don't know that we can get much sense of comfort out of just studying a set of commercial contracts, as opposed to having some kind of contract. I don't know whether it has to be with the ISO, or with an intermediary, with say the 30, or 50, or

whatever set of people, but, in other words, they're going to pay for something, or the LSE is going to pay for something over a period of time. Just studying third party contracts doesn't provide any kind of comfort, I wouldn't think.

G. Cook

Again, this is the one area where we would have to work out a lot of detail through the tariff process. Again, our thought was is that if an LSE can show an RPS contract to that area, and a number of LSEs can come together and show that they've met the threshold that's required for that. That gives us an idea that there is a significant commercial interest in developing in that area, and that's the general idea under the proposal, and that 100% of the costs wouldn't be rolled into TAC initially. Only a portion of those costs would be, and it would somewhat mitigate the stranded cost risks going forward.

E. Lowe

Again, Governor Cazalet, I think on number seven, our feeling is that show a demonstration of the contract doesn't necessarily need coordination to figure out the transmission. Having a clear rule as to what the transmission obligation will be will help them bid, we think, more successfully for those contracts.

G. Cook

Again, they wouldn't be required to finance the transmission. They're under our proposal, as I'll get to in my next slide. Under our proposal, they're simply required to pay their portion of the annual revenue requirement for those facilities. The financing of the facilities is done by the project developer.

Again, good segue into the proposed cost recovery treatment. The upfront financing would be facilitated through the TAC, but again, the project would be financed by the transmission owner. Upon interconnection, the generators would assume their pro rata capacity share of the, again, facility costs, but what we're talking about here in our proposal is the annual revenue requirement, whatever that may be. That would be determined by FERC. We're not trying to specify a specific rate making treatment. Whatever FERC decided should be the revenue requirement for those facilities.

Past expenses would not be assessed onto generation upon interconnection. So if somebody comes along in year five, we're not going to require them to pay their portion of the revenue requirement that has been paid through TAC up to year five. We think that's fairly consistent with traditional rate making principles. If you move into a

subdivision, you're not required to pay for the distribution facilities that may have been there for 30 years. You're just required to pay your costs going forward, the same type of situation.

E. Cazalet — So this is going to be financed over what period of time? Ten years, 20?

G. Cook — It's however FERC decides to set the annual revenue requirement. I think, typically, these are 30-year type projects, but again, that's not the ISO's business. We would leave that up to FERC and the PTOs would retain the ownership of the facilities.

We did try and address the primary stakeholders' concerns in our latest proposal. Again, the risk of stranded costs was brought up to us several times, so that's why we have. Right now we're proposing to require 30% of the capacity to be covered by contracts, combined with an open season.

Transmission rights was another stakeholder concern. Our proposal suggests that contractual rights would be afforded to the generation developers on the radio facilities only. If the facilities later became looped into the network, those contractual rights would terminate, and the rights would be available through the ISO/CRR allocation procedures.

The process, we've heard a lot about that, whether we should go through the two-step process, or go directly to a tariff filing. Again, we think it's prudent at this time, given that we are asking FERC to change long-standing FERC policy, to actually go forward with the petition for the declaratory order first.

Finally, that the proposal does not contain enough detailed information. We have tried to flush out the proposal to some extent, particularly on the policy issues that we would be asking FERC to provide guidance on, and we think, at this time, that the proposal is sufficiently detailed for that type of filing. What's really not in there are the implementation details, and again, those will take a lot of time and resources to work out, but we would expect to do that when we get to the tariff development process.

E. Cazalet Is there anything in the proposal that would discourage or prevent having five transition projects out there, each of them 30% subscribed, and that fulfilled all the need for RPS resources in a period of time. So, it was a long time before you actually, in other words, people would tend to get a new transmission line going, rather than using up the transmission that was here. In part, because a wind developer would come along, and

they're first going to develop the premium properties in the area, and some of the properties later developed might not be quite as economic, so they don't fill up the lines.

G. Cook

Yes, I think we would definitely insure against that, and we would do that. It's abbreviated in my slide, but in the cost effective criteria would require that these things would be evaluated within our transmission planning process. So that we would take a forward-looking analysis of this to ensure that the lines that are built would be the least cost solution for facilitating the connection of these types of resources to the grid.

Finally, I have a couple of additional slides to show you what the magnitude of this may be. The blue portion of this slide shows what the current renewable resources in the state are, and the green portion is what we expect will be on-line to possible additions to meet the 20% RPS goal by 2010. So you can see that we're expecting quite a bit of additional resources to be developed between now and 2010.

That being said, taking a forward look at this, kind of a back of the envelope calculation that I did, shows that once we meet that 20% RPS goal by 2010, if it remained at 20%, just to meet load growth, we would be

looking at adding anywhere from 500 to 750 megawatts of renewable generation each year. Again, I think that goes to show what we would be expecting to see fairly incremental additions of these types of resources into California, as we go forward. That's why, again, this type of proposal is necessary to help facilitate that we can capture the economy as a scale, so we don't just build 500 megawatt projects when we may need, over a five year period, a 3,000 megawatt transmission line.

E. Cazalet — Greg, give us a sense, as it relates to this slide, or the next one, as to roughly what percentage of these resources are remote from a network facility, such that this particular proposal is going to be helpful, as opposed to not needed.

G. Cook — Okay, I think I can do it best with this slide. It's not perfect for that, but on this slide, what this shows is known renewable generation regions in California. The red dots are wind regions. The blue dots are geothermal. All of the red dots are areas that have been developed, to some extent, for wind today. One thing you notice is all of those dots are fairly close to load centers right now. I think that points to the problem that we've had in the past in that we are tending to locate these resources closer to the grid, because the transmission was a real barrier.

What doesn't really show up on this slide, which, hopefully it does in your color slides, is that there are hash marks on this slide. The upward sloping gray hash marks are areas where it's windy, and these are areas where there's potential to build out more wind generation in the future. A lot of these are fairly remote from loads, so I think there is a potential for that. Then, likewise, if you look at the downward sloping orange lines, those are areas where there's geothermal potential, and again, a lot of those are at the edge of the state, and generally far away from load centers. So again, I think there's the possibility there as well.

Finally, the yellow is Death Valley down there, where, not surprisingly, would be a really great place for some solar. So that's kind of remote in itself. I think there is the potential that this could really help facilitate reaching some of the more remote regions that could be ripe for renewable energy development.

Finally, it's not just us. There are 22 states that either have a renewable portfolio standard, or a renewable goal, well 20 have renewable portfolio standards, and two have goals. We did talk a little bit about Texas. There were some question, what is ERCOT doing?

Essentially what they've done, they passed a bill, Senate Bill 20, and it's fairly short, so I read it, and my understanding of it is essentially what it says is the state will set up the competitive renewable energy resource zones, which is essentially similar to what we're talking about here. They're going to identify areas that are ripe for renewable energy development, and then, once those are developed, they've instructed that transmission corridors, or they called them trunk lines would be built out to these regions, and the cost of those trunk lines would then be rolled into general transmission rates.

I would call it similar to the Edison proposal that they put forward a couple of years ago, whereas ours is, I would say, a more conservative proposal in that we do require the generators to pay for their share of the transmission facilities.

That's all I had. I would be happy to entertain any questions.

M. Willrich That was a very good presentation, and we have soaked in that in the past, as well as right here, and getting a lot of very good input from the public

comment as well. I don't want to rush anything. Any more questions from anybody?

G. Cook — Let's see what FERC has to say.

M. Willrich — Okay, are we ready to consider this, or do you want to ask questions, Tim?

T. Gage — I'm ready to make a motion.

M. Willrich — You're ready to make a motion? Okay, I would entertain a motion.

T. Gage — I would so move.

E. Cazalet — Second it.

E. Lowe — Can we discuss it?

M. Willrich — You can absolutely discuss it, or we can also state a point-of-view, if you wish, before we vote.

E. Lowe — I want to say that I appreciate everyone's comments on this, and also the clarification on timing. I think that the key words here, and I believe, unfortunately, Commissioner Geesman is not here, but he said it all so eloquently, I thought, at the very beginning. This is all about seeking guidance. I think we create a better tariff when we get feedback from FERC. The fact that FERC's expecting this, the fact that they want this, the fact that we're taking a lead on this, I think is all really important. So, I just wanted to say that for the record. If it's moved and seconded, then I'll vote aye, unless there's more discussion.

M. Willrich — For the record, I would say that, from my perspective, this is really a major move in support of some very ambitious goals that have been set out for the state in connection, not just with renewable energy as renewable energy, but in terms with the whole participation in the governor's climate change program, which the legislature has backed. I'm delighted that we may, depending on the outcome here, move ahead with this proposal. So I'm very pleased with what we have on the table.

Y. Mansour — Mr. Chairman and Governors, this is the first step in what the ISO will be coming with in our business land to support those initiatives. We know gas and the renewables. There are a lot of things on the operational side.

There are a lot of things in how we accommodate, how we get other elements of the infrastructure ready to accommodate that massive amount of renewables. We are ready to lead.

M. Willrich — Ken Weisman, are you still on-line?

K. Weisman — I am.

M. Willrich — Do you have any comment?

K. Wiseman — No, I just concur with you, Mason that this is important and exciting, and, as always, thank the staff for the great work and the good process.

M. Willrich — Okay.

G. Cook — Since everybody else commented, I will too. I had lots of questions, and generally, I think it's important to ask lots of questions. Prior to this, I put these guys through the ringer for several hours the other day, and they've responded. If we were just to sit here and listen to presentations and not have that dialogue, I think we get better policy by having that dialogue. So, I hope everybody who graciously put up with my questions felt that

way. I understand it a whole lot better now than it was first presented to me.

M. Willrich — Because of a lot of your questions, a lot of us don't have to ask so many. We learned.

G. Cook — There's no time left.

M. Willrich — We learn as we go along. So, it's been moved and seconded and ready for the vote. All in favor?

Room — Aye.

M. Willrich — Opposed. Thank you very much.

Y. Mansour — Can I read my CEO report now, Mr. Chairman?

M. Willrich — No, not yet.

E. Lowe — That will be at midnight, I think, Yokout.

K. Wiseman — You missed your chance, I had a lot of questions for you.

M. Willrich — Now we do. We have a very important briefing from Chuck King on the MRTU order. I'm hopeful that we can finish this off within the timeframe allotted; I mean finish all of this off within the timeframe allotted, and still have plenty of time for questions from the board as we go. But, looking at the time, let's be conscious of where we are with the time. Chuck, thank you.

C. King — Thank you, Chairman Willrich and Governors. I'll try to be brief in the interest of time, and hit the high points. I won't go through all of the slides. One of the points that I would like to make before launching into the presentation is that we have a very extensive team of folks at the ISO working on our response to this order as we speak. I would like to acknowledge the efforts of Ean O'Neill of the General Counsel's staff, who is, in addition to being one of our attorneys that has been involved with this for quite some time, she's taking on the project manager role in helping us organize the work effort to develop the compliance filings for this order.

# ATTACHMENT B

FINAL

# Opinion on "Alternative Treatment of New Transmission for Interconnection of Renewable Generation"

by
Frank A. Wolak, Chairman
James Bushnell, Member
Benjamin F. Hobbs, Member
Market Surveillance Committee of the California ISO

October 6, 2006

## 1. Background

The California ISO recently issued a white paper proposing a third category of transmission expansions specifically for renewable generation projects.[1] Currently the ISO has two types of transmission expansion projects: (1) network facilities and (2) generation intertie (gen-tie) facilities. Network facilities are part of the looped transmission network and typically benefit more than one generation owner and are therefore paid for by the Participating Transmission Owner (PTO) and recovered through the ISO's Transmission Access Charge (TAC). Gen-tie facilities serve one generation unit owner, are typically less than 5 miles long, and power flows over them in one direction. For these reasons gen-tie facilties only benefit the generation unit owner interconnecting to the ISO control area so they are paid for by that entity. The ISO's white paper proposes to establish a new category of transmission facilities to interconnect renewable generation resources. However, a portion of the annual costs of this new category of transmission facilities will initially be paid for by the TAC. Renewable generation unit owners will take over paying a share of the annual cost of these interconnection facilities when they begin operating. The ISO argues that this proposal is designed to address a "market failure that imposes barriers to efficient development of renewable generation facilities." Removing any barriers to the development of renewable generation in California is essential to achieving the state's ambitious renewables portfolio standard (RPS) of 20% percent of retail sales in California produced by renewable sources by 2010.

## 2. Market Failures Addressed by New Category of Transmission Expansions

There are three features of renewable generation technologies that, in the absence of regulatory intervention, could create a market failure that would increase the cost to California of meeting its RPS goals. First, electricity from renewable generation sources must be produced where the wind, solar or geothermal resource is located, which is typically far from the major California load centers. Second, the total amount of potential renewable resources at a given location can significantly exceed the typical scale of a single renewable generation project. Third, many renewable generation projects are not competitive with fossil fuel generation at current spot and futures prices of natural gas in the absence of explicit penalties to fossil fuel suppliers for emitting greenhouse gases. Unless a California retailer needs renewable energy to meet its RPS requirement, the renewable resource is unlikely to be developed because there are lower cost and more flexible fossil-fuel alternatives available.

[1] "Proposal for Alternative Treatment of New Transmission for the Interconnection of Renewable Generation," California ISO White Paper, September 21, 2006.

These three features can combine to create a market failure that increases the cost to California of meeting its RPS goals. The first factor implies that the interconnection facilities for renewable generation sources tend to be much longer than interconnection facilities for fossil fuel generation sources. The size of the typical renewable resource project is also significantly smaller than the competing fossil fuel generation project. For example, the largest wind farm in the United States is the Stateline Wind Project on the Oregon-Washington border with an installed capacity of 300 MW. Although the Altamont Pass, Tehachapi Pass and San Gorgonio Pass regions in California have more installed capacity, they are actually composed of a large number of individual wind farms. Wind generation projects are significantly smaller than the usual combined-cycle gas turbine (CCGT) generation project, which is typically composed of three turbines with a combined capacity larger than 500 MW. With a few exceptions, most notably the 354 MW Mojave Desert Solar Electric Generating System (SEGS), solar projects are also significantly smaller than CCGT projects.

The significantly larger installed capacity of a CCGT project and the drastically shorter interconnection distances for these projects imply that the cost of the transmission interconnection facilities for the typical wind or solar project is a much larger fraction of the cost of constructing the generation facility. In addition, because there are likely to be many individual renewable generation projects at a single remote location, the size of the interconnection facility needed to serve all of these projects is substantially larger than the interconnection facility needed to serve any single renewable resource project at that location. For example, a location may have the potential to support 1000 MW of wind resources, but the average size of the wind projects at this location may be 100 MW. Because of economies to scale in constructing transmission interconnection facilities, it may be much cheaper from a discounted present value of costs perspective to construct interconnection facilities with the capacity to serve the 1000 MW wind generation potential that exists at this location rather than build only the capacity needed to serve the initial 100 MW project and then add more interconnection capacity as more wind generation capacity enters at this location.

This logic implies the potential existence of a market failure that is common to many forms of infrastructure that benefit a large number of individuals or firms, such as bridges and highways. Even though the total benefits received by all the users of a facility exceeds the total cost of constructing and operating the facility, if the cost of coordinating the many potential users of the facility and extracting sufficient payments from them to pay for the facility are sufficiently high, no private party will find it profitable to construct the facility. Provision by a centralized public entity that has the legal right to extract payments from each beneficiary can drastically lower coordination costs.

Under the ISO's current interconnection policy, a market failure could occur if the total cost of constructing all of the interconnection facilities necessary to serve each renewable electricity supplier at the remote location when it begins producing is larger than the cost of constructing a single large interconnection facility to serve all of the expected entrants at that location when the first generation facility comes on line. Economies of scale in constructing and operating interconnection facilities make the cost of the large interconnection facility to each renewable supplier smaller than if the necessary interconnection facilities were constructed

sequentially, at the time each renewable supplier began producing. If the costs of coordinating all of the expected renewable resource suppliers at a remote location in order to construct the single large interconnection facility are sufficiently high, then under ISO's current interconnection policy the renewable resources owners may instead choose to construct these interconnection facilities sequentially as each new facility begins producing. This sequential construction of the necessary interconnection facilities will result in a total cost for interconnecting all of the eventual renewable suppliers at that location that is larger than the cost of the single interconnection facility built to serve all of these suppliers at the time the first supplier begins producing. However, if the total costs of such a large interconnection facility were charged to the first entrant, it may be so high as to prevent development at all. The ISO can serve as the centralized public entity that eliminates the need for suppliers to incur these coordination costs by allocating the cost of constructing and operating the large least-cost interconnection facility using the mechanism described in the ISO's proposal for a new category for transmission interconnections. Note that this same problem of coordinating transmission investment amongst multiple firms who may benefit from a network enhancement provides much of the justification for the current treatment of 'network' investments.

The third feature of the renewable resource supply noted above further increases the cost of coordination among potential entrants at this remote location. Renewable generation resources are currently only purchased to meet the RPS, because lower cost sources of electricity supply are available to retailers. Consequently, a potential renewable resource entrant can face significantly less demand in the forward market than a fossil fuel supplier, unless a robust forward market for renewable energy certificates (RECs) develops.[2] Specifically, if a retailer has met its RPS standard, then it no longer has any demand for energy from renewable sources at prices that cover the long-run average cost of the renewable generation source, because lower-priced sources of electricity are available. A potential CCGT entrant has an average cost that is lower than many existing natural gas-fired units in California, so that it can compete in the forward market with existing suppliers at prices that cover its long-run average cost. Because renewable generation entrants typically only sign forward market supply arrangements to meet RPS standards, a significant fraction of the potential renewable generation capacity at a remote location may be unlikely to be able to obtain forward market supply arrangements at the time the initial renewable generation entrant at that location is able to sign one.

This logic implies that during the early stages of development of a remote renewable generation location, there could be a number of potential entrants without long-term supply contracts. Under the ISO's existing interconnection policies, coordination among potential renewable entrants is difficult because initial entrants have to ask potential future entrants to share the cost of the single large transmission line to this location despite the fact that they do not yet have a future revenue stream. This is a risk the potential future entrants are very unlikely to be willing to take on. Consequently, under the ISO's current interconnection policies, the initial renewable generation entrant may be forced to construct an interconnection facility tailored only to its interconnection needs rather than to the needs of all eventual suppliers at that location. The

[2] Although California does not have a formal renewable energy credit trading system, the flexibility built into the present system implies that unbundling and credit trading can occur *de facto* ("Renewable Energy Certificates and the California Renewables Portfolio Standard Program," Staff White Paper, California Public Utilities Commission, April 20, 2006, www.cpuc.ca.gov/PUBLISHED/REPORT/55606.htm).

unilateral response of each new entrant at that location to obtaining a long-term supply arrangement can result in a sequence of interconnection facility investments to serve this remote area whose total cost is much greater than the cost of the least-cost interconnection facility needed to serve all of the potential renewable resources at that location.

### 3. Addressing the Potential Market Failure

The ISO's alternative treatment of new transmission for interconnection of renewable generation is designed to increase the likelihood that the interconnection facilities needed to serve *all* of the eventual supply at a remote renewable resource location is constructed at least cost. This is accomplished by charging the early entrants to the location only a share of total cost of the least-cost line and covering the remainder of the costs of the line through the TAC. Subsequent entrants are charged a share of the remaining cost of the line when they begin producing at that location.

Returning to the above example of 1000 MW of expected wind supply at a remote location that is served by 10 suppliers providing an average of 100 MW of wind generation, the ISO's proposed mechanism would have the initial 100 MW entrant pay 1/10 of the annualized cost of the interconnection project necessary to serve the 1000 MW of capacity. The remainder of the cost of the project would be covered from the TAC. However, as each of the remaining 9 suppliers enters, it would take on its capacity-weighted share of the remaining cost of the interconnection project.

The ISO's mechanism has two attractive features that increase the likelihood that the least-cost interconnection facilities will be constructed. First, it reduces the cost to the initial entrant by only charging them for the portion of the facilities that it uses. Second, it reduces the cost to subsequent entrants by only charging them the capacity weighted share of the remaining cost of facilities at the time they enter.

Although these two features of the ISO's proposal can increase the likelihood that California's RPS will be met through the construction of the least-cost mix of interconnection facilities, there are several aspects of the proposal that must be carefully monitored to ensure this outcome occurs. It is possible for this alternative treatment of interconnection facilities to become a subsidy to remote renewable generation sources that unnecessarily increases the cost of meeting California's RPS goals.

### 4. Avoiding Unnecessary Subsidies to Renewable Generation Development

The most straightforward way in which the ISO's proposed alternative treatment for interconnection facilities could increase the cost of meeting California's RPS goals is if it leads to over-investment in transmission. This could happen if high-capacity interconnection facilities are built to remote locations in anticipation of significant renewable capacity entry that fails to materialize. This could create a large stranded cost in the form of substantial unused interconnection capacity that must be paid for through a higher TAC. If there are economies to scale in the construction and operation of interconnection capacity to this location, the renewable generation owners that do enter receive a subsidy in the form of a lower interconnection charge

than they would pay if this large capacity facility was not constructed and instead the entrants only constructed the interconnection facility necessary to serve the renewable capacity actually at that location. This subsidy would be funded by all California consumers through the higher TAC resulting from the stranded costs of the unused portion of the larger interconnection facility.

Such a subsidy would have the undesirable effect of artificially depressing the price of RECs by hiding a significant portion of RPS costs within the TAC. This could distort choices among technologies to meet the RPS, by making development of remote sources artificially inexpensive relative to other technologies, such as landfill methane, local wind development, or even renewable imports from other states.

To guard against an outcome that results in large stranded costs and subsidizes remote renewable generation projects, the ISO must ensure that the locations served by these new interconnection facilities are the regions where renewable suppliers are truly likely to enter. The ISO proposal relies on the California Energy Commission's designation of the locations with significant renewable energy potential in determining where to construct these interconnection facilities and how large to make them. The ISO should also work with the California Public Utilities Commission (CPUC) to determine where the forward contracts signed by the major California load-serving entities to fulfill their RPS obligations are actually being sourced. The ISO's transmission planning process should use all reliable information on where renewable resources will locate before making these investment decisions. The potential subsides to renewable generation resources and higher prices to California consumers that could result from constructing too many or too large of interconnection facilities for renewable generation to remote areas in California implies that the ISO must thoroughly vet any interconnection facility that receives this alternative treatment through its stakeholder process and validate through a more formal process that there is sufficient generation commitment in the proposed area to warrant the transmission investment.

A second source of potential subsides in the ISO's proposal arises if new renewable generation facilities are promised firm transmission rights (FTRs) and scheduling priority on these facilities. The ISO currently offers FTRs to entities that interconnect to the ISO control area and upgrade the transmission network. However, parties electing to receive FTRs do not receive scheduling priority on the transmission line. To avoid explicit subsidies to renewable generation owners, the ISO's proposal should award only FTRs without scheduling priority to users of this interconnection facility. Given all of the effort in the Market Redesign and Technology Upgrade (MRTU) process devoted to converting existing transmission rights (ETCs) with scheduling priority into purely financial transmission rights, it would be a significant step backwards for the ISO to create a new set of transmission rights with scheduling priority.

A third source of potential subsidies results from the provision in the ISO's proposal that transfers the remaining cost of the interconnection facility to the TAC if it is designated as a network facility. To avoid subsidizing renewable generation facilities, the ISO should set clear, publicly verifiable standards for how an interconnection facility becomes a network facility. The ISO's stakeholder process should play a major role in setting these standards.

## 5. TAC or PTO Funding

The CPUC announced in June 2006 that it would allow utilities in its jurisdiction to recover from retail ratepayers the cost of transmission facilities that it deems necessary to meet RPS targets. This mechanism would place the burden of unrecovered facility costs on the ratepayers of these jurisdictional utilities rather than all California market participants that pay the TAC. Given that the RPS is a statewide mandate, requiring only CPUC jurisdictional utilities to fund the project, may inequitably distribute the burden of the interconnection costs of meeting California's RPS mandate. TAC funding would assess any of the costs not paid for the by renewable resource owner on all load in the California ISO control area.

However, if the entire ISO control area is shouldering the risk of unreimbursed project costs via the TAC, it becomes even more important that any interconnection facility funded under this alternative approach be subject to rigorous "open season" provisions to ensure maximum access to all generation developers, not just to those providing renewable energy to the retail customers of the affiliate of the PTO where these facilities interconnect.

## 6. Treatment of Similarly Situated Fossil Fuel Resources

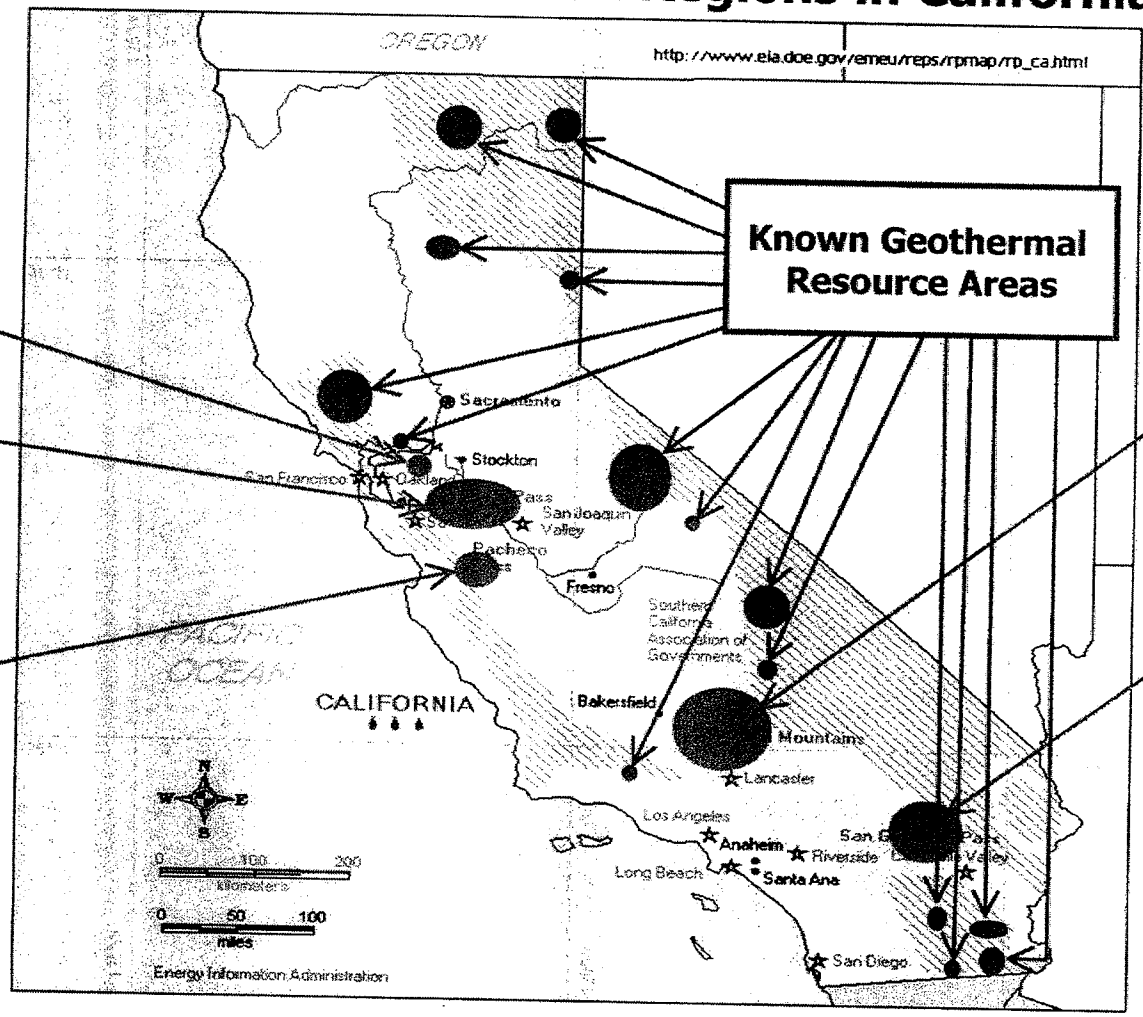
Although this alternative treatment of interconnection facilities is explicitly designed for renewable generation sources, the ISO should consider this treatment for fossil fuel sources that share the same three features as renewable sources. For example, one could imagine a large coal-fired resource that must be remotely located because of the carbon sequestration potential of its location. If coal sequestration potential of this location is large enough to support a number of coal-fired facilities, the ISO may wish to consider similar treatment for the interconnection facilities to this remote location on the same grounds that no single coal-fired facility would choose to construct the least cost interconnection facilities to this location.

# ATTACHMENT C

California ISO
Your Link to Power

California Independent
System Operator Corporation

# Renewable Generation Regions in California




● = Geothermal ● = Wind

# ATTACHMENT D

# Past Wind & Solar Projects

| AREA | On Line Date | Generating Unit Name/Description | MWs | PTO Area |
|---|---|---|---|---|
| Altamont | 1983 | ARCADIAN RENEWABLE POWER CORP. - highly inactive | 35 | PGE |
| | 1983 | SEA WEST ENERGY (AGGREGATE) | 100 | PGE |
| | 1983 | BUENA VISTA ENERGY, LLC | 38 | PGE |
| | 1984 | ALTAMONT POWER LLC (PARTNERS 1) | 12 | PGE |
| | 1985 | ALTAMONT POWER (AGGREGATE) | 92 | PGE |
| | 1985 | PATTERSON PASS WIND FARM LLC | 31 | PGE |
| | 1985 | ALTAMONT MIDWAY LTD. | 56 | PGE |
| | 1985 | ZOND WINDSYSTEMS INC. | 24 | PGE |
| | 1986 | GREEN RIDGE POWER LLC-FRICK (Aggregate) | 15 | PGE |
| | 1986 | NORTHWIND ENERGY | 31 | PGE |
| | 1986 | Tres Vaqueros Wind Farms, LLC. | 38 | PGE |
| | 1987 | GREEN RIDGE POWER LLC-RALPH (Aggregate) | 103 | PGE |
| | 1988 | GREEN RIDGE POWER LLC-JACKSON (Aggregate) | 98 | PGE |
| | 1988 | GREEN RIDGE POWER LLC-PATTERSON (Aggregate) | 183 | PGE |
| | 1988 | GREEN RIDGE POWER LLC-WALKER (Aggregate) | 59 | PGE |
| | 1994 | GREEN RIDGE POWER LLC- RUSSELL (Aggregate) | 76 | PGE |
| | 2004 | DIABLO WINDS | 19 | PGE |
| **Altamont Total** | | | **1007** | |
| **Pacheco** | 1988 | INTERNATIONAL TURBINE RESEARCH | 21 | PGE |
| **Pacheco Total** | | | **21** | |
| **San Gorgonio** | 1983 | DEVERS AREA LUMPED UNITS | 430 | SCE |
| | 2001 | Mountain View I | 44 | SCE |
| | 2001 | Mountain View II | 22 | SCE |
| | 2002 | PACIFIC WEST I | 2 | SCE |
| | 2002 | Cabazon Wind Project | 41 | SCE |
| | 2002 | Whitewater Hill Wind Project | 62 | SCE |
| | 2003 | Mountain View III | 22 | SCE |
| | 2003 | WINTEC V FACILITY | 1 | SCE |
| | 2004 | GARNET GREEN POWER PROJECT UNIT 1 | 7 | SCE |
| | 2004 | GARNET GREEN POWER PROJECT UNIT 2 | 7 | SCE |
| | 2004 | GARNET GREEN POWER PROJECT UNIT 3 | 3 | SCE |
| | 2005 | KUMEYAAY WIND FARM | 50 | SDGE |
| **San Gorgonio Total** | | | **691** | |
| **Solano** | 1994 | SOLANO WIND | 15 | PGE |
| | 2003 | HIGH WINDS PROJECT | 162 | PGE |
| | 2006 | SHILOH I WIND PROJECT | 150 | PGE |
| **Solano Total** | | | 327 | |
| **Tehachapi** | 1982 | ANTELOPE VALLEY AREA LUMPED UNITS | 425 | SCE |
| (Solar) | 1984 | GALE_1_SEGS1 | 14 | SCE |
| (Solar) | 1984 | SEGS_1_SEGS2 | 46 | SCE |
| | 1985 | VINCENT AREA LUMPED UNITS | 324 | SCE |
| (Solar) | 1988 | KRAMER_1_SEGS37 | 206 | SCE |
| (Solar) | 1990 | KRAMER _2_SEGS89 | 200 | SCE |
| | 2005 | OASIS POWER PLANT | 60 | SCE |
| **Tehachapi Total** | | | **1275** | |
| **Grand** | | | 3321 | |

Total

# Future Wind & Solar Projects

| Area | On Line Date | Type | Interconnection Points | MWs | PTO Area |
|---|---|---|---|---|---|
| **Boulevard** | 2007 | W | Crestwood | 117 | SDGE |
| | 2007 | W | Boulevard - Crestwood 69-kV transmission line | 201 | SDGE |
| | 2008 | W | Crestwood | 36 | SDGE |
| | 2008 | W | 500 kV Imperial Valley-Miguel trans line | 160 | SDGE |
| | 2008 | W | 500 kV Imperial Valley-Miguel trans line | 300 | SDGE |
| | 2009 | S | Imperial Valley Substation | 300 | SDGE |
| | 2011 | S | Imperial Valley Substation | 600 | SDGE |
| Boulevard Total | | | | 1714 | |
| **MISC** | 2006 | W | Windmaster/Buena Vista Sub | 38 | PGE |
| | 2006 | W | Collector Substation at Geysers #17 & Fulton 230 kV line | 201 | PGE |
| | 2007 | W | 230kV line btn Pit#3 & Round Mtn | 102 | PGE |
| | 2008 | W | Cabrillo | 120 | PGE |
| | 2008 | W | PG&E Coburn 230 kV Sub | 210 | PGE |
| | 2009 | W | Bridgeville 115kV Substation | 70 | PGE |
| | 2009 | W | No. 1 & No. 2 Mesa-Divide 115kV Lines | 105 | PGE |
| | 2011 | W | Eldorado Substation | 1500 | SCE |
| MISC Total | | | | 2346 | |
| **Mojave** | 2007 | W | Mountain Pass | 50 | SCE |
| | 2008 | S | Pisgah 230 kV Substation | 850 | SCE |
| | 2008 | W | Mountain Pass Substation | 63 | SCE |
| | 2008 | W | Victor 230 kV | 150 | SCE |
| | 2008 | W | Pisgah-Lugo 230kV Trans Line | 150 | SCE |
| | 2008 | W | Pisgah-Lugo Sub 230kV | 50 | SCE |
| | 2008 | W | Lugo-Pisgah 230kV Transmission Line | 60 | SCE |
| | 2008 | W | Lugo-Pisgah No. 2 230 kV tran line | 60 | SCE |
| | 2009 | S | Mohave 500 kV Switchyard | 635 | SCE |
| | 2009 | S | Kramer Substation | 80 | SCE |
| | 2009 | S | Kramer Substation | 80 | SCE |
| | 2009 | S | Kramer Substation | 320 | SCE |
| | 2010 | W | Pisgah-Lugo 230kV | 140 | SCE |
| | 2010 | S | Mountain Pass Substation | 100 | SCE |
| | 2010 | S | Kramer Substation | 300 | SCE |
| | 2010 | S | Mohave Generating Station | 565 | SCE |
| | 2011 | S | Pisgah Substation | 550 | SCE |
| | 2011 | S | Mojave 500 kV Switchyard | 1200 | SCE |
| | 2013 | S | Pisgah Substation | 1400 | SCE |
| Mojave Total | | | | 6803 | |
| **San Gorgonio** | 2006 | W | Devers Substation | 101 | SCE |
| | 2007 | W | Devers-Garnet 115 kV line (Tap) | 17 | SCE |
| | 2008 | S | Eagle Mountain Substation | 150 | SCE |
| | 2008 | W | Devers-Vista 230kV #1 | 150 | SCE |
| | 2010 | S | Eagle Mountain Substation | 400 | SCE |
| San Gorgonio Total | | | | 817 | |
| **Solano** | 2001 | W | Lambie-Contra Costa 230 kV | 128 | PGE |
| | 2006 | W | New Birds Lndng Sw Stn near Contra Costa PP Sub | 150 | PGE |

| | | | | | |
|---|---|---|---|---|---|
| | 2006 | W | High Winds/Contra Costa PP | 150 | PGE |
| | 2007 | W | New Birds Lndng Sw Sta near Contra Costa PP Sub | 38 | PGE |
| | 2008 | W | New Birds Lndng Sw Sta near Contra Costa PP Sub | 200 | PGE |
| | 2009 | W | Birds Landing | 30 | PGE |
| Solano Total | | | | 696 | |
| **Tehachapi** | 2007 | W | Segment 3 230 Collector Loop Tehachapi | 120 | SCE |
| | 2007 | W | Vincent Substation through Sagebrush 230 kV line | 120 | SCE |
| | 2008 | W | Vincent Substation | 33 | SCE |
| | 2008 | W | Canwind Substation | 34 | SCE |
| | 2008 | W | 66kV Antelope-Neenach-Bailey line | 110 | SCE |
| | 2008 | W | Antelope | 300 | SCE |
| | 2008 | W | Antelope Sub | 250 | SCE |
| | 2008 | W | Tehachapi Conceptual Substation #1 | 220 | SCE |
| | 2008 | W | Tehachapi Conceptual Substation #2 | 180 | SCE |
| | 2009 | W | Proposed "New" Dutchwind Substation | 51 | SCE |
| | 2009 | W | Monolith Substation | 300 | SCE |
| | 2009 | W | Monolith Substation | 201 | SCE |
| | 2009 | W | Cottownwind Substation | 400 | SCE |
| | 2009 | W | Tehachapi Conceptual Substation #1 | 550 | SCE |
| | 2009 | W | Tehachapi Conceptual Substation #1 | 600 | SCE |
| | 2009 | W | Tehachapi Conceptual Substation #5 | 160 | SCE |
| | 2009 | W | SCE 230kV Conceptual Substation #2 | 297 | SCE |
| | 2009 | W | SCE Highwind Sub #2 (proposed) 230 kV | 362 | SCE |
| | 2010 | W | Segment 3 of Antelope Transmission Project | 51 | SCE |
| | 2010 | W | Tehachapi Conceptual Substation #1 | 500 | SCE |
| **Tehachapi Total** | | | | **4839** | |
| **Grand Total** | | | | **17215** | |

# ATTACHMENT E

# Western Governors' Association
# Policy Resolution 06-10

June 11, 2006
Sedona, Arizona

## *Clean and Diversified Energy for the West*

## A. BACKGROUND

1. Traditional resources such as oil, natural gas, coal and hydropower have played and will continue to play a significant role in meeting future energy needs. At the same time, resources such as energy efficiency, solar, wind, geothermal, biomass and advanced coal technologies are relatively untapped but hugely promising. Together, the combination of these resources provides the foundation for a clean, diversified and secure energy future for the West.

2. The Western Governors' Association launched its Clean and Diversified Energy Initiative in a June 2004 resolution (*04-13*) that set out the objective of "identifying ways to increase the contribution of renewable energy, energy efficiency, and clean energy technologies within the context of the overall energy needs of the West." This resolution identified the need for new clean and diversified energy sources for transportation, buildings, electricity, and other needs, and outlined four important goals:

    i. additional development of 30,000 megawatts of clean energy by 2015 from resources such as energy efficiency, solar, wind, geothermal, biomass, clean coal technologies, and advanced natural gas technologies;
    ii. a 20% increase in energy efficiency by 2020;
    iii. an ability to meet the transmission needs of the West for the next 25 years; and
    iv. better position the Western energy system to respond to new environmental challenges, including potential limitations on emissions.

3. The Western Governors' Association recognizes that a clean and diversified energy system will:

    - Protect the Western economy from energy shortages and price spikes that are harmful to businesses and consumers and disruptive to investment;
    - Augment our pursuit of a national energy policy that will result in a diverse energy portfolio;
    - Accommodate the energy needs of a growing, mobile Western population;
    - Better position the Western energy system to respond to new local, regional and environmental challenges; and
    - Take advantage of the development of new technologies that will lower the cost of renewable energy and reduce the cost of controlling emissions from the West's vast fossil fuel resource base.

energy efficiency that can reduce annual load growth in the West from around 2% to 0.5% while saving customers and businesses billions of dollars a year.

## B. GOVERNORS' POLICY STATEMENT

1. The Western Governors acknowledge and recognize the positive contribution of more than 250 CDEAC process participants who dedicated time, resources and energy to this comprehensive project, as well as those who provided financial support. The CDEAC's work has been productive, collaborative and influential. The Western Governors accept the CDEAC report with commendation to the many individuals, organizations and staff that made it a success.

2. Western Governors agree to draw upon the full range of recommendations contained in the CDEAC report as a basis on which to advocate for energy policy changes at the federal and regional levels and their respective states, where appropriate.

3. Western Governors are supportive of federal energy polices that:

   - Provide for a long-term (10 year) extension of the production tax credit for all renewable energy technologies, with complementary polices for consumer-owned utilities and tribes;
   - Provide tax credits for energy efficiency investments
   - Raise the cap on the residential investment tax credit to $10,000 for renewable energy or distributed generation systems;
   - Support improvements in national appliance efficiency standards;
   - Encourage adequate funding for state programs, including energy efficiency, clean generation and storage technology research, development and demonstration;
   - Encourage federal agencies to collaborate with Western states and regional organizations on facility siting and infrastructure planning, consistent with sound, sustainable environmental practices;
   - Extend the federal IGCC tax credit for five years and provide a tax credit program for carbon capture and sequestration for at least five years;
   - Support increased federal support and tax incentives for the construction of multiple pilot facilities that demonstrate IGCC, in the Western United States in high altitude areas using western coal; and
   - Encourage proactive, transparent, stakeholder-driven regional transmission expansion planning, defer to existing regional and sub-regional processes that meet such standards, and reform imbalance penalties to allow for greater use of the existing transmission system.

4. Western Governors find that a strong and resilient transmission and distribution grid is critical to electricity affordability and reliability. Grid expansion must also be undertaken in an environmentally responsible manner. We encourage regulators, policymakers, utilities, transmission operators and other stakeholders to consider the recommendations identified

within the CDEAC report in order to eliminate barriers to greater utilization of clean energy resources across the west.

5. Western Governors agree to collaborate in advancing regional and sub-regional policies for major interstate clean energy projects and programs, and to promote implementation of the Western Regional Energy Generation Information System to facilitate development of regional markets

6. Western Governors support reforms in the U.S. Federal Energy Regulatory Commission's Open Access Transmission Tariff to implement the recommendations of the CDEAC that promote (a) regional transmission planning expansion and (b) expanded use of the existing transmission grid by reforming imbalance penalties.

7. Western Governors recognize that a combination of state, regional and federal policy action will be required to advance a clean and diversified energy system and deliver the reliability, cost and environmental benefits to Western energy consumers. Accordingly, Western Governors support the promotion and distribution of the CDEAC report in advancing such action.

## C. GOVERNORS' MANAGEMENT DIRECTIVE

1. The Western Governors direct the WGA staff to work toward federal adoption of the policies supported in this resolution. The adoption and implementation of clean energy policies remains a high priority for Western states.

2. The Western Governors' Association will assist, as available and appropriate, with the development of regional or interstate policies and projects that are consistent with this resolution.

3. The Western Governors direct the WGA staff to consider options to ensure continued broad stakeholder involvement into energy policy discussions regarding energy efficiency and conservation, supply and energy use, including the development of funding mechanisms to continue the work.

4. The Western Governors direct Western Governors' Association to identify mechanisms to assist the Governors in enacting policies that achieve clean and diversified energy goals and report back to the governors not later than the winter 2006 meeting. These mechanisms should include:

    - Act as a clearinghouse by collecting and disseminating information on adopted policies and programs;
    - Measurement and reporting of progress against energy efficiency and clean energy generation goals; and
    - Regularly collaborate with existing regional policy organizations, WGA affiliates such as the Western Interstate Energy Board, the Western Regional

Air Partnership, and other entities to develop and implement regional clean energy policies.

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# ATTACHMENT F

California ISO
Your Link to Power

# Proposal to

# Remove Barriers to Efficient Transmission Investment

**CAISO White Paper -- Revised**
**September 21, 2006**

# TABLE OF CONTENTS

# 1 EXECUTIVE SUMMARY

Many CAISO stakeholders have identified the initial assessment of costs for transmission facilities as a significant barrier to the development of generation that is inherently constrained by the nature of its technology or energy resource. Most obviously, the production of electricity through wind, solar, biomass and other technologies is limited to certain geographical regions with very little nearby load but vast potential for renewable energy supply. Power plants in these remote regions typically require long, high voltage transmission lines to interconnect to the high-voltage transmission grid, so costs are considerably greater than the shorter generator tie-lines necessary for generators that are closer to the CAISO grid. Moreover, renewable generation development typically is added in relatively small increments of generation capacity with several developer parties involved over a period of time.

The assessment of construction costs before interconnection for a large-sized line that could efficiently handle the output from multiple power plants that are likely to be developed in these regions often proves too great a financing hurdle for the first generation developer(s). Generator financing of the line would become manageable as expected additional generation is developed in the region over time. The assessment of the full costs of the facilities to the first generation to be developed in the region results in foregoing economies of scale and the development of these resources in less than optimal regions in an effort to mitigate the up-front transmission costs.

The CAISO believes the current interconnection policies governing the assessment of transmission costs may be diminishing prospects for the efficient development of locationally constrained generating resources, and that consideration of new mechanisms to promote construction of transmission facilities is warranted.

To that end, the CAISO proposes a general framework for new evaluation criteria for certain transmission projects that currently are not considered "network" facilities. The CAISO also proposes alternative treatment for the costs associated with this type of transmission project.

This alternative treatment would assess the costs for these facilities on interconnecting generating resources, which is similar to the current policy reflected in the CAISO tariff. However, the PTO would finance the costs initially through its FERC-approved revenue requirement, and generators would take over their share of these annual payments as they come on line and use the facilities.

Thus, the most significant difference between this proposed alternative cost treatment and current practice is the allocation of the cost of the transmission facilities to multiple generators connecting to the same large interconnection facilities over a long period of time.

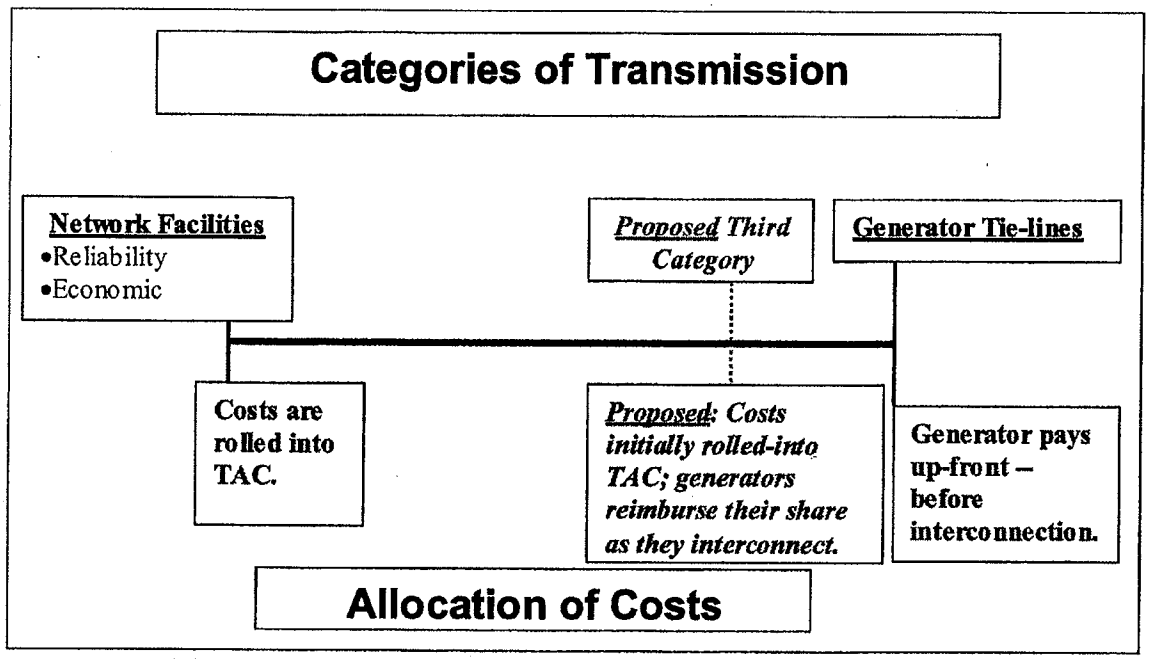
The CAISO's proposal is designed to address a market failure that imposes barriers to the efficient development of renewable generation facilities. Under the current two category FERC structure (network and generation-intertie facilities) for transmission expansion projects, development of renewable generation regions is often not pursued due to the combination of the high initial cost of transmission facilities necessary to connect the region to the grid and the incremental nature of renewable generation development. Under the current structure, the

entire cost of the transmission facilities must be paid initially by the first increment of renewable generation, although the cost of network facilities will be paid back over a five-year period after the facilities are energized. This requirement for upfront financing creates a "chicken and egg" problem for smaller project developers who have no choice where to locate their generating resource. It is difficult for these smaller project developers to join together to finance large transmission projects that would interconnect remote regions to the grid. The difficulty arises from the fact that renewable generation projects generally do not proceed without a contract in place for their energy output due to their relatively higher cost. This results in renewable generation resources being developed in step to meet renewable energy demand levels, which, under an RPS requirement based on load levels, will increase relative to the overall increase in energy demand levels. Therefore, a region with significant expected renewable energy development potential may not be fully developed for several years.

The CAISO proposal includes a new third category of transmission asset in which the cost for the unsubscribed portion of these facilities is collected through the Transmission Access Charge (TAC), rather than assigning all of the cost to the initial increment of renewable generation facilities. As more generation is developed in the area, the revenue requirement for the facilities would be transferred from TAC to the generation facilities until the entire cost of the facilities is covered by the generation resources in the area, similar to the cost treatment of generation intertie facilities.

The CAISO believes that this will help to facilitate more economical development of renewable generation resources needed to meet State and local RPS and fuel diversity goals and result in lower costs for meeting these objectives.[1] The following diagram illustrates how the new proposed third category of transmission facilities would fit within the current structure.

[1] FERC has also recognized that "[t]he development of renewable sources of energy, including wind resources, brings benefits to energy customers by providing environmental benefits and supports increased reliability by increasing the diversity of energy supplies. Wind energy can satisfy certain federal and state-mandated programs for the development of renewable energy." (*Imbalance Provisions for Intermittent Resources,* "Notice of Proposed Rulemaking," Docket No. RM05-10-000 (April 14, 2005) at P53.)


Categories of Transmission
Network Facilities
•Reliability
•Economic
Proposed Third Category
Generator Tie-lines
Costs are rolled into TAC.
Proposed: Costs initially rolled-into TAC; generators reimburse their share as they interconnect.
Generator pays up-front – before interconnection.
Allocation of Costs

# 2 INTRODUCTION

This Revised White Paper clarifies and modifies the concepts proposed in a June 28th White Paper and discussed with stakeholders at a public meeting on July 7th.

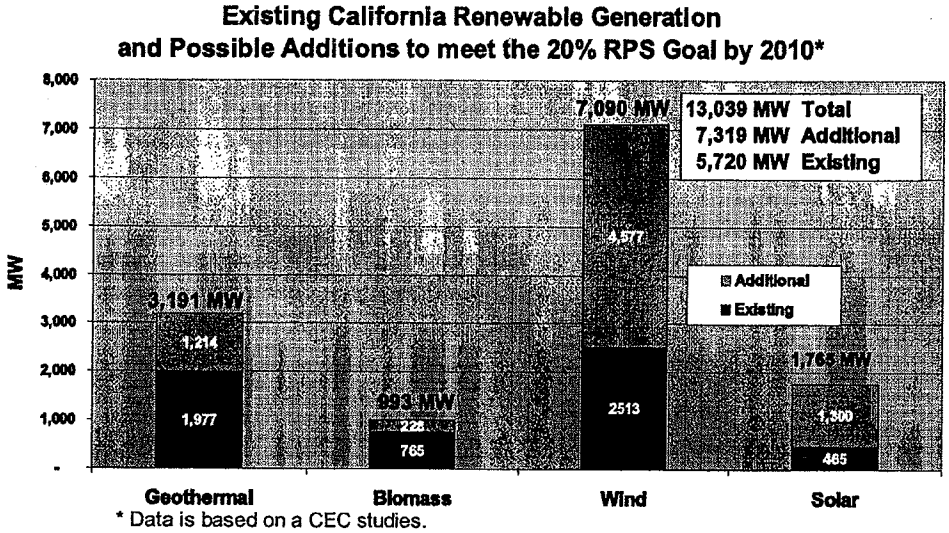
This proposal addresses a barrier to transmission development where the nature of the technology requires certain resources to be sited in remote areas. For example, generating plants that utilize wind, solar, biomass and other renewable sources are limited to specific locations where it is possible to capture their energy resource consistently over extended periods of time. Recently adopted standards for renewable generation by state and local legislative bodies will significantly increase the amount of energy procurement from renewable resources in the coming years.

The unique, location-specific nature of these resources frequently creates different transmission needs compared to other generation sources. Locationally constrained resources are usually located in areas remote from load centers and distant from the existing grid. Transmission facilities required to interconnect these resources are typically 500 kV facilities that can span over 100 miles.

In addition, the capacity of an individual generation project often will be much smaller than the capacity of the tie-line required to optimally and efficiently connect all expected locationally-constrained generation (typically renewables) in the region to the networked grid. In these circumstances, developers maintain they are unable to finance the totality of the costs associated with the Interconnection Facilities sized to accommodate the anticipated quantity of generation in the region and less optimal options may be pursued.

In contrast, generation interconnections for fossil fuel generation resources tend to be much lower cost, as they are typically 60 kV facilities that are less than five miles in length. Therefore, the percentage of generation to transmission cost of a typical renewable generator is dramatically higher than that of a fossil fuel plant.

The severity of this market failure is heightened by the obligations for most California Load-Serving Entities, including municipally owned electric systems, to meet challenging renewable portfolio standards (RPS) goals such as acquiring 20% of their electricity production from renewable resources by 2010. These preferences for renewables have been mandated by state law or, in some cases, by policies established by municipal officials. The following chart shows the amount of current and additional renewable generation expected to meet the State's RPS goal by 2010.



* Data is based on a CEC studies.

In recognition of the inevitable need to connect transmission to alternative energy sources, the CAISO proposes modest changes to its existing policy for assessing costs for certain eligible transmission facilities that are currently not recoverable through the CAISO's TAC. This conceptual proposal is not intended to favor one generation technology over another; it is meant to promote efficient transmission development that recognizes significant generation preferences already imposed through mandated RPS and other requirements.

Under this proposal, when a generator requires a new high voltage transmission line for Interconnection that would not qualify as a Network Upgrade, or when the CAISO determines such a line is necessary for the economic development of large amounts of generation in a particular region, the line would be sized to accommodate anticipated Interconnections using the line.

The costs for such a line would initially be rolled into the CAISO's TAC, and generation developers would reimburse their share of these costs as they become operational. Thus, each Generator would be responsible for the going-forward costs of the line in proportion to the capacity required for its Interconnection.

The CAISO believes the principles explained within this Revised White Paper are generally consistent with current FERC policy and fit within the current construct for assessing costs of transmission projects. By pursuing FERC policy guidance and possibly proposing a tariff amendment, the CAISO seeks to solve a transmission problem that is likely to intensify as requirements for locationally constrained generation such as renewables are expanded.

# 3 REQUEST FOR ADDITIONAL STAKEHOLDER COMMENTS AND PROCESS GOING FORWARD

Following the June 28th posting of the first White Paper on this issue and a July 7th stakeholder meeting, the CAISO received written comments from ten entities which are posted at: http://www.caiso.com/1816/1816d22953ec0.html

The comments from the American Wind Energy Association, California Energy Commission, National Grid, Pacific Gas & Electric Company and Southern California Edison generally supported the "third category" concepts and efforts to amend eventually the CAISO's tariff as it relates to bulk transmission projects. The comments from the California Department of Water Resources/State Water Project, California Municipal Utilities Association, California Wind Energy Association, Metropolitan Water District, and Northern California Power Agency either generally opposed or raised specific concerns about the concepts for alternative treatment of certain transmission facilities.

This Revised White Paper seeks to address many of these stakeholder comments and clarify, where possible, the general criteria for a possible third category of transmission expansions, or a subcategory of Interconnection Facilities, specifically for high-voltage, bulk-transfer generation intertie lines serving multiple Generators (often renewable Generators), that would be eligible for alternative cost recovery.

The CAISO welcomes additional stakeholder comments to this Revised White Paper, and requests that written comments be submitted to DWithrow@caiso.com by close of business on Thursday, October 5th.

The CAISO plans to use this Revised White Paper and further stakeholder comments to finalize a set of principles for the alternative treatment of certain transmission facilities that, if approved by the CAISO Board at its meeting scheduled for October 19th, will be incorporated into a petition to FERC seeking a declaratory order.

Such an order from FERC would provide clear policy direction for a foundation of changes to the CAISO tariff that, subject to the approval of the CAISO Board of Governors, might be filed at FERC later in 2006 or early 2007. In fashioning a proposal for this type of Transmission, the CAISO recognizes that FERC ultimately will resolve the policy questions related to the criteria for eligibility and the wholesale rate treatment for recovering permissible costs related to these transmission assets.

The CAISO acknowledges the strong interest among some stakeholders to move immediately to a stakeholder process for a detailed tariff filing. However, in light of concerns raised by other stakeholders, the CAISO reiterates its commitment to seek as much consensus as possible, while avoiding further delay to work out certain details that are not necessary for the filing of the petition for declaratory order. Many issues will be refined in greater detail later through the stakeholder process for developing a tariff amendment. Although some stakeholders have commented that resolution of certain details is critical for their support of the declaratory order petition to FERC, the CAISO management believes it serves the interests of all interested parties to seek FERC's policy guidance soon at the conceptual level, and then focus on details that are more appropriate for a tariff filing.

Thus, the CAISO reiterates its intention to move forward through a two-step process: 1) a petition to FERC for a declaratory order, and then, 2) a stakeholder process for a detailed tariff filing if there is reasonable assurance that FERC would accept the principles and conceptual policies that support such a filing.

# 4 RECENT REGULATORY DEVELOPMENTS

## 4.1.1 Background on Previous Petition to FERC for Declaratory Order

On March 24, 2005, Southern California Edison Company (SCE) petitioned FERC for a declaratory order related to the "Antelope Project," three transmission segments needed to interconnect future wind projects in the Tehachapi Mountains area of California.[2] SCE categorized segments 1 and 2 as high-voltage "network upgrades" and segment 3 as a high-voltage, bulk transfer generation intertie line. In its petition, SCE sought (1) rolled-in rate treatment for costs incurred for all three segments, (2) full recovery of all prudently-incurred costs for each segment, regardless of whether the wind generation develops or SCE abandons the projects, (3) the creation of a new category of transmission facility, "trunk lines" that would allow rolled-in rate treatment, and (4) authority to place segment 3 under the CAISO's operational control. Over 25 parties intervened and submitted comments both supporting and opposing the SCE petition.

On July 1, 2005, FERC rejected rolled-in rate treatment for segment 3 of SCE's proposed transmission project and denied SCE's request to establish a new category of transmission facilities.[3] In doing so, FERC refused to alter its traditional treatment of generation-tie facilities with respect to rate treatment. FERC deferred on the issue of advance prudence with regard to the appropriate sizing of segments 1 and 2. However, FERC modified its prior precedent for limiting recovery of abandoned or cancelled projects to 50% of the prudently incurred investment. In this case FERC granted SCE's request to allow it to recover 100% of the prudent costs of segments 1 and 2 even if the facilities are abandoned or cancelled.

## 4.1.2 California Public Utilities Commission "Backstop" Proceeding

Section 399.25 of the California Public Utilities Code was enacted as part of California's renewable portfolio standards (RPS) legislation. That section directs the California Public Utilities Commission (CPUC) to find that transmission facilities necessary to facilitate achievement of the State's RPS goals "needed" for the purpose of siting approval. In addition, Section 399.25 requires the CPUC to establish a "backstop" cost mechanism allowing utilities to recover through retail rates any costs of such needed transmission facilities that are not approved by FERC for recovery through transmission rates and therefore collected through the CAISO's TAC.

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2 Docket No. EL05-80-000

3 *Southern California Edison,* 112 FERC ¶ 61,014 (2005), rehearing denied in [get cite].

On June 15, 2006, the CPUC issued a decision addressing specific policies and procedures to implement the cost recovery provisions of Section 399.25.[4] The decision finds, among other things, that retail cost recovery provisions extend to high-voltage, bulk-transfer transmission facilities, whether classified as network or Interconnection Facilities so long as they are designed to serve multiple-RPS eligible Generators and that the amount of added transmission capacity will likely be utilized by RPS eligible Generators within a reasonable period of time.

The decision further states that it is the CPUC's intent to allocate the backstop costs to the ratepayers of all jurisdictional utilities, and not merely to the customers of the utility constructing the transmission facilities. However, revenues received from Generators as they take service from the constructed transmission facilities would offset the costs borne by retail ratepayers.

The CPUC's approval for cost recovery of certain facilities under Section 399.25 is viewed by a number of stakeholders as a "last resort" that, while helpful, establishes an inconsistent framework among federal and state regulators that could delay development of renewable generation. In addition, the CPUC cost recovery mechanism is limited to CPUC jurisdictional entities and may not equitably allocate the costs of these facilities to all that could potentially benefit by having greater access to renewable resource development regions and more efficient renewable energy markets.

To spur renewable generation development, help market participants more efficiently meet renewable energy goals and clarify the wholesale treatment of certain transmission facilities needed for renewable development in other states, the CAISO (through the proposal and process outlined in this White Paper) seeks to develop a mechanism that allows recovery of a portion of the costs at the wholesale level until the renewable generation is fully developed.

# 5 CURRENT TREATMENT OF NEW TRANSMISSION FACILITIES WITHIN THE CAISO CONTROL AREA

Transmission facilities generally fall into three broad categories: (1) network transmission facilities, (2) Interconnection Facilities, i.e. Generator intertie-lines[5] and (3) local distribution facilities. Currently, neither local distribution facilities nor Generator intertie-lines are eligible for CAISO operational control.[6] As noted above, the purpose of this White Paper is to outline and seek comments on a potential alternative approach under which certain facilities that attach multiple Generators would receive initial financial support from Transmission customers to remove barriers to the development of renewable generation resources.

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[4] See *Interim Opinion on Procedures to Implement the Cost Recovery Provisions of Public Utilities Code Section 399.25,* Investigation 05-09-005 (June 15, 2006).

[5] Under FERC policy, a facility is not a Generator tie-line, but rather a Network Facility, if it serves any network function.

[6] See, e.g., Sec. 4.1.1 of the Transmission Control Agreement ("TCA"). Section 4.1.1 of the TCA provides, in pertinent part, that "directly assignable radial lines and associated facilities interconnecting generation" and "lines and associated facilities classified as 'local distribution' facilities" are deemed not to form part of a PTO's transmission network subject to CAISO operational control. The CAISO believes that, to the extent a third category of transmission facility is sanctioned by FERC, the TCA would not require modification because the new category of facility would not be by definition a "directly assignable radial line."

The CAISO identifies and evaluates new transmission facilities through its coordinated transmission planning process. Only network transmission facilities that either promote economic efficiency or maintain system reliability in accordance with the CAISO's Applicable Reliability Criteria[7] can be recommended and approved by the CAISO and placed under its operational control. Any entity may submit a proposal for a new network transmission facility. However, the CAISO, in coordination with its Participating Transmission Owners, is under an express obligation to identify network transmission additions or upgrades, as well as alternatives to transmission, needed to maintain Applicable Reliability Criteria. As such, reliability related projects are generally proposed by Participating Transmission Owners or the CAISO through the CAISO's annual Grid Plan. Similarly, transmission projects that promote economic efficiency are frequently identified through the outcomes of CAISO studies related to reliability (such as RMR or LCR studies) or congestion.

Another way that transmission projects are identified is through the Interconnection process for new Generators, which should be viewed as a subset of the CAISO's transmission planning process. "Interconnection Customers" sponsor transmission projects that are necessary to safely interconnect their generating plant to the CAISO Controlled Grid, or might facilitate the delivery of power that comes from that new generating plant. These projects can be either "Interconnection Facilities" or "Network Upgrades." The nature of and cost treatment of these different classifications of Interconnection-related transmission projects are discussed further below.

## 5.1 INTERCONNECTION FACILITIES

In Order No. 2003[8] and its progeny, which set forth standard Interconnection procedures and agreements for the Interconnection of large Generating Units (i.e., generators > 20 MW), FERC utilized the term "Interconnection Facilities." Interconnection Facilities include all transmission facilities and equipment necessary to physically and electrically interconnect the Large Generating Facility to the ISO Controlled Grid. Interconnection Facilities are "sole use" facilities and do not include Network Upgrades described below. This definition of Interconnection Facilities is roughly equivalent to and replaces the prior term Direct Assignment Facilities, which was used by the CAISO prior to its compliance with Order No. 2003.

## 5.2 NETWORK UPGRADES

This category includes any addition, modification, and/or upgrade to the ISO Controlled Grid required at or beyond the first point of Interconnection necessary to accommodate the Interconnection of a new generating facility to the ISO Controlled Grid. Network Upgrades consist of Delivery Network Upgrades and Reliability Network Upgrades.

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[7] Under the CAISO Tariff, Applicable Reliability Criteria are "[t]he reliability standards established by NERC, WECC, and Local Reliability Criteria as amended from time to time, including any requirements of the NRC." (CAISO Tariff, Appendix A, Master Definitions Supplement.) Local Reliability Criteria are those "Reliability Criteria unique to the transmission systems of each of the PTOs."

[8] *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, Stats. & Regs. ¶ 31,146, 68 Fed.Reg. 49,846 (2003); *Order on Rehearing*, 106 FERC ¶ 61,220 (2004) ("Order No. 2003-A").

### 5.2.1 Reliability Network Upgrades

Reliability Network Upgrades consist of any addition, modification, and/or upgrade to the ISO Controlled Grid beyond the first point of Interconnection necessary to safely and reliably interconnect the Large Generating Facility to the ISO Controlled Grid, including those necessary to remedy short circuit or stability problems resulting from the Interconnection. Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Interconnection may have on a path's WECC rating.

### 5.2.2 Delivery Network Upgrades

Delivery Network Upgrades are those transmission facilities, other than Interconnection Facilities and Reliability Upgrades, necessary to relieve constraints on the CAISO Controlled grid and to ensure the delivery of energy from a new Large Generating Facility to Load under peak conditions.

## 5.3 COST ALLOCATION

Under current FERC policy, costs for Interconnection Facilities are borne solely by the generation developer. The upfront costs to the Generator developer are not subject to reimbursement from Participating Transmission Owners.[9] Generally, Interconnection Facilities are short in distance, not subject to the CAISO's Operational Control and are designed to transmit the output of a single Generating Unit owner. Where there is no reason, economic or otherwise, to size a line in excess of that needed to support the output of a particular known Generator, this policy is unlikely to impose a burden on generation developers.

Network Upgrades, whether Reliability Network Upgrades or Delivery Network Upgrades, are treated differently. Under FERC policy, the interconnecting Generator generally must provide the upfront funding for Delivery Network Upgrades. However, unlike Interconnection Facilities, the costs of Network Upgrades can be "rolled-in" to general transmission rates of the Participating Transmission Owners and recovered through the CAISO's TAC. Under the LGIP, the interconnecting Generator can elect to either receive (1) refunds from the Participating Transmission Owner, with interest, over a five-year period or (2) transmission rights, i.e., Firm Transmission Rights or Congestion Revenue Rights, as applicable. The Participating Transmission Owner may, at its own election, agree to initially pay for the necessary Network Upgrades.

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[9] See CAISO Tariff, Appendix V (Standard Large Generator Interconnection Agreement) at Art. 11.

# 6 PROPOSAL FOR A THIRD CATEGORY OR ALTERNATIVE TREATMENT OF TRANSMISSION FACILITIES

Numerous parties have asserted that the traditional treatment accorded Interconnection Facilities costs is problematic in instances where (1) the resources must be located remotely from load and the existing transmission grid because of fuel and technology limitations and (2) the optimally sized expansion, based on expectations of future market entry in the region, exceeds the capacity needed to support the known projects that have applied for Interconnection. Under these circumstances, the requirement that the generation developer fund all Interconnection Facilities before interconnection imposes a high hurdle that may be impacting the economic development of renewable generation.

## 6.1 KEY PRINCIPLES FOR ELIGIBILITY

The CAISO suggests the principles outlined below as the basis for creating a possible distinct category of transmission that encompasses locationally constrained generator supply transmission lines. This distinct category would be defined as "high-voltage transmission facilities necessary to interconnect large concentrations of locationally constrained resources" that are designed to overcome obstacles to the construction of transmission and achieve economies of scale for the development of renewable resources.

Another way to describe this proposal is, essentially, as a subcategory of Interconnection Facilities that would be eligible for alternative cost recovery treatment.

Each of the following principles must be met for proposed transmission expansion projects to be eligible for the alternative cost recovery treatment:

1. **The transmission project is not otherwise eligible for rate treatment that allows costs to be incorporated into the Transmission Access Charge (TAC).**

Generally transmission upgrades that have the following basic operational characteristics would be considered "network" facilities:

- High-voltage transmission that is or is expected to be placed under CAISO operational control.
- Transmission facilities with bi-directional power flows, not radial.
- Transmission facilities that will be integrated into the CAISO Control Area transmission system.

Current FERC policy, as reflected in the CAISO tariff, permits costs associated with Network Upgrades to be rolled-into the general transmission rates of the Participating Transmission Owners. These network facilities would not qualify for alternative treatment. This proposal is limited toward facilities whose costs currently are not recoverable through the CAISO's TAC.

An example of this "non-network" type would be the Tehachapi Segment 3 facility within SCE's 2005 proposal to FERC. The more recent reconfigured transmission plans for the Tehachapi

area includes segments that provide network benefits and thus would not qualify under this proposed criteria.

**2. The transmission project would permit wholesale transmission access to an area not currently accessible where there is a significant energy resource that is not transportable.**

This proposal would address the current problem encountered by developers who must locate their generating resources in areas far from load or existing transmission lines. The existing policy that requires the developer to pay up-front transmission costs for generation tie lines creates a barrier to entry for generators that must be sited in remote areas due to the nature of their energy resource. Only certain transmission facilities that are necessary to connect these locationally constrained resources would be eligible for this alternative rate treatment.

The CAISO contemplates relying on state entities such as the CPUC or CEC to identify and assess areas where non-transportable energy resources like wind, geothermal and solar present the best opportunities for practical development.

It is expected that most, if not all, generation that must be remotely located would qualify as renewable for the purposes of meeting RPS and other renewable energy requirements. However, it is conceivable that other generation that is sited in these remote regions could connect to the supply transmission line and would be eligible for the alternative rate treatment.

**3. The transmission project will to be turned over to the CAISO's operational control.**

This proposal is targeted toward High-Voltage transmission facilities that are expected to be under CAISO operational control.

**4. The transmission project is designed to serve multiple power plants in areas where the energy resource is non-transportable.**

This proposal is targeted toward bulk-transfer transmission facilities that can efficiently serve multiple generating resources. The renewable resources expected to be developed in these areas would each individually have capacity that is significantly smaller than the total transfer capability of the transmission facilities.

**5. The transmission project is evaluated within a prudent grid planning process involving the CAISO, affected utilities and stakeholders.**

The CAISO expects to finalize a robust and comprehensive transmission planning process in the near future that assesses transmission projects based on cost-effectiveness in connection with surrounding projects and facilities. Transmission projects eligible for this alternative rate treatment would be subject to cost-effectiveness principles adopted as part of this sub-regional transmission planning process. In short, the CAISO will conduct analysis to determine whether

the costs associated with meeting the RPS and other renewable requirements are expected to be lower over time with the project than without.

6. **The transmission project would not increase the annual revenue requirement (TAC rates) by more than 5% annually over a 10-year period.**

Stakeholders have raised concerns that this alternative cost recovery treatment could open a floodgate of expensive projects. To address these concerns, this proposal would apply only to those projects that do not individually impact the TAC by more than 5% annually on average over a 10-year period.

As an example, SCE's 2005 proposal for Tehachapi Segment 3 involved an aggregate cost of approximately $75 million (for Segment 3 only.) The overall high-voltage TAC collected system-wide on an annual basis by the CAISO is approximately $540 million. A 5% cap on the annual revenue requirement associated to any one project would be around $27 million. For renewable generators who would pay the upfront costs of a facility like Segment 3, the annual revenue requirement over a 10-year period would be significantly under $27 million.

Extremely expensive projects that impact that annual revenue requirement on average by more than 5% would not qualify for this alternative rate treatment and would have to be fully financed by generation developers. TAC rates shall be reduced as new generators come on line and pay back their portion of the project's costs and will be taken into account in determining whether the project meets this requirement.

7. **The transmission project would be able to demonstrate adequate commercial interest among multiple generation developers.**

Stakeholders have also raised concerns about stranded costs resulting from abandoned investments. As an additional safeguard to ensure the viability of transmission projects and to mitigate the risk of stranded costs, a demonstration of commercial interest would be required for this alternative rate treatment.

One suggestion has been a so-called "open season" period whereby developers could qualify for interconnection through a transparent, non-discriminatory solicitation process. The CAISO invites other ideas for satisfying a need to demonstrate commercial commitment, such as a requirement a certain percentage of the line's capacity to be subscribed by contracts, or Interconnection Study deposits, or other demonstrations of commercial interest prior to advancement of funds to interconnect.

## 6.2 PROPOSED COST RECOVERY TREATMENT

Currently, the costs for building networked transmission facilities, but not gen-ties, are rolled-into the TAC. This reflects the presumption that the networked facilities provide benefits to all users of the Grid.

As discussed above, application of this general transmission pricing policy can serve as a deterrent to the construction of optimally sized Interconnection Facilities necessary for compliance with State and local RPS. The effect could be mitigated by providing that the costs of eligible renewable generator supply transmission would be initially funded by the Participating Transmission Owner and would be recovered by rolling the costs of such facilities into the CAISO's TAC until qualifying generation developers interconnect and pay the going forward costs of the facilities.

As generation develops and utilizes the facilities, developers will reimburse the Participating Transmission Owner their share of the renewable generator supply transmission line in installments. The reimbursement would flow to ratepayers through the Transmission Revenue Balancing Account (TRBA). This would allow renewable generator supply transmission lines to be built in advance of Generator Interconnection requests, but ultimately be paid by generation developers when generation developers step forward to attach generation resources to the line.

Such an approach:

- Provides a mechanism for transmission project developers (Participating Transmission Owners) to obtain full cost recovery for the transmission facilities without unduly burdening the development of renewable generation.

- Benefits prospective multiple facility Interconnection customers by increasing the likelihood that Interconnection Facilities will be in place when they initiate an Interconnection request and ensuring that they do not have to bear the full cost of those facilities up front as a direct assignment charge.

- Benefits electricity consumers by facilitating the most economic development of renewable generating resources through which the policies reflected in the RPS can be advanced.

This approach being considered by the CAISO is consistent with the principles underlying rolled-in rate treatment, *i.e.*, the upgrades provide benefits to all participants in the CAISO markets in the form of greater access to renewable generation and a more diverse portfolio and economic means of meeting the State's RPS, currently 20% by 2010.

Moreover, the inclusion of the costs of eligible renewable generator supply transmission lines in rolled-in transmission rates is temporary because, as new generation is developed that interconnects to the facility, costs will be shifted from transmission customers to generators. In these circumstances, the CAISO suggests that it's appropriate that costs for transmission facilities that facilitate the efficient development of renewable energy resources to meet State and regional policies be initially spread to all transmission customers.

In summary, the CAISO proposes the following principles for cost recovery treatment for transmission line facilities that meet the criteria outlined in this whitepaper:

- **Up-front financing by PTOs of qualifying transmission projects would be recoverable through the Transmission Access Charge (TAC).**

The up-front costs for the unsubscribed portion of the transmission facilities would be initially covered by the Participating Transmission Owner and rolled into the CAISO's TAC, which is paid by all users of the CAISO Controlled Grid. As additional renewable generation resources are developed in the area and connected to the transmission facilities, cost recovery would be transferred to those generation owners. Once the anticipated generation is fully developed, all of the costs would be borne by the generation resources and none of the costs would be included in the TAC.

- **Upon interconnection, generators begin to pay their "pro-rata share" (capacity ratio) of the going forward costs over the life of the facility.**

These going-forward costs would consist of each generator paying their pro-rata share of the PTO's annual revenue requirement for that transmission project. This would include depreciation, any remaining interest expense on the initial investment, maintenance expenses and other costs associated with a transmission facility that typically flow (with FERC approval) to the annual revenue requirement.

The pro-rata share of costs is conceptually: a/b; where "a" represents the physical transmission rights of the generation project in question on the line and "b" represents the full rated capacity of the transmission line under normal operating conditions.

Consider the following simplified example of a project that costs $1,000,000 and uses straight-line depreciation over its 10-year life. Further assume this project's cost of capital is 10%.

The yearly revenue requirement would be:

| | Depreciation Expense | Interest Expense | **Revenue Requirement** |
|---|---|---|---|
| **Year 1** | $100,000 | $10,000 | **$110,000** |
| **Year 2** | $100,000 | $9,000 | **$109,000** |
| **Year 3** | $100,000 | $8,000 | **$108,000** |
| **Year 10** | $100,000 | $1,000 | **$101,000** |

A generator (G1) that interconnects in Year 1 with a 33% percent capacity share of the line would pay 33% of $110k = $36,300; the remaining portion (67%) of the revenue requirement ($73,700) would be covered through TAC.

Another generator (G2) that interconnects to the facilities in Year 3 also with a 33% capacity share of the line would pay 33% of $108k= $35,640, which is the same as G1 in Year 3. G2 would not be required to reimburse TAC ratepayers for its share of the Year 1 and Year 2 interest and depreciation expense ($72,600) in this example.

