

STATE OF CALIFORNIA

**Energy Resources Conservation
and Development Commission**

In the Matter of:

**The Application for Certification for the
CARLSBAD ENERGY CENTER
PROJECT**

Docket No. 07-AFC-6

**CARLSBAD ENERGY CENTER LLC'S
SUPPLEMENTAL TESTIMONY, EXHIBITS, WITNESS LIST,
AND TIME ESTIMATES FOR EXAMINATION OF WITNESSES**

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I. INTRODUCTION

On November 9, 2011, the Committee assigned to the Carlsbad Energy Center Project's application for certification proceeding issued an order that directed the parties to this proceeding to, among other things, submit supplemental testimony, exhibits, a witness list and time estimates for examination of witnesses ("November 9th Order"). To that end, Applicant, Carlsbad Energy Center LLC, herein presents supplemental testimony and provides such additional information as required by the Committee's November 9th Order.

II. TESTIMONY

Among the topics the Committee indicated evidence and arguments will be accepted at the December 12, 2011 Evidentiary Hearing was:

- The impact of the three new [Power Purchase Agreement] projects on [the Committee's] cumulative impacts and alternatives analysis;
- Conditions LAND-2 and LAND-3, their environmental impacts and appropriate modifications to address the financial concerns raised by the Applicant;
- Grid reliability issues raised by the comments from [California Independent System Operator] during the June 30, 2011, Energy Commission Business Meeting;
- The federal [Prevention of Significant Deterioration] permit that the project will require in order to operate;

- Recent City [of Carlsbad] land use LORS amendments contained in Resolution 2011-230 and Ordinance CS-158; and,
- Additional evidence, not previously presented, regarding whether it is appropriate to override either unmitigated environmental impacts or noncompliance with state or local LORS.

Applicant presents testimony on these topics herein. However, in some instances, Applicant provides no new testimony; rather, Applicant relies on information and evidence already in the record. Therefore, Applicant would not present a witness for such topic and notes so within the applicable section below.

A. The Potential Impacts of the Three New Power Purchase Agreement Projects on the Committee’s Cumulative Impacts and Alternatives Analysis

On May 9, 2011, the Committee published the Presiding Member’s Proposed Decision (“PMPD”) for CECP. Thereafