

Comment Set A0029
California Independent System Operator



California Independent
System Operator Corporation

April 11, 2008

DELIVERED BY ELECTRONIC MAIL AND U.S. MAIL

Billie C. Blanchard
Energy Division
California Public Utilities Commission
c/o Aspen Environmental Group
233 Montgomery Street, Suite 935
San Francisco, CA 94104

Lynda Kastoll
El Centro Field Office
Bureau of Land Management
c/o Aspen Environmental Group
233 Montgomery Street, Suite 935
San Francisco, CA 94104

Re: A.06-08-010; Comments of the California Independent System Operator Corporation on the Draft Environmental Impact Report/Environmental Impact Statement for the Sunrise Powerlink Transmission Project

Dear Ms. Blanchard & Ms. Kastoll:

Pursuant to the California Environmental Quality Act and the National Environmental Policy Act, the California Independent System Operator Corporation (CAISO) submits these comments on the Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) for the Sunrise Powerlink Transmission project (Sunrise).

I. THE CAISO

The CAISO is a not-for-profit public benefit corporation established in 1998. The CAISO serves as an impartial link between power plants and the utilities that provide electricity to customers, ensuring equal access to transmission facilities formerly under utility control.

Public Utilities Code section 345 obligates the CAISO to provide for the “efficient and reliable operation of the transmission grid.” To do this, the CAISO operates a complex network of transmission facilities needed to transmit power to load centers and acts as a clearinghouse for thousands of market transactions every day. The CAISO also plays an important role with respect to the development of renewable energy resources by planning for the development and operation of the facilities that provide these resources with access to the grid and markets. In order for the CAISO to meet its statutory responsibilities, however, critical infrastructure must be in place when and where it is needed.

Comment Set A0029, cont. California Independent System Operator

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 2

The CAISO has determined through its planning process that there is a need for additional infrastructure in order to meet long-term reliability needs in the San Diego area. Based on its analysis, the CAISO has further determined that Sunrise will help San Diego Gas & Electric Company ("SDG&E") satisfy this long-term reliability need by significantly increasing the amount of power that SDG&E can import into its service area and increase access to renewable energy resources that are needed for SDG&E to meet RPS requirements. Accordingly, the CAISO has a significant interest in the DEIR/EIS, particularly with respect to alternatives to Sunrise, because of the potential impact on electricity reliability and the development of renewable energy resources necessary to meet RPS goals.

II. PROJECT OBJECTIVES

The DEIR/EIS notes that the California Public Utilities Commission (CPUC) and Bureau of Land Management have identified three "basic project objectives" which are used in the DEIR/EIS to screen potential alternatives to Sunrise. These three project objectives are:

1. To maintain reliability in the delivery of power to the San Diego region;
2. To reduce the cost of energy in the region; and
3. To accommodate the delivery of renewable energy to meet State and federal renewable energy goals from geothermal and solar resources in the Imperial Valley and wind and other resources in San Diego County.¹

With respect to the alternatives identified in the DEIR/EIS as "environmentally superior," only Sunrise would meet all of the above objectives. As discussed below, the CAISO has identified material factual inaccuracies with respect to the alternatives that the DEIR/EIS finds are environmentally superior and has significant concerns regarding the ability of these alternatives to ensure electric reliability, reduce energy costs, and increase access to needed renewable generation.

III. NEW IN-AREA ALL-SOURCE GENERATION ALTERNATIVE

The DEIR/EIS describes the All-Source Generation Alternative as providing approximately 1,000 MW of in-area generation consisting of one natural-gas fired combined cycle (*i.e.*, base load) power plant, four natural-gas fired peaking power plants, and a combination of wind, solar photovoltaic (PV) and biomass/biogas renewable generation facilities.

The CAISO is concerned that this alternative cannot feasibly be implemented in time to meet the reliability needs of the San Diego area, and that these resources identified will not provide sufficient capacity to meet these needs, for the reasons set forth below.

¹ DEIR/EIS at ES-20.

A0029-1

Comment Set A0029, cont. California Independent System Operator

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 3

A. Base Load Generation

The DEIR/EIS identifies three potential base load generation projects: (1) the South Bay Replacement Project (nominal capacity 620 MW); (2) the San Diego Community Power Project being developed by ENPEX (nominal capacity 750 MW); and (3) the Encina Power Plant Repowering (nominal capacity 540 MW). The CAISO has significant questions regarding whether the South Bay Replacement Project and ENPEX project will be built.

With respect to the South Bay Replacement Project, the CAISO was notified in October 2007 that the project developer was unable to secure site control for the project, had elected not to proceed with executing a Large Generator Interconnection Agreement, and was no longer pursuing development of the project. The project developer has also withdrawn its application for certification (AFC) with the California Energy Commission (CEC) for the project.² Given the time necessary to acquire site control, obtain necessary regulatory approvals, and complete construction, it is *not* reasonable to believe that the South Bay Replacement Project can or will be built in the next several years, even if the project developer immediately resumed development activities. In any event, at the present time, it appears unlikely that the South Bay Replacement Project will be built at all.

The inclusion of the ENPEX project in the DEIR/EIS also raises several concerns for the CAISO. ENPEX has not even submitted an AFC to the CEC for the project and, as the DEIR/EIS notes, the development status of the project is unclear.³ Thus, there is no evidence suggesting that ENPEX is moving forward with the development of the project at this time. Moreover, even if ENPEX were to submit an AFC for the project soon, there are significant questions regarding when the project could be timely completed given permitting and construction times. Certainly, it does not appear to the CAISO that it is reasonable to expect that the ENPEX project could be constructed within the time period assumed in the DEIR/EIS. Moreover, the City of Santee opposes the ENPEX project, which could further delay or perhaps prevent construction should ENPEX decide to move forward with developing the project.

In addition, for the CAISO's grid planning purposes, only generation projects that are under construction are considered when assessing the need for transmission system additions in 5- year planning cases and only projects that are under construction or have received regulatory approval are modeled for 10-year planning cases.⁴ Because the ENPEX project has not received regulatory approval, the CAISO does not assume that the project will be online within the next 5-10 years (2013 - 2018) for planning purposes.

² DEIR/EIS at Ap.1-325, note 29.

³ DEIR/EIS at Ap.1-332

⁴ See "Generation Assumptions for Grid Planning Studies." This document can be found at <http://www.caiso.com/docs/2001/06/25/20010625134406100.pdf>

A0029-2

A0029-3

Comment Set A0029, cont. California Independent System Operator

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 4

The Encina project is much further along in the permitting process and a decision from the CEC on an AFC for the project is expected any time.⁵ The Encina project, however, is a repowering project, meaning that it will simply replace a portion of existing capacity⁶ with new capacity, resulting in a net increase in capacity of approximately 220 MW – not the entire 540 MW nameplate capacity for the project. Thus, assuming that the Encina repowering project is built, the project would not result in a net 540 MW increase in available local generation capacity as the DEIR/EIS apparently assumes.

A0029-4

In light of the above, the CAISO does not believe it is prudent planning practice to rely upon the South Bay Replacement Project, the ENPEX project, or the Encina repowering project when evaluating the All-Source Generation Alternative to Sunrise.

B. Natural-Gas Fired Peaking Power Plants

A0029-5

The DEIR/EIS identifies four specific peaking power plant projects within San Diego resulting from SDG&E's 2008 Peaker request for offers (RFO) and assumes that these projects will be online in 2008.⁷ Based on this assumption, the DEIR/EIS provides that 250 MW of "incremental firm on-peak [new or expanded peaker] capacity" can be expected by 2010.⁸ The four peaker projects considered by the DEIR/EIS are located at: (1) Miramar substation (49 MW); (2) Pala substation (99 MW); (3) Margarita substation (99 MW); and (4) Borrego Springs substation (15 MW).⁹ In addition, the DEIR/EIS identifies four other peaker projects that could be online by 2010 if the four specific peaker projects resulting from SDG&E's 2008 Peaker RFO are not fully developed to achieve the 250 MW target.¹⁰

The CAISO is concerned that these peaker projects will not result in 250 MW of incremental firm, on-peak capacity as assumed in the DEIR/EIS. As an initial matter, the CAISO's "need" analysis already assumes that 138 MW of the 198 MW of capacity the DEIR/EIS assumes for the peaker projects located at the Pala (99 MW) and Margarita (99 MW) substations will be on-line in 2008.¹¹ Thus, at most, the Pala and Margarita projects would seem to contribute only an additional 50 MW of on-peak capacity above what the CAISO has already assumed for these projects.

With respect to other peaker projects identified in the DEIR/EIS that could potentially make-up this shortfall, it is unclear whether any of these projects will actually be constructed. As the DEIR/EIS notes, no public information is available for the Kearney Mesa peaker or the

⁵ See Carlsbad-NRG, Docket No. 07-AFC-6, http://www.energy.ca.gov/sitingcases/all_projects.html.

⁶ DEIR/EIS at Ap.1-334.

⁷ See DEIR/EIS at C-78; Ap.1-335.

⁸ DEIR/EIS at Ap.1-326 (Table Ap.1-15).

⁹ DEIR/EIS at Ap.1-335 – 1-336.

¹⁰ See DEIR/EIS at Ap.1-336 – 1-337.

¹¹ See CAISO Ex. I-6 at 39 (Table 5).

Comment Set A0029, cont. California Independent System Operator

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 5

Escondido peaker expansion projects, and the CEC provides no information on the status of these projects.¹² The Chula Vista Peaker expansion project has filed an AFC with CEC but, without a power purchase agreement, it is unclear whether the project can be financed or constructed. Thus, there is little evidence to suggest that these peaker projects will go forward, which in turn raises significant questions regarding the reasonableness of relying on these projects when evaluating the All-Source Generation Alternative.

A0029-5 cont.

C. Renewable Generation Included in the All-Source Generation Alternative.

Renewable generation included in the All-Source Generation Alternative consists of:

A0029-6

- Approximately 200 MW (nameplate) of wind power located in the Crestwood Summit/Boulevard area by 2010 with an additional 200 MW (nameplate) by 2016. For reliability accounting purposes, this equates to 48 MW by 2010 and an additional 48 MW by 2016.¹³
- Approximately 50 MW (both nameplate and for reliability accounting purposes) of biomass or landfill gas generation by 2010 with an additional 50 MW by 2016.¹⁴
- Approximately 210 MW (nameplate) of solar photovoltaic ("PV") to be installed on unidentified residential and commercial buildings by 2010. For reliability accounting purposes, this equates to 105 MW by 2010, reduced to 84.5 MW by 2016.¹⁵
- Approximately 300 MW (nameplate) of solar thermal to be developed near Borrego Springs by 2016. For reliability accounting purposes, this equates to 240 MW by 2016.

Assuming, arguendo, that all of these resources are constructed within the time frames noted in the DEIR/EIS, nameplate capacity in the San Diego area would increase 460 MW by 2010 and 969 MW by 2016. For reliability accounting purposes, this equates to 203 MW in 2010 and 520.5 MW in 2016.¹⁶

The CAISO is concerned with the conclusion stated in the DEIR/EIS that renewable resources will provide 203 MW of incremental firm on-peak capacity by 2010 and/or 520.5 MW by 2016. Given the challenges in developing large scale renewable energy projects and the fact that some of the renewable projects identified in the DEIR/EIS do not even have sites and/or are currently not being developed, it is extremely risky to rely upon the renewable generation projects identified in the DEIR/EIS in evaluating the All-Source Generation Alternative.

¹² DEIR/EIS at Ap.1-336 – 1-337.

¹³ DEIR/EIS at Ap.1-312 (Table Ap.1-13); Ap.1-317 – 1-318.

¹⁴ DEIR/EIS at Ap.1-312 (Table Ap.1-13); Ap.1-318 – 1-321.

¹⁵ DEIR/EIS at Ap.1-312 (Table Ap.1-13); Ap.1-313 – 1-317; Ap.1-337.

¹⁶ DEIR/EIS at Ap.1-312 (Table Ap.1-13).

Comment Set A0029, cont. California Independent System Operator

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 6

For instance, with respect to potential solar thermal generation, the DEIR/EIS notes that no developers have identified sites in the Borrego Springs area that could accommodate a 300 MW solar thermal project.¹⁷ Moreover, to build 300 MW of solar thermal nameplate capacity, the DEIR/EIS notes that approximately 1,500 acres of land would be needed.¹⁸ Even if such a large site could be found, the CAISO believes interconnecting such generation would require substantial additions or upgrades to the transmission infrastructure, including at least 40 miles of additions or upgrades from Borrego Springs to the closest existing 230 kV or 138 kV substation, as well as with downstream upgrades beyond the existing 230 kV or 138 kV substation.

A0029-7

The CAISO also has concerns with the ability of potential wind resources to provide incremental firm on-peak capacity as assumed in the DEIR/EIS. As an initial matter, the DEIR/EIS notes that 400 MW of wind generation would require 2,000 acres of land in the San Diego area, which would seem to present significant land acquisition and permitting challenges. Significant transmission infrastructure would also be needed to interconnect new wind resources to the grid and that would take years to become operational given permitting and construction timelines. Furthermore, there are serious deliverability issues associated with new wind generation in the Crestwood area identified in the DEIR/EIS.

A0029-8

In order to achieve 210 MW of solar PV nameplate capacity, more than 26,649 residential and 85 commercial installations would need to occur each year. This is 25,000 more residential and 36 more commercial installations than currently occur each year.¹⁹ Moreover, the DEIR/EIS notes that developing 210 MW of solar PV capacity would require approximately 500 workers per year installing individual PV systems through San Diego County over 3 years.²⁰ Given this massive undertaking, it would seem unlikely that the amount of solar PV assumed to be online in the DEIR/EIS is achievable.