- **Past carrying costs that reflect the time value of money and the stranded-cost risk will not be assessed to the generation resources.**

Essentially, carrying costs for unsubscribed portions of the transmission facilities will be borne by all CAISO ratepayers through the TAC. By paying these costs, CAISO ratepayers will receive the benefit of having access to the most economical renewable generation resources to meet RPS and other fuel diversity goals.

- **PTOs would retain ownership of the facilities, regardless of whether the transmission line remains radial in nature or evolves into a network facility at a later time.**

Generators could receive transmission rights proportional to their share of the going-forward costs of the radial line. As long as the line remains a non-network facility, these transmission rights should protect against potential congestion costs and allow for scheduling priority.

If the qualifying transmission project evolves into a network facility at a later time, the generators would be relieved of their respective share of the revenue requirement on a prospective basis upon conversion to a network facility.

Any portion of the revenue requirement associated with qualifying transmission facilities that is not recoverable from generators would be borne by all ratepayers through the TAC. Transmission rights for the radial facility would expire, so that transmission rights to the newly upgraded network line would be available with the CAISO's allocation procedures.

# ATTACHMENT G

California ISO
Your Link to Power

California Independent
System Operator Corporation

# Memorandum

**To:** ISO Board of Governors

**From:** Greg Cook, Manager, Tariff & Regulatory Policy Development
Anjali Sheffrin, Chief Economist / Director, Market & Product Development
Chuck King, Vice President, Market Development & Program Management

**Date:** October 12, 2006

**Re:** ***Removing Barriers for Efficient Transmission Development***

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***This item requires Board action.*** This memorandum seeks Board approval for the filing of a petition for a declaratory order to FERC. Such a petition would seek FERC's approval of an alternative cost allocation for construction of transmission facilities to interconnect renewable generating resources located in remote areas and general policy guidance for future development of a tariff amendment related to the financing of such transmission facilities.

## EXECUTIVE SUMMARY

The ISO proposes to seek policy guidance from FERC about a new way to assign costs for transmission construction necessary to interconnect generating resources in remote areas. This memorandum explains this alternative cost allocation, the principles by which transmission facilities might qualify for such cost treatment and the process by which the ISO is working with stakeholders on this proposal.

The current ISO tariff reflects longstanding FERC policy that prescribes two ways to assign costs for high-voltage transmission needed for interconnection:

1) Costs for network transmission facilities can be rolled into Transmission Access charges on the presumption that these facilities benefit the system used by all ISO Scheduling Coordinators.
2) Costs for Generator "tie-lines" that are necessary to safely interconnect a generating plant to the ISO Controlled Grid are borne solely by the Generator developer.

The rigid boundary between these two cost allocation approaches is effectively imposing barriers to the efficient development of renewable generation. Electric energy production through wind, solar, biomass and other technologies is often inherently constrained to certain remote regions that typically require long lines to interconnect to the high-voltage transmission grid. Thus, the costs are often considerably greater than the shorter typical generator tie-lines necessary for generators that are closer to the ISO grid.

In addition, small project developers who have no choice where to locate their generating resource often utilize the capacity of a high-voltage line in relatively small increments compared to the total transfer capability of the facilities; however, under the current two category structure the entire cost of the transmission facility must be paid up-front by the first increment of generation.

As a conceptual proposal to address this market failure, the ISO has developed, with stakeholder input, a new approach that could allow transmission costs for the unsubscribed portion of the facilities to be rolled into the ISO access charges initially but then, as additional generation resource interconnect, the developer would assume responsibility for their share of the annual revenue requirements of the line in proportion to the capacity required for interconnection. Eligibility for this proposed cost allocation would be limited to cost-efficient, high-voltage transmission located in areas where the energy resources are not transportable.

Management seeks to incorporate this conceptual proposal within a petition to FERC. At a later time, the ISO intends to initiate a stakeholder process to develop tariff language to implement this proposal if FERC's response to this petition warrants such an effort. The reason for this two-step process is to gain reasonable assurance that FERC generally supports a "third category" for justifying transmission facilities before committing ISO and stakeholder resources that would be needed to refine the details for a tariff filing.

Management recommends the following motion:

> ***That the ISO Board of Governors approve the principles and cost allocation proposal for a Third Category of New Transmission Facilities, as outlined in the memorandum dated October 12, 2006, and related attachments; and***
>
> ***That the ISO Board of Governors approve the incorporation of this conceptual proposal within a Petition for Declaratory Order and to make all the necessary and appropriate filings with the Federal Energy Regulatory Commission in support of this conceptual proposal.***

## BACKGROUND

Many ISO stakeholders have identified the initial assessment of costs for transmission facilities as a significant barrier to the development of generation that is limited to certain geographical regions with vast potential for renewable energy supply. The unique, location-specific nature of these resources frequently creates different transmission needs compared to other generation sources. Locationally constrained resources are usually located in areas remote from load centers and distant from the existing grid. Transmission facilities required to interconnect these resources are typically 500 kV facilities that can span over 100 miles. This is significantly different from the typical line, five miles or less in length, required to connect other types of generation.

Moreover, renewable generation development in a region typically is added in relatively small increments of generation capacity with several developer parties involved over a period of time. The capacity of an individual generation project often will be much smaller (i.e., 50 MW) than the capacity of the tie-line required to optimally and efficiently connect all expected locationally-constrained generation (i.e., 1000 MW) in the region to the networked grid. In these circumstances, developers maintain they are unable to finance the totality of the costs associated with the Interconnection Facilities sized to accommodate the anticipated quantity of generation in the region.

Current interconnection policies governing the assessment of transmission costs are diminishing prospects for the efficient development of locationally constrained generating resources. Under the current structure, economies of scale are often foregone for less optimal piece-meal renewable energy development that is not as highly impacted by the current transmission policies. The severity of this failure is heightened by the obligations for most California Load-Serving Entities, including municipally owned electric systems, to meet challenging renewable portfolio standards (RPS) goals such as acquiring 20% of their electricity production from renewable resources by 2010. These preferences for renewables have been mandated by state law or, in some cases, by policies established by municipal officials.

Thus the ISO proposes modest changes to its existing policy for assessing costs for certain eligible transmission facilities that are currently not recoverable through the ISO's Transmission Access charges. The ISO also proposes a general framework for new evaluation criteria for certain transmission projects that currently are not considered "network" facilities. This conceptual proposal is not intended to favor one generation technology over another; it is meant to promote efficient transmission development that recognizes significant generation preferences already imposed through mandated RPS and other requirements.

Under judicial interpretations of the Federal Power Act and FERC Order No. 888, the facilities at issue would qualify as transmission facilities in interstate commerce under the jurisdiction of FERC. In addition, although such facilities may not meet FERC's definition of "network" facilities, they enhance the transmission system by promoting fuel diversity and providing access to new resources, in particular renewable resources – which both Congress and California have identified as important public policies. Further, such transmission facilities will promote economic efficiency and enhance system flexibility. Because these transmission facilities benefit transmission customers, the proposed interim rolled-in rate treatment is consistent with cost-causation principles.

As discussed above, the conceptual proposal differs from the treatment afforded the interconnection of large generators. The default allocation of such costs is set forth in FERC Order No. 2003. FERC Order No. 2003, however, specifically provides for Independent Entity Variations from its default procedures, applicable to ISOs and Regional Transmission Organizations. The ISO believes that there is justification for treating the transmission facilities eligible for the alternative rate treatment proposed herein from traditional generator interconnection lines.

In that regard, a traditional generator tie-line typically involves a single resource coming on at a single point in time. The line will be for the sole use of that generator and the line will be sized accordingly. FERC's policy has been to require the generator to pay for the line up front. FERC's existing policy regarding rate treatment for gen-ties is not workable for purposes of encouraging the connection of renewable resources to the grid. Renewable resources are typically located in areas remote from the grid, and renewable developers have no choice but to locate their projects in such locations because the fuel source is not transportable. Renewable development typically involves a number of individual projects (often small projects) -- as opposed to a single project -- that come on line over a period of years -- as opposed to coming on line at a single point in time. Under these circumstances, FERC's existing policy will not promote the development of the necessary infrastructure. Thus, an alternative to FERC's default mechanism is appropriate under the Independent Entity variation.

A complete description of the ISO's proposal can be found in the attached white paper "Removing Barriers to Efficient Transmission Development." The following sections summarize the proposed principles for eligibility and cost allocation to be included in the ISO's petition to FERC.

## PRINCIPLES FOR ELIGIBILITY

The ISO proposes the following principles as the basis for a distinct category of transmission that encompasses locationally constrained generator supply transmission lines:

1. **The transmission project is not otherwise eligible for rate treatment that allows costs to be incorporated into the Transmission Access Charge (TAC).** This proposed cost treatment would apply only to non-network transmission facilities that connect the generators to the ISO grid.

2. **The transmission project would permit wholesale transmission access to an area not currently accessible where there is a significant energy resource that is not transportable.** The existing policy that requires the developer to pay up-front transmission costs for generation tie-lines creates a barrier to entry for generators that must be sited in remote areas due to the nature of their energy resource. The ISO contemplates relying on state entities such as the California Energy Commission to identify and assess areas where non-transportable energy resources like wind, geothermal and solar present the best opportunities for practical development.

3. **The transmission project will to be turned over to the CAISO's operational control.** This proposal is targeted toward High-Voltage transmission facilities that are expected to be under ISO operational control.

4. **The transmission project is designed to serve multiple power plants.** The ISO envisions this unique cost treatment for only for large capacity transmission lines that can efficiently serve multiple generating resources.

5. **The transmission project is evaluated within a prudent grid planning process involving the CAISO, affected utilities and stakeholders.** The ISO would conduct analysis to determine whether the costs associated with meeting the state's renewable requirements are expected to be lower over time with the project than without.

6. **The transmission project would not increase the annual revenue requirement (TAC rates) by more than 5% annually over a 10-year period.** In response to various stakeholder concerns, the ISO endorses a mechanism to limit the risk that an extraordinarily expensive transmission project would have a significant impact upon the transmission access charges. The ISO will propose to FERC that no one project can be projected to add more than a 5% average rise in the TAC rate annually over a ten-year period.

7. **The transmission project would be able to demonstrate adequate commercial interest among multiple generation developers.** As an additional safeguard to ensure the viability of these types of transmission projects and to mitigate the risk of stranded costs, a demonstration of commercial interest would be required for this alternative cost treatment. The ISO will propose to FERC an "open season" period whereby developers could qualify for interconnection through a transparent, non-discriminatory solicitation process. Additionally, the ISO will propose that 30% of the capacity of the proposed transmission line be subscribed through commercial contracts as a prerequisite for this alternative cost treatment.

## ALTERNATIVE COST ALLOCATION PROPOSAL

The ISO proposes the following principles for recovering the costs of transmission line facilities that meet the eligibility described above.

- **Up-front financing by Participating Transmission Owners of qualifying transmission projects would be recoverable through the Transmission Access Charge (TAC).** The up-front costs for the unsubscribed portion of the transmission facilities would be initially covered by the PTO and rolled into the ISO's TAC, which is paid by all users of the ISO Controlled Grid. As additional renewable generation resources are developed in the area and connected to the transmission facilities, cost recovery would be transferred to those generation owners. Once the anticipated generation is fully developed, the costs would be borne by the generation developers and would not be included in the TAC. Thus a significant difference between this proposed alternative and current practice is the timeframe for the allocation of costs; generator developers would still pay, but costs for the unsubscribed portion of the facilities initially would be borne by the TAC until additional generators were interconnected.

- **Upon interconnection, generators begin to pay their "pro-rata share" (capacity ratio) of the annual revenue requirements over the life of the facility.** Another key difference between this proposed alternative and current practice is that the first generation developer would not bear the entire cost of the transmission line. The proposal allows for multiple developers to pay for their share of the capacity of a line. Thus transmission into remote regions could be optimally sized to capture efficiencies in areas with large potential for renewable resources. As more generation is developed in the area, the revenue requirement for the facilities would be transferred from the TAC to the multiple generation developers until the generators cover the entire cost of the facilities, similar to the current cost treatment for generator tie-lines.

- **Past expenses (interest expense, depreciation expense, taxes, O&M, etc.) recovered through the annual revenue requirement and the stranded-cost risk will not be assessed to the generation resources.** Essentially, costs for unsubscribed portions of the transmission facilities would be borne by all ISO ratepayers through the TAC. By paying these costs, ISO ratepayers will receive the benefit of having access to the most economical renewable generation resources to meet RPS and other fuel diversity goals.

- **PTOs would retain ownership of the facilities, regardless of whether the transmission line remains radial in nature or evolves into a network facility at a later time.**

## STAKEHOLDER PROCESS

The ISO has held an extended stakeholder process to understand stakeholder perspectives and improve the proposal. The following lists the stakeholder activities that have occurred since early summer to aid in the development of the ISO proposal.

- Board of Governors informational briefing June 13th
- White Paper posted June 28th
- Stakeholder Meeting July 7th
- Stakeholder written comments received July 14th
- MSC discussion May 31st, August 8th and September 18th
- Revised White Paper posted September 22nd
- Stakeholder Conference Call September 29th

- Written stakeholder written comments received October 5th

## POSITIONS OF THE PARTIES

The written comments from the American Wind Energy Association, California Energy Commission, National Grid, Pacific Gas & Electric Company and Southern California Edison generally supported the "third category" concepts and efforts to amend eventually the CAISO's tariff as it relates to bulk transmission projects. The California Public Utilities Commission has also expressed support for the proposal. The written comments from the California Department of Water Resources/State Water Project, California Municipal Utilities Association, LS Power Generation, LLC, Metropolitan Water District, Mirant and Northern California Power Agency either generally opposed or raised specific concerns about the concepts for alternative treatment of certain transmission facilities.

A summary of the two sets of written comments submitted to the ISO and the ISO's response to these comments is included as Attachment 2.

A number of stakeholders have commented on this process by which the ISO would seek FERC's policy guidance through a Petition for Declaratory Order. A frequent suggestion is that the ISO proceed immediately into a stakeholder process to develop tariff language that resolves specific details, and then file a proposed tariff amendment with FERC. Management has considered this approach but continues to believe it is wise, especially for an issue that may modify longstanding FERC policy, to gain reasonable assurance that FERC would approve this conceptual proposal before committing the ISO and stakeholders to an intensive process to develop tariff language.

A number of stakeholders also raised concerns about the potential risk for egregious costs of gen-tie lines to be borne by all ratepayers. To address these reasonable concerns the ISO has added to this conceptual proposal two additional principles that require each transmission project to demonstrate commercial interest and limit the overall impact to the TAC. The ISO believes these principles significantly mitigate the risk of stranded investment while avoiding additional barriers to the development of transmission needed for generation in remote areas.

## MARKET SURVEILLANCE COMMITTEE OPINION

The MSC has discussed this proposal at three public meetings and one stakeholder conference call and has contributed significantly to the understanding of interested parties as well as the refinement of the proposal.

The MSC is providing the Board with its written opinion separately.

## MANAGEMENT RECOMMENDATION

Management recommends that the Board approve the principles and cost allocation methodology described above and in the attached white paper to remove barriers to the efficient development of new transmission facilities necessary for interconnecting renewable resources. Management also recommends that the Board approve the proposed process of proceeding with filing a Petition for Declaratory Order at FERC to obtain the Commission's guidance on the establishing a new category of transmission facilities.