A0029-9

IV. NEW IN-AREA RENEWABLE GENERATION ALTERNATIVE

The Renewable Generation Alternative consists of the same renewable resources that the DEIR/EIS identifies for the renewable portion of the All-Source Generation Alternative. The CAISO has the same concerns with this alternative that are discussed above with respect to the All Source Generation Alternative. In particular, with respect to the renewable portion of the All-Source Generation Alternative, there is little evidence at this time to suggest that the renewable generation projects identified in the DEIR/EIS will be developed and constructed. Thus, it is not prudent nor reasonable to rely upon the renewable generation projects identified in the DEIR/EIS in evaluating Renewable Generation Alternative.

A0029-10

However, even if the CPUC were to assume that these renewable resources could be timely built, the associated capacity would be significantly less than the 1,000 MW of import capability to be

¹⁷ DEIR/EIS at Ap.1-312.

¹⁸ DEIR/EIS at Ap.1-313.

¹⁹ See DEIR/EIS at Ap.1-313.

²⁰ DEIR/EIS at Ap.1-313 – 1-317.

Comment Set A0029, cont. California Independent System Operator

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 7

provided by Sunrise. As a result, the CAISO does not believe the Renewable Generation Alternative represents an actual alternative to Sunrise.

A0029-10 cont.

V. LEAPS Transmission-Only (TE/VS) Alternative

The CAISO has studied a LEAPS “transmission only” alternative and has identified two areas of factual inaccuracies in the DEIR/EIS’s evaluation of this alternative. First, the DEIR/EIS incorrectly assumes that TE/VS would provide the same reliability benefits to the SDG&E area as Sunrise.²¹ Second, the DEIR/EIS incorrectly concludes that TE/VS would “partially” achieve the objective of delivering renewable generation from the Imperial Valley and the Salton Sea areas.

A0029-11

Sunrise will reduce the San Diego locational capacity requirement (LCR) by 1000 MW. The DEIR/EIS describes TE/VS as having a designed capacity of 1300 MW to 1600 MW.²² There is no further explanation provided to support this conclusion, so the CAISO assumes that the DEIR/EIS equates the designed capacity of TE/VS with the ability of TE/VS to reduce LCR. It is incorrect to equate the designed capacity of TE/VS with the ability of TE/VS to reduce LCR.

Taking into account the operation of “phase shifters,” the CAISO determined that the TE/VS project would reduce LCR by 625 MW in the San Diego area. This increase does not bring TE/VS to the level of Sunrise in terms of reliability benefits, and it certainly is nowhere near the 1300-1600 MW level of reliability benefits assumed in the DEIR/EIS.

With respect to assisting SDG&E in its ability to meet renewable energy requirements by facilitating access to sources of solar and geothermal energy in the Imperial Valley and Salton Sea areas, the DEIR/EIS acknowledges that this objective cannot be met by the TE/VS alternative. Rather, the DEIR/EIS provides that the renewable energy objective will be met only “partially” because the ability of TE/VS to access renewables is dependent upon the completion of the Green Path North project, in conjunction with Southern California Edison’s (SCE) second Devers-Palo Verde 500 kV line (DPV2).²³ The conclusion that TE/VS by itself cannot provide access to Imperial Valley and Salton Sea renewables is consistent with the CAISO’s analysis.

A0029-12

The DEIR/EIS does state that the TE/VS alternative could provide *indirect* access to renewable generation in the Imperial Valley and Salton Sea areas. The CAISO does not believe such a conclusion is accurate or reasonable. The DEIR/EIS assumes that the combination of the Devers-Palo Verde and DPV2 lines in the SCE territory, together with TE/VS, “could allow for the importation of low cost conventional generation from the Blythe area or the Palo Verde hub in Arizona, thereby freeing capacity on the existing SWPL [Southwest Power Link] to import renewable power from the Imperial Valley.”²⁴ However, interconnected electric power systems

²¹ See e.g., DEIR/EIS at Ap.1-260.

²² DEIR/EIS at C-69; A.1-260.

²³ DEIR/EIS at Ap.1-258.

²⁴ DEIR/EIS at Ap.1-258.

Comment Set A0029, cont. California Independent System Operator

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 8

do not work the way assumed by the DEIR/EIS. Power flow from the Blythe area or the Palo Verde hub into the CAISO control area would naturally flow through both the Devers Substation and Miguel Substation. The TE/VS phase shifters are ineffective at regulating the flow through Miguel substation.

A0029-12 cont.

TE/VS clearly does not meet the Project Objectives identified in the DEIR/EIS unless other projects, the implementation of which are uncertain, are considered in combination with TE/VS. Accordingly, the CAISO does not believe it is reasonable to consider TE/VS to be a comparable alternative to Sunrise, and the DEIR/EIS determination that this alternative meets the screening criteria for project alternatives is incorrect.

A0029-13

VI. SOUTHERN ROUTE ALTERNATIVE 4

According to the DEIR/EIS, DEIR/EIS Alternative No. 4 is the Interstate 8 Alternative with Modified Route D Alternative and three segment route options. It is the CAISO's understanding that this alternative is collocated with the Southwest Power Link (SWPL) for 36 miles in an area of lower fire risk.²⁵

A0029-14

The CAISO has evaluated DEIR/EIS Alternative No. 4 and determined that this alternative would perform *electrically* similar to Sunrise. However, from a reliability perspective, the Western Electricity Coordinating Council (WECC) Planning Coordination Committee recently determined that the risk of a common corridor outage of both 500 kV lines (DEIR/EIS Alternative 4 and the existing SWPL) was significant and would require a remedial action scheme designed to trip up to 1000 MW of load in the San Diego area and up to 2000 MW of generation in the Imperial Valley area in order to protect against this risk. Thus, according to WECC's determination, there is a significant risk of load shedding with DEIR/EIS Alternative 4. In contrast, the WECC has recently determined that there is not a similar risk of a common corridor outage for Sunrise.

VII. LEAPS GENERATION AND TRANSMISSION ALTERNATIVE

The CAISO's concerns with this alternative are the same as discussed above with respect to the TE/VS Alternative. The TE/VS + LEAPS Alternative fails to meet either the reliability objective or the access to renewables objective for all of the same reasons that the TE/VS Alternative does not meet these objectives. The TE/VS + LEAPS alternative does not meet the Sunrise reliability and access to renewable generation objectives discussed above in these comments and should not be considered an alternative to Sunrise.

A0029-15

VIII. NO PROJECT ALTERNATIVE

It is the CAISO's understanding that an evaluation of a No Project Alternative is a required part of the environmental review process that addresses the scenario that is likely to occur if Sunrise

A0029-16

²⁵ DEIR/EIS at ES-3-4.

**Comment Set A0029, cont.
California Independent System Operator**

Billie C. Blanchard
Lynda Kastoll
April 11, 2008
Page 9

is not approved. The generation supply-side resources included in the No Project Alternative are the same as those included in the first two environmentally superior alternatives (*i.e.*, All-Source Generation Alternative and Renewable Generation Alternative). On the transmission supply-side, the DEIR/EIS includes the TE/VS alternatives, Path 44 Upgrades and Mexico Light in this alternative as well. The CAISO has previously addressed its concerns with both the All-Source and Renewable Generation Alternatives and also the TE/VS Alternatives. If Sunrise is not approved, the CAISO does not believe that these alternatives will satisfy SDG&E's reliability needs nor provide sufficient access to renewable generation to meet renewable generation requirements.

A0029-16 cont.

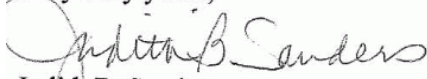
With respect to the Path 44 Upgrades and Mexico Light, the CAISO has studied these projects and found that both options cause reliability and economic concerns on the CAISO and CFE systems. Based simply on the CAISO's study, these projects should not be included in the No Project Alternative as possible actions that would provide the same level of reliability or access to renewable benefits as Sunrise without considering the costs of mitigating the reliability, economic, and environmental concerns associated with these alternatives.

IX. CONCLUSION

It is the position of the CAISO that the alternatives identified by the DEIR/EIS as being environmentally superior to Sunrise, as well as the No Project scenario, do not meet the Sunrise objectives and should not have been included as comparable alternatives or scenarios that would meet the reliability and access to renewables needs of the San Diego area. Furthermore, DEIR/EIS Alternative 4, the Sunrise southern route proposal, poses reliability concerns that are not present with the Sunrise route as proposed or Alternative 5, the northern route alternative. The DEIR/EIS should be modified to incorporate the deficiencies described by the CAISO in these comments.

A0029-17

Very truly yours,



Judith B. Sanders
Senior Counsel

Responses to Comment Set A0029

California Independent System Operator

A0029-1 The CAISO comment asserts that only the Sunrise Powerlink Project would meet all of the basic project objectives. CEQA and NEPA require reasonable alternatives to be identified in the Draft EIR/EIS. See Section C.2.1 of Draft EIR/EIS for the CEQA and NEPA criteria on selection of reasonable alternatives, especially alternatives that “would feasibly attain most of the basic objectives of the project” and that are “potentially feasible.” Ensuring electric reliability, reducing energy costs, and increasing access to renewable generation can be accomplished to varying levels of success by the alternatives. The CPUC will consider the ability of the Proposed Project and the alternatives to achieve project objectives in the General Proceeding (A.06-08-010).