**MOTION**

***Moved,***

***That the ISO Board of Governors approve the principles and cost allocation proposal for a Third Category of New Transmission Facilities, as outlined in the memorandum dated October 12, 2006, and related attachments; and***

***That the ISO Board of Governors approve the incorporation of this conceptual proposal within a Petition for Declaratory Order and to make all necessary and appropriate filings with the Federal Energy Regulatory Commission in support this conceptual proposal.***

## Stakeholder Process:

# Principles and Cost Allocation Proposal for a Third Category of New Transmission Facilities

# Summary of Submitted Comments

**(1) Stakeholder Written Comments to June 28, 2006 White Paper**
**(2) Stakeholder Written Comments to September 21, 2006 Revised White Paper**
**(Documents available at: http://www.caiso.com/1816/1816d22953ec0.html)**

| Stakeholder | Comment | ISO Response |
|---|---|---|
| (1) American Wind Energy Association (AWEA) | The CAISO's White Paper addresses a fundamental problem: generation will not come until there is transmission, and transmission will not be built until there are generator requests for service. There is a need for policy reform to address this "chicken and egg" problem.<br><br>The CAISO's policy should not be based upon a generation preference, but rather should address the specific circumstances that currently impede the planning and construction of needed transmission. This should include areas with these characteristics: | The CAISO agrees these characteristics should apply to the type of transmission facilities eligible for alternative cost recovery treatment, and the CAISO believes its proposed principles encompass these characteristics. |

| Stakeholder | Comment | ISO Response |
|---|---|---|
| | ▪ Significant potential for development of an inherently location-constrained generation technology<br>▪ Insufficient transfer capability at present to allow development of the resource<br>▪ Reasonable basis for concluding that multiple projects will be developed if sufficient transmission were built<br>▪ The appropriately-sized transmission is greater than any individual generation project can be expected to finance.<br><br>AWEA intends to review and work with other stakeholders to ensure that any CAISO proposal withstands FERC scrutiny. | |
| (1) California Department of Water Resources' State Water Project (DWR/SWP) | The CAISO should develop a more thorough and specific proposal. A Declaratory order could be applied in a broader context to include out-of-state or out-of-country regions and non-wires services or facilities.<br><br>CAISO should answer questions related to:<br>1) The legal justification for the CAISO proposal<br>2) The necessity for this proposed petition<br>3) The operational control of these type of transmission facilities<br>4) Whether renewable generators would own these facilities and be required to become PTOs<br>5) Specific details on the cost recovery mechanism<br>6) Specific criteria for economic analysis<br>7) Whether generators would repay "carrying" costs<br>8) Whether non-renewable generators would be allowed to connect to these transmission facilities | The CAISO recognizes that FERC must approve the specifics of any tariff language that seeks to implement this proposed policy.<br><br>The CAISO believes the Revised White Paper clarifies its proposal regarding these issues:<br>1) The proposal seeks to address a market failure that imposes barriers to the efficient development of renewable generation facilities.<br>2) The severity of this market failure is heightened by the obligations upon LSEs to meet RPS goals.<br>3) These facilities would operate under CAISO control.<br>4) PTOs would retain ownership of these transmission facilities.<br>5) The Revised White Paper includes a conceptual example, and additional details likely would be addressed within a possible tariff filing.<br>6) The Revised White outlines the conceptual proposal for economic analysis on these |

| Stakeholder | Comment | ISO Response |
|---|---|---|
| | | transmission facilities, and additional details likely would be addressed within a possible tariff filing.<br>7) Generators would assume their pro rata share of the going forward costs over the life of the facility.<br>8) All types of generation would be eligible for interconnection to these types of facilities. |
| (2) California Department of Water Resources' State Water Project (DWR/SWP) | The CAISO appears to support including the costs of gen-tie lines in the TAC. The CAISO should be aware this proposal would be counter to FERC's existing interconnection policy. | The CAISO recognizes this is a potential change in FERC policy, which is why the CAISO is seeking conceptual guidance from FERC at this time before committing the time and resources necessary to develop a detailed tariff amendment. |
| (1) California Energy Commission | The CEC supports the efforts for recognition of a third category of transmission and approval of alternative cost recovery for these facilities. | |
| (1) California Municipal Utilities Association (CMUA) | The CAISO should reconsider its tactical two-step approach. Details needed for a tariff filing are lacking and the resulting policy guidance from FERC may be of limited value.<br><br>California law applies goals for renewable development for munis that are highly similar to those applied to CPUC-jurisdictional entities.<br><br>The CAISO approach is unnecessary and bad policy.<br><br>Wind energy regions often may be accessed through network upgrades, such as the plan being pursued at Tehachapi. This controversial issue is being raised for no good reason.<br><br>This proposal is well beyond the proper role of the CAISO. There may be no limit to the societal goals in which the CAISO could pursue. | The CAISO is seeking conceptual guidance from FERC at this time before committing the time and resources necessary to develop a detailed tariff amendment.<br><br>The proposal is well within the CAISO's obligation to efficiently plan transmission upgrades throughout the CAISO grid. Identifying market failures and proposing |

| Stakeholder | Comment | ISO Response |
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| | | ways to lower barriers to transmission access is a key part of transmission planning. |
| | The CAISO should examine market design in a comprehensive, rather than piecemeal, fashion. All market participants do not benefit from remote renewable generation.<br>▪ Local procurement obligations make it highly unlikely that certain CMUA members could integrate remote renewable resources.<br>▪ Proposal subsidizes certain resources distant from load while attempting to price energy and transmission within LMP design. | |
| | The CAISO should clarify whether generator's costs would be "pro rata, going forward" or including the prior carrying costs of the facilities. Stakeholders should be given additional opportunities to provide written comments after this clarification. | The CAISO's revised White Paper clarifies the generator's costs would be its share of the going-forward costs of the facility. |
| | All funding options appear to place the risk that no development occurs on load. | The CAISO's proposal recognizes that past carrying costs borne by ratepayers through the TAC reflect the time value of money and the stranded-cost risk. This is intended to overcome the high hurdle currently faced by generators locating in remote regions. |
| | CAISO proposal is identical to SCE's petition and appears headed toward the same result. | The CAISO's proposal is different from SCE's petition because generators are required to pay their portion of the going-forward costs; SCE's proposal did not require generators to pay these costs. |
| | Allowing thermal generators to interconnect to subsidized lines raises questions about the overall purpose of the proposed policy. CAISO proposal subsidizes the costs for one type of resource to the disadvantage of other fuel sources. State policies promote | The CAISO's proposal is not intended to favor one type of energy resource over another. It is meant to promote efficient transmission development that recognizes generation preferences already imposed through |

| Stakeholder | Comment | ISO Response |
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| | renewable resources, not one fuel source. | mandated RPS and other requirements. |
| (2) LS Power Generation, LLC | LS Power completely supports the state's RPS requirements; however, the CAISO proposal has the potential to saddle California ratepayers with stranded costs many years into the future.<br><br>This issue is neither related to market design nor is caused by market failure; rather, the issue is related to FERC's interconnection policy. The CAISO's proposal seeks to carve out an exception for renewable resources that is highly discriminatory because the proposal does not advance the same treatment to all other generators proposing to interconnect to the CAISO grid.<br><br>Most large generators have been interconnected to 115kV, 230kV and 500kV transmission networks, and the cost of direct assignment facilities associated with many of these facilities has been quite significant.<br><br>The assumption that only initial costs will be rolled into TAC is highly speculative, as there is no guarantee that the line will be fully utilized. This policy could have astronomical impacts upon the TAC that could saddle market participants and California ratepayers with hundreds of millions of dollars of non-recovered costs.<br><br>LS Power believes it is not prudent to move forward with a proposal of this magnitude without addressing the grid planning methodology to be used to evaluate the costs and benefits of these investments. The current TEAM methodology is not designed to address these investments. | The proposal seeks to address a market failure that imposes barriers to the efficient development of renewable generation facilities. The proposal does permit any type of generating facility to connect to this type of transmission facilities.<br><br>The CAISO agrees that a cap on the impact to the TAC brought by these types of transmission facilities is a reasonable concept.<br><br>The CAISO recognizes this is a potential change in FERC policy, which is why the CAISO is seeking conceptual guidance from FERC at this time before committing the time and resources necessary to develop a detailed tariff amendment. |

| Stakeholder | Comment | ISO Response |
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| | The proposed 5% limit on each project's impact upon TAC fails to impose a reasonable cap because the cumulative affect of a series of stranded investments could result in a highly burdensome impact on all California ratepayers. LS Power recommends a 60% subscription in the transmission facility with a full 95-100% subscription within 3-4 years. | The CAISO intends to seek FERC policy guidance on the reasonableness of any limits that would mitigate the risks of stranded investment. |
| | The opportunity for constructing and financing the third category of transmission assets should be made available to all market participants and that PTOs interested in investing in these projects should be allowed to compete for this investment opportunity. | This proposal is not intended to preclude any opportunities for merchant transmission to construct facilities and to earn appropriate compensation for its development. |
| | LS Power recommends a full tariff filing to provide a specified forum to resolve this matter. | The CAISO recognizes this is a potential change in FERC policy, which is why the CAISO is seeking conceptual guidance from FERC at this time before committing the time and resources necessary to develop a detailed tariff amendment. |
| (1) Metropolitan Water District (MWD) | Slim description of benefits is speculative, unlikely to be experienced and FERC already rejected SCE petition.<br>▪ CAISO proposal does not provide a more economic means of meeting RPS because overall costs for renewable generation will not be lowered<br>▪ Non-renewable resources would have incentives to site its facilities on the eligible transmission line. | The CAISO's proposal is different from SCE's petition because generators are required to pay their portion of the going-forward costs; SCE's proposal did not require generators to pay these costs. |
| | New Category will have Unintended Consequences<br>▪ may result in rolling into TAC the cost of all generation tie-lines<br>▪ would dilute accurate price signals under MRTU by reducing the initial cost of serving load from remote renewable generators | The CAISO has recognized appropriate caps to mitigate the risks of high impacts upon the TAC.<br><br>This proposal should not have significant impact upon LMP prices. It is designed to efficiently plan for transmission upgrades into areas with high potential for |

| Stakeholder | Comment | ISO Response |
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| | ▪ would distort price signals to incent renewable generation close to load<br>▪ remote locations means the costs of implementing alternative rate treatment may be very high<br>▪ RCST settlement demonstrates the CAISO needs more resources close to load; this proposal would facilitate generation remote from load.<br>▪ Other possible ramifications, such as who would own the facility, who would be entitled to depreciate, what are the terms and conditions for repayment by the generators, and whether generators pay all incurred costs or just going-forward costs.<br><br>LSEs, not the CAISO, should determine how to subsidize renewable generation. | large MWs of renewable resources.<br><br>The Revised White Paper clarifies that PTOs would retain ownership of these facilities and that generators would be responsible for going-forward costs. Additional details likely would be addressed within a possible tariff filing.<br><br>The intent of this proposal is to efficiently develop transmission needed in remote regions. |
| (2) Metropolitan Water District (MWD) | Metropolitan fundamentally questions the wisdom of subsidizing the cost of developing remote, rather than local, renewable sources of energy.<br><br>The CAISO's revised proposal distorts the price signals that would otherwise exist under LMP.<br><br>The CAISO's revised proposal will have unintended consequences; for example, a thermal generator would have incentive to interconnect its facility to this type of transmission line, and the CAISO would have to build another line in the vicinity for future renewable resources.<br><br>Metropolitan is uneasy that the CAISO proposal will result in rolling into TAC the cost of all generation tie-lines, not just those intended | Because the fuel source in remote regions is non-transportable, developers face barriers in those areas because transmission lines needed to interconnect to the grid are typically longer and more expensive than other gen-tie lines.<br><br>This proposal should not have significant impact upon LMP prices. It is designed to efficiently plan for transmission upgrades into areas with high potential for large MWs of renewable resources.<br><br>The CAISO does not build transmission lines, and this proposal is designed to enhance efficient planning of transmission so that lines can be optimally sized. |

| Stakeholder | Comment | ISO Response |
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| | to benefit renewable generation.<br><br>Metropolitan would prefer a cumulative, maximum increase cap to the TAC instead of a cap on individual projects.<br><br>The interconnecting generator should pay its share of the cumulative costs.<br><br>Commitments for a majority of a transmission line's capacity should be required to minimize the potential for stranded investments. | The proposal limits eligibility for this cost treatment in several ways; for example, only transmission lines in remote regions would qualify for this alternative treatment. The CAISO agrees on a cap on the impact to the cap, and will continue to work with stakeholders on details related to the magnitude of such a cap.<br><br>The CAISO agrees that interconnecting generators should pay its share of the going forward costs, and will continue to work with stakeholders on details related to the magnitude of these costs.<br><br>The CAISO is proposing that 30% of a transmission line's capacity be committed, and will work further with stakeholders who believe this percentage should be modified. |
| (2) Mirant | Mirant supports the state's renewable policy, fuel diversity and environmental goals and offers comments as constructive suggestions.<br><br>The CAISO's proposed third category appears to be a substantial change in interconnection policy. Mirant poses the question whether the magnitude of the problem warrants diversion from FERC precedent, or could it be dealt with in a more isolated way.<br><br>Mirant recommends the costs for this type of transmission should be explicit and tracked through a separate accounting mechanism.<br><br>Mirant suggests that, in order to avoid incentives to delay generation construction, developers that interconnect later should pay their proportional share of costs over a longer time period | <br><br>The CAISO has defined the market failure and anticipates continued obstacles that are significant enough to warrant this petition to FERC.<br><br>This idea should be explored as part of a possible stakeholder process to develop a tariff amendment.<br><br>This idea should be explored as part of a possible stakeholder process to develop a tariff amendment. |

| Stakeholder | Comment | ISO Response |
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| | rather than just the "going forward" portion.<br><br>Mirant comments that without a significant percentage (40-50%) of the expected resources demonstrating a binding financial commitment, the stranded costs risk to ratepayers is unreasonably high.<br><br>The CAISO should exhaust merchant opportunities to manage the renewable transmission risk before ratepayers are forced to bear all the risks and associated costs. | This idea should be explored as part of a possible stakeholder process to develop a tariff amendment.<br><br>This proposal is not intended to preclude any opportunities for merchant transmission to construct facilities and to earn appropriate compensation for its development. |
| (1) National Grid | The CAISO's proposal is a positive step, moves public policy forward, a step in the direction of improved regional planning.<br><br>The new category of transmission should include all generation types rather than just renewable generation.<br>▪ Traditional generation technologies seeking to site in remote areas also face barriers, thus diminishing access to diverse resources to the detriment of customers.<br><br>National Grid agrees that multi-generator supply lines provide benefits to all grid users and should be eligible for broader cost allocation.<br><br>Further development and thought should be given to these questions:<br>▪ What are the benefits of these lines and how should these benefits be measured?<br>▪ Do both generators and load benefit from these lines?<br>▪ If load customers benefit, should the ultimate cost be rolled into the TAC?<br>▪ Should the generators' ability to pay for transmission | The CAISO appreciates these constructive comments. |

| Stakeholder | Comment | ISO Response |
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| | supply lines be considered in designing cost allocation mechanism? | |
| (1) Northern California Power Agency (NCPA) | Integrated resource planning is not a proper role for the CAISO.<br><br>The proposal needs more detail, including a methodology for evaluating the costs and benefits for eligible facilities.<br><br>Rolled-in rate treatment is inconsistent with cost causation. Who pays for transmission should be based on cost causation.<br><br>The presumption that all market participants will benefit is misleading because LSEs are not equal in meeting RPS requirements, and resources differ in their location.<br><br>It is questionable whether NCPA customers could utilize renewable generation in Tehachapi, but would pay under the current proposal.<br><br>CAISO should recognize that energy has to be deliverable to load – similar to resource requirements in locally-constrained areas.<br><br>If cost treatment strays from cost causation principles, evaluation of trunk lines should be conducted within the framework of the entire market design, and incremental costs on load-pocket load should be included.<br><br>CAISO proposal doesn't address whether generator is responsible for going-forward costs or the full cost of the project.<br><br>Specific contractual commitments should be established to ensure that sufficient renewable projects will be developed to cover the cost of the facility. | This proposal does not place the CAISO in the role of integrated resource planning. The proposal is well within the CAISO's obligation to efficiently plan transmission upgrades throughout the CAISO grid.<br><br>The CAISO is seeking conceptual guidance from FERC for an alternative cost treatment of transmission facilities. A possible tariff filing is more appropriate for defining the methodology to be utilized in assessing the costs and benefits.<br><br>This proposal is not limited to the Tehachapi area.<br><br>This proposal only seeks to overcome the hurdle for initial financing of long transmission lines that is faced by developers in remote areas. It does not address resource requirements in locally constrained areas and does not require deliverability.<br><br>The Revised White Paper clarifies this proposal imposes going forward costs upon the interconnecting generator.<br><br>The CAISO agrees that a demonstration of commercial interest should be required, and the CAISO is seeking guidance from FERC as to the nature of such a |