General Response GR-1 provides additional information on how the project objectives are considered in the identification of alternatives, and General Response GR-12 provides clarification on how the CEQA and NEPA processes are integrated with the decision-making process in the General Proceeding.

Potentially feasible alternatives include a New In-Area All-Source Generation Alternative that ensures reliability and provides renewable generation. It is not necessary that this or any Non-Wires Alternative fully match the 1,000 MW import capability of the Proposed Project for them to be considered as reasonable alternatives under CEQA and NEPA. Unlike transmission projects, which tend to add large increments of capacity to the system, generation projects can be sized to meet the incremental load growth of a given area. The incremental capacity increase associated with the baseload generation is only one component of this alternative. This incremental increase in local generation capacity would be phased with additional amounts of peaking capacity and renewable generation in accordance with load growth in the San Diego area. It is potentially feasible to phase-in multiple generation projects over time in response to the area’s incremental load growth. Thus, although one single generation project may not provide 1,000 MW of incremental baseload capacity, generation projects could play a significant role in meeting the incremental generation needs of the San Diego area. In CPUC Decision 07-12-052 (December 20, 2007) regarding the Long-Term Procurement Plan (R.06-02-013), the CPUC authorized SDG&E to procure 530 MW of local capacity by 2015, which includes 130 MW of peaking units approved earlier by the CPUC, only if the Sunrise Powerlink application is denied. This means that if the Sunrise Powerlink decision does not allow the transmission line to be developed, SDG&E would be allowed to procure 400 MW of additional local resources to meet local capacity needs.

The reliability needs of the San Diego area are a subject of the General Proceeding and determining the timing of satisfying these needs is beyond the scope of the EIR/EIS. The New In-Area All-Source Generation Alternative is representative of reasonable generation scenarios considering the uncertainties of project development.

A0029-2 See Response A0029-1 for information on the need for one single generation project to achieve the objectives of the Proposed Project. General Response GR-1 provides additional information on the feasibility of the New In-Area All-Source Generation Alternative, including the current status of the South Bay Replacement Project and the efforts of its developer to secure a site for a similar project.

- A0029-3 The probability that any specific generation project, such as the ENPEX project, will eventually become operational is unknown. One factor which has a significant impact on this probability is the ability of a given project to obtain a power purchase agreement with the local utility. As for which generation projects should, or should not, be included for grid planning purposes, there is not a steadfast rule adhered to by the subregional transmission planning groups in the WECC region. The CAISO, in its own economic analysis of the Proposed Project, included significant amounts of generation (namely Imperial Valley renewable projects) that are neither under construction nor have received regulatory approval of necessary permits to even begin construction. These renewables, including Stirling Energy Systems solar facility, would not qualify for inclusion under the CAISO's "Generation Assumptions for Grid Planning Studies." Although the success of any specific project is uncertain, it is reasonable to assume that in-area baseload generation could be developed in the San Diego area. General Response GR-1 provides additional information on the feasibility of the New In-Area All-Source Generation Alternative, including the efforts of the ENPEX project developers to secure contracts with SDG&E.
- A0029-4 The repowering project at Encina, the Carlsbad Energy Center, would increase local generation capacity by 220 MW according to the comment, which would provide substantial new generation in the San Diego area. This is because as part of the Carlsbad Project, existing steam boiler Units 1, 2, and 3 at the Encina Power Station would be retired. This project would be one component of the New In-Area All-Source Generation Alternative as described in the Draft EIR/EIS. Updated information on the status of this project is provided in General Response GR-1.
- A0029-5 The comment suggests that none of the peaking power plants identified in the New In-Area All-Source Generation Alternative would be likely to go forward. The beginning of Section E.6 in the Draft EIR/EIS and General Response GR-1 both state that the projects considered under this alternative are representative of reasonable generation scenarios, rather than specific projects. Including peaking power plants in the New In-Area All-Source Generation Alternative allows the Draft EIR/EIS to provide an environmental analysis of a development plan that is akin to the "Reference Case" in the General Proceeding, which assumes that enough peaking capacity would be added to meet the CAISO reliability requirements.
- A0029-6 General Response GR-2 provides additional information on the feasibility of the renewable energy components of the Non-Wires Alternatives and the potential for the generation mix to vary depending on the success or status of individual projects. The Non-Wires Alternatives include various renewable generation projects which could feasibly be developed within the San Diego area. These alternatives by no means represent an exhaustive list of potential renewable projects nor the maximum level of potential in-area renewable generation. It is reasonable to assume that, by some combination of projects, sufficient renewable generation could be installed that could be included in the mix of local generation for reliability accounting purposes.
- The CAISO is concerned about the risk of renewable projects not being developed. Project failure affects all types of generation projects and does not diminish the fact that the projects in the Non-Wires Alternatives are "potentially feasible" and suitable for inclusion in the Draft EIR/EIS. The CAISO, in its own economic analysis of the Pro-

posed Project, assumes that Imperial Valley renewable resources will be developed although these are also subject to a risk of project failure. Because the majority of the Imperial Valley renewable resources within CAISO's economic analysis are not under construction and have not received regulatory approval, they would not qualify for inclusion under the CAISO's "Generation Assumptions for Grid Planning Studies."

A0029-7 The Draft EIR/EIS identifies the potential for solar thermal development near Borrego Springs, and a site is analyzed for potential impacts. The necessary transmission additions and upgrades are identified in the description of the New In-Area Renewable Generation Alternative, Section C.4.10.1 and Section E.5.1.1 (Draft EIR/EIS, p. E.5-6). See also General Response GR-2 regarding the feasibility of this alternative.

A0029-8 The Draft EIR/EIS identifies the potential for wind development near in the Crestwood area, and a site is analyzed for potential impact. The deliverability issues would be addressed by transmission additions and upgrades included in the description of the New In-Area Renewable Generation Alternative, Section C.4.10.1 and Section E.5.1.4 (Draft EIR/EIS, p. E.5-27). See also General Response GR-2 regarding the feasibility of this alternative.

A0029-9 The level of solar photovoltaic installations included in the New In-Area Renewable Generation Alternative, Section C.4.10.1 and Section E.5.1.2 would be aggressive, as noted in Appendix 1, Alternatives Screening Report (Draft EIR/EIS, page Ap.1-313). This level would represent only approximately ten percent of the maximum technical potential for in-area solar photovoltaic generation, meaning that 90 percent of the technical potential in the County would not be cost-effective or reasonable to develop with PV at this time. See also General Response GR-2 regarding the feasibility of this alternative.

A0029-10 See Response A0029-6 for information on the timeliness of renewable energy projects in the New In-Area Renewable Generation alternative and General Response GR-2 for more information on the feasibility of the alternative. The feasibility of the Non-Wires Alternatives is not dependent upon its matching the 1,000 MW of import capability that is proposed for the Sunrise Powerlink Project by any date. Rather, its feasibility is dependent upon the ability of project sponsors to develop renewable generation in accordance with the incremental load growth in the San Diego area. Based on the myriad of renewable technologies discussed in Section 4.10 of Appendix 1 of the Draft EIR/EIS, it is reasonable to assume that these resources can be phased-in to match local load growth, and that is why they are incorporated into the non-wires alternatives.

A0029-11 The commenter claims that the LEAPS Transmission-Only Alternative would not provide the same reliability benefits to SDG&E area as the Proposed Project. See General Response GR-4 for a discussion of how the alternative achieves objectives.

The level of reliability benefit that would be provided by LEAPS alternatives differs depending on opinions from CAISO, SDG&E, and The Nevada Hydro Company, the developer of the TE/VS Interconnect that forms the basis of the LEAPS Transmission-Only Alternative. Although CAISO determined that project would reduce the local capacity requirement for SDG&E territory by 625 MW, TNHC provided testimony that the import capability would be 1,000 MW (e.g., in the October 2007 TNHC Applica-

tion for Certificate of Public Convenience and Necessity in A.07-10-005). Based on thermal capacity, it is not unreasonable to assume that the TE/VS Interconnect 500 kV line could achieve a rating of 1,300 to 1,600 MW, assuming adequately designed interconnected elements.

The rating of a transmission line is highly dependent upon the rated capacity of the elements connected to the line. These elements, such as transformers, breakers, and capacitors, are often the limiting factors when determining a transmission line's rating. In the case of the TE/VS Interconnect the line's rating is limited by, among other things, the capacity of the "phase-shifting" transformers. There are several recent examples where transmission line ratings have been increased as the result of upgrades to the interconnected elements. Two recent examples are the Navajo-Crystal and Perkins-Mead 500 kV lines. These projects have received a combined 1,345 MW increase in their ratings as the result of upgrades to their respective capacitor banks. Assigning the rating for the TE/VS Interconnect depends on the capacity of the interconnected elements, and determining the actual rating, whether it be 625 MW or 1,000 MW, is not within the scope of the environmental analysis. This would be determined as part of the General Proceeding for the Proposed Project or the proceeding for the TE/VS Interconnect (A.07-10-005).