| Stakeholder | Comment | ISO Response |
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| | | demonstration. |
| | Long-term contracts need long-term FTRs, or else LSEs would be discouraged from making commitments. | The CAISO appreciates these comments. |
| | If long-term FTRs could ensure that contracting LSEs could rely on the deliverability of the resource and get credit for local reliability requirements, then NCPA members would be more likely to consider contracting with remote resources to voluntarily finance trunk lines. | The CAISO appreciates these comments. |
| (2) Northern California Power Agency (NCPA) | NCPA strongly supports renewable resource development and its members are subject to renewable generation goals that are highly similar and in many cases more aggressive than those applied to CPUC-jurisdictional entities. NCPA's comments should not be interpreted as a lack of support for accessibility to renewables. | |
| | NCPA is concerned that this proposal puts the CAISO in the role of integrated resource planning, and NCPA questions whether this is an appropriate role for an independent grid operator. | This proposal does not place the CAISO in the role of integrated resource planning. The proposal is well within the CAISO's obligation to efficiently plan transmission upgrades throughout the CAISO grid. |
| | The CAISO proposal is too vague to evaluate costs and benefits. . It may be more appropriate to propose such a cost recovery mechanism for specific projects as they materialize rather than introduce a general rule that could be applied to a wide range of projects. This proposal should be fully vetted prior to implementation. | This conceptual proposal will not be implemented without a FERC approved tariff amendment that is developed and proposed within a CAISO stakeholder process. |
| | The CAISO proposal deviates from the principle of cost causation. The presumption that all participants benefit from a more diverse portfolio and economic means of meeting RPS is based on misleading notions, namely that all LSEs are in the same situation | The proposal requires that generators interconnecting to these types of transmission facilities pay their share of the going forward costs. It is intended to overcome the initial financing barrier that is hindering development of long |

| Stakeholder | Comment | ISO Response |
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| | in failing to meet their RPS goals and that all resources are equally deliverable. NCPA believe the costs of these transmission facilities should be allocated to those LSEs that directly benefit from the access made available as a result of these facilities.<br><br>NCPA suggests a majority share of the capacity for this type of transmission project should be contracted to demonstrate sufficient commitment, and that a minimum requirement of renewable generation be committed. The appropriate percentage requirement should be developed through the CAISO stakeholder process.<br><br>NCPA recommends specific limitations on increases to the TAC on a year-by-year comparison as well as the CAISO's proposed 5% cap on average over a 10-year period. | transmission lines that are needed for remote areas.<br><br>The CAISO agrees that some demonstration of commercial interest should be required before the alternative cost treatment is applied to certain transmission facilities. The CAISO is seeking FERC guidance on this concept in anticipation that the appropriate percentage requirement is worked out through a stakeholder process. |
| (1) Pacific Gas and Electric Company | PG&E supports changes to the CAISO Tariff addressing the initial and subsequent cost responsibility of bulk transmission lines necessary for renewable resources.<br><br>PG&E suggests that eligibility should be linked to the existence of state or federal policies. The CAISO should rely on state regulatory findings.<br><br>PG&E generally supports the proposed basic criteria for the size and cost-effectiveness of eligible renewable resources.<br><br>PG&E supports inclusion of a prerequisite based upon forward contracts with LSEs.<br><br>PG&E does not support alternatives that would transfer cost responsibility to a subset of PTO customers after an initial period. | The CAISO appreciates these constructive comments.<br><br>The CAISO agrees that some demonstration of commercial interest should be required before the alternative cost treatment is applied to certain transmission facilities. The CAISO is seeking FERC guidance on this concept in anticipation that the appropriate percentage |

| Stakeholder | Comment | ISO Response |
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| | | requirement is worked out through a stakeholder process. |
| | PG&E is concerned that a Petition for Declaratory Order will cause unnecessary delay and that instead a tariff filing would most quickly achieve the anticipated benefits. | The CAISO is seeking conceptual guidance from FERC at this time before committing the time and resources necessary to develop a detailed tariff amendment. |
| (1) Southern California Edison Company | Overall, SCE supports this proposal from a technical and procedural perspective. | |
| | However, CAISO should skip the petition for declaratory order and proceed directly into tariff development. If the CAISO pursues the petition, stakeholder process on tariff development should begin immediately while waiting for FERC to issue its declaratory order. | The CAISO is seeking conceptual guidance from FERC at this time before committing the time and resources necessary to develop a detailed tariff amendment. |
| | SCE supports the concept that a CAISO determination of the trunkline facilities being necessary for the efficient development of renewable resources to meet state RPS standards should justify up-front cost recovery. | |
| | CAISO's proposed cost recovery is equitable and reasonable. The CAISO should make clear that ratepayers will not pay 100% of facilities. | The Revised White Paper seeks to clarify that generators do pay their share of the going forward costs as they interconnect. |
| | Cost recovery mechanism at the federal level will better facilitate construction of transmission to meet RPS than the limited state jurisdictional level. | |
| | RPS generation benefits all users of the grid and costs should not fall solely on the ratepayers of the utility where the facility is required by Mother Nature to locate. | |
| | SCE opposes the alternative proposal to phase-out TAC recovery | The Revised Proposal does not include a phase-out of |

| Stakeholder | Comment | ISO Response |
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| | after five years – this would ensure continued uncertainty so that PTOs would require payment up-front for costs. | TAC recovery. |
| | SCE opposes the second alternative exempting non-CPUC jurisdictional entities – RPS generation benefits all CAISO grid users. Any attempted bifurcation of the costs being rolled-in would be unmanageable. | The CAISO agrees. |
| | SCE believes the following explicit requirements for facilities with alternative rate treatment should include:<br>▪ Facilities that support RPS goals, not merely be considered "renewable" generation.<br>▪ Facilities under CAISO operational control with minimum operating voltage of 200 kV.<br>▪ CAISO and FERC approval for alternative rate recovery before any PTO is required to start permit or construction of facilities.<br>▪ CAISO determines the line capacity before the PTO can determine and file with FERC the rate it charges the interconnecting generators.<br>▪ If a trunkline ultimately becomes a network facility, future charges to generators will be eliminated.<br>▪ CAISO should ensure interconnected generators are not eligible for any type of refund based on prior usage of the line. | The CAISO appreciates these constructive comments. |
| | SCE believes eligible facilities should provide for the integration of renewable generation within a limited geographic area that is a reasonable distance from the existing grid. | The CAISO agrees. |
| | Only non-network facilities should be considered for the alternative | The CAISO agrees. |

| Stakeholder | Comment | ISO Response |
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| | rate treatment. Transmission needed for renewable generation often are not gen-ties in the traditional sense due to their higher cost, capability to provide for the needs of multiple generators, and greater length when compared to traditional gen-tie facilities. CAISO proposal should cover only those facilities that fall into the "void."<br><br>Power Purchase Agreements should be required to demonstrate access to renewable generation to allow for alternative rate treatment. State law requires some showing or validation that the proposed facilities are to be constructed for renewable resources.<br><br>The main benefit of the trunkline proposal is the environmental benefit of avoiding numerous gen-ties running in parallel. | The CAISO agrees that some demonstration of commercial interest should be required before the alternative cost treatment is applied to certain transmission facilities. The CAISO is seeking FERC guidance on this concept in anticipation that the appropriate percentage requirement is worked out through a stakeholder process. |
| (2) Southern California Edison Company | SCE continues to support the CAISO's proposal. SCE offers a number of constructive edits related to the language used in the Revised White Paper.<br><br>SCE suggests the "cap" for each project's impact on the TAC use a different measurement mechanism than the proposed trigger of 5% of the TAC rate. SCE suggests an easier "cap" mechanism that is readily accessible, unambiguous and publicly available would be a calculation based on the amount of Gross Plant as reflected in the TAC.<br><br>SCE does not agree that a certain percentage of a line's capacity needs to be subscribed by contracts or other demonstrations of commercial interest. SCE suggests the one approved PPA between the generator and a PTO should suffice as a demonstration of commercial interest, and that the CAISO should | The CAISO appreciates this comment. The CAISO agrees that a cap on the impact to the TAC brought by these types of transmission facilities is a reasonable concept. Additional details on the mechanism for applying this cap likely would be addressed within a possible tariff filing.<br><br>The CAISO appreciates this comment. The CAISO looks forward to FERC guidance on this concept of an appropriate demonstration of commercial interest. |

| Stakeholder | Comment | ISO Response |
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| | also rely on studies by state agencies to identify renewable resource areas. | |
| | SCE suggests the inclusion of the costs of eligible facilities in rolled-in transmission rates include return on investment, taxes, operations and maintenance, administrative and general expenses and all other costs associated with a transmission facility that are typically reflected in (with FERC approval) the annual revenue requirement. SCE recognizes that details remain to be developed but emphasizes that this proposal must not proscribe the ratemaking for PTOs. | The CAISO agrees that, under this conceptual proposal, all costs typically reflected in the annual revenue requirement that is approved by FERC would be eligible to be initially rolled into the TAC. Additional details on the inclusion of costs of eligible facilities likely would be addressed within a possible tariff filing. |
| | SCE proposes language to clarify that capacity of a qualifying transmission facility would be available to generators according to FERC-approved interconnection procedures. | The CAISO agrees with this concept and anticipates that additional details likely would be addressed within a possible tariff filing. |

# ATTACHMENT H

# CAISO Multi-User Resource Trunkline Aggregate Cap
## Illustrative Effect on TAC Rates Using High Voltage Transmission Net Plant

| Line # | | | |
|---|---|---|---|
| 1 | **Current CAISO area wide HV TRR** | **$598,440,671** | (As of January 1, 2007) |
| 2 | Net Plant PG&E HV | $1,489,500,000 | (PG&E TO9 ER06-1325-000) |
| 3 | Net Plant SCE HV | $1,370,715,000 | (SCE TO Case ER06-186-000) |
| 4 | Net Plant SDG&E HV(/1) | $339,550,286 | (SDG&E TO Case ER07-284-000) |
| 5 | **Total HV Net Plant** | **$3,199,765,286** | (Sum Lines 2, 3, 4) |
| | **Rule of Thumb $TRR/$Capital** | **20%** | |

| | HV Net Plant | | | |
|---|---|---|---|---|
| | **% Net Plant** | **Aggregate Cap(/2) (% * Line 5)** | **Added TRR (20% of Aggregate Cap)** | **Increase in current HVTAC (Added TRR / Line 1)** |
| 6 | 15% | $479,964,793 | $95,992,959 | 16.04% |

/1 This number is an assumption. SDG&E's rate case (ER07-284-000) did not break out its transmission plant into HV and LV. However, SDG&E does split its TRR into HV and LV. The % used for the TRR split was assumed for purposes of this table

/2 These amounts are at most 70% of the potential capital costs of 3rd category facilities, assuming that at least 30% of the capacity is already subscribed through LGIAs. If more than 30% of the capacity is subscribed then the total capital costs could be even higher without affecting the HVTAC.

| | | | |
|---|---|---|---|
| 1 | **PG&E** | | |
| 2 | **Net Plant in Service HV Network** | **$1,429,501,000** | PG&E TO Case (ER06-1325-000) Exhibit PGE-21, 127 of 190, Statement BK Period 2, Table 7: Plant in Service, Line 35 |
| 3 | | | |
| 4 | **SCE** | | |
| 5 | Cost of HV Transmission Plant | $2,286,829,000 | SCE TO Case (ER06-186-000) Volume 5, Statement AD, Period 2, sheet 2 of 3 |
| 6 | Accumulated Depreciation of HV Transmission Plant | $916,114,000 | SCE TO Case (ER06-186-000) Volume 5, Statement AE, Period 2, sheet 3 of 4 |
| 7 | **Net HV Transmission Plant** | **$1,370,715,000** | Line 5 - Line 6 |
| 8 | | | |
| 9 | **SDG&E** | | |
| 10 | Cost of Transmission Plant | $1,122,182,000 | SDG&E TO Case (ER07-284-000) Statement AD Period 2, Exhibit No. SDG-11, page 12 of 149, line 17 |
| 11 | Transmission Depreciation Reserve | $445,141,000 | SDG&E TO Case (ER07-284-000) Statement AE, Exhibit No. SDG-9, page 14 of 242, line 5 |
| 12 | Net Transmission Plant | $677,041,000 | Line 10 - Line 11 |
| 13 | Allocation basis for HV Transmission pre 2001 | $342,058,485 | SDG&E TO Case (ER07-284-000) High Voltage-Low Voltage Summary of Plant Allocation Study, SDG-9 Page 166-167 of 242 |
| 14 | Allocation basis for HV Transmission 2001 - June 30 2006 | $209,733,345 | SDG&E TO Case (ER07-284-000) High Voltage-Low Voltage Summary of Plant Allocation Study, SDG-9 Page 166-167 of 242 |
| 15 | Total Allocation basis for HV Transmission | $551,791,831 | Line 13 + Line 14 |
| 16 | Allocation basis for LV Transmission pre 2001 | $328,125,712 | SDG&E TO Case (ER07-284-000) High Voltage-Low Voltage Summary of Plant Allocation Study, SDG-9 Page 166-167 of 242 |
| 17 | Allocation basis for LV Transmission 2001 - June 30 2006 | $220,319,177 | SDG&E TO Case (ER07-284-000) High Voltage-Low Voltage Summary of Plant Allocation Study, SDG-9 Page 166-167 of 242 |
| 18 | Total Allocation basis for LV Transmission | $548,444,889 | Line 16 + Line 17 |
| 19 | Allocation factor for High/Low split | 50.15% | Line 15 / (Line 15 + Line 18) |
| 20 | | | |
| 21 | **SDG&E HV Net Plant** | **$339,550,286** | Line 12 * Line 19 |

# ATTACHMENT I

**NOTICE OF FILING SUITABLE FOR PUBLICATION IN THE FEDERAL REGISTER**

**UNITED STATES OF AMERICA**
**BEFORE THE**
**FEDERAL ENERGY REGULATORY COMMISSION**

| | | |
|---|---|---|
| **California Independent System Operator Corporation** | ) | **Docket Nos. EL07-____-000** |

**Notice of Filing**

[ ]

Take notice that on January 25, 2007, the California Independent System Operator Corporation (CAISO), pursuant to Rule 207 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (18 C.F.R. § 385.207), filed a Petition for Declaratory Order in the captioned docket. In the Petition for Declaratory Order, the CAISO requests general conceptual approval for the financing mechanism proposed therein and requests additional guidance regarding the eligibility criteria that should apply for that financing mechanism.

The CAISO states that copies of the Petition for Declaratory Order, and all attachments thereto, have been served on the California Public Utilities Commission, the California Energy Commission, the California Electricity Oversight Board, and all parties with effective Scheduling Coordinator Service Agreements under the ISO Tariff. In addition, the CAISO has posted the Petition for Declaratory Order and all attachments on the ISO Home Page.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant. The Commission encourages electronic submission of protests or interventions in lieu of paper using the "eFiling" link at http://www.ferc.gov. Persons unable to file electronically should submit an original and 14 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426.

This filing is accessible on-line at http://www.ferc.gov, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail FERCOnlineSupport@ferc.gov, or call toll-free (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

Comment Date: _____