In order for a project to be deemed a reasonable alternative it is not required to be equivalent in all aspects with the Proposed Project. It is clear that the LEAPS Transmission-Only Alternative would increase import capacity into the SDG&E service area. The expectation that the Sunrise Project would increase the import capacity by 1,000 MW does not mean that there is an immediate need for that level of import. Even if the LEAPS Alternatives are initially limited to a 625 MW increase, as stated by the CAISO, the development of the alternative would increase system reliability and accommodate several years of load growth in the SDG&E service area.

A0029-12 The comment claims that the LEAPS Transmission-Only Alternative would not "partially" achieve the objective of delivering renewable generation to SDG&E. See General Response GR-4 for a discussion of how the alternative achieves objectives.

The comment disputes that the LEAPS Transmission-Only Alternative would provide indirect access to renewable generation. However, this conclusion is accurate because the LEAPS Alternatives would increase the San Diego area import capability, which would promote power transfers within the CAISO grid, and renewable generators delivering anywhere on the CAISO grid are eligible for compliance with RPS goals.

The LEAPS Alternatives could enhance access to renewable resources by increasing the import capacity into SDG&E's service area. The LEAPS Alternatives, like the Proposed Project, could improve SDG&E's ability to schedule renewable energy into its service area from remote generators. As noted by the comment, electric power flows on the transmission system in accordance with the laws of physics. Power scheduling on the transmission system occurs in accordance with contracts and scheduling rights. When a load-serving entity, such as SDG&E, contracts for power from a remote generating resource there is no guarantee that the energy produced by that resource ever actually reaches the San Diego area. However, SDG&E is given credit for the output of that generator when balancing its loads and resources. Similar to the Proposed Project, the

LEAPS Alternatives could increase the scheduling capacity into the San Diego area. SDG&E would continue to have the ability to utilize the total import capacity to schedule its desired mix of renewable and fossil fuel-fired generation resources.

- A0029-13 The comment contests the conclusion that the LEAPS Transmission-Only Alternative should be included as a potentially feasible alternative to the Sunrise Powerlink Project. General Response GR-4 provides further information on how the LEAPS Alternatives achieve objectives and meet the criteria for inclusion in the Draft EIR/EIS. The final determination regarding feasibility of achieving project objectives will be determined by the decision-makers in the General Proceeding.
- A0029-14 The comment asserts that the Southern Environmentally Superior Route Alternative would involve a risk of a common corridor outage. The Western Electricity Coordinating Council (“WECC”) Reliability Performance Evaluation Work Group (“RPEWG”) did not find that the risk of a common corridor outage, due to collocation of the Southern Route Alternative with the SWPL, was significant. In fact, the RPEWG’s findings, based solely upon information provided by SDG&E, were that the risk equated to a standard Category C contingency. This is the standard WECC rating for multiple transmission circuits in a common corridor. According to the WECC reliability criteria controlled load shedding is an acceptable response to a Category C contingency. General Response GR-3 and General Response GR-8 provide further information on how the southern alternatives would not present a significantly different reliability risk compared with the Proposed Project when all components of the options are considered.
- A0029-15 The comment contests the conclusion that the LEAPS Generation and Transmission Alternative should be included as a potentially feasible alternative to the Sunrise Powerlink Project. See Responses A0029-11 to A0029-13; General Response GR-4 provides further information on how the LEAPS Alternatives achieve objectives and meet the criteria for inclusion in the Draft EIR/EIS.
- A0029-16 The CAISO comment claims that absent approval of the Sunrise Powerlink, the components of the No Project/No Action Alternative in the Draft EIR/EIS would not satisfy SDG&E’s needs for reliability or access to renewable generation. However, CAISO’s comment provides no information on what other options could potentially satisfy SDG&E absent the project. The Draft EIR/EIS provides a description of a No Project/No Action Alternative based on a menu of generation and transmission options available to SDG&E. The description No Project/No Action Alternative does not assume that any one single element would satisfy project objectives. The “Reference Case” in the General Proceeding that includes combustion turbine projects as part of the minimum action SDG&E could take to maintain reliability is encompassed within the menu of projects in the Draft EIR/EIS No Project/No Action Alternative, which shows potential conventional generation (Section C.6.2, Table C-4). The EIR/EIS does not consider project costs and benefits of the No Project/No Action Alternative, the extent to which the No Project/No Action Alternative accomplishes the project objectives, or the specific flexibility or effectiveness of the alternative. These issues will be considered in the General Proceeding. Analyzing the degree to which any alternative, including the No Project/No Action Alternative, provides reliability and economic performance is beyond the scope of the EIR/EIS.

A0029-17 See Responses to Comments A0029-14 and A0029-16 for information on why contested alternatives are included in the Draft EIR/EIS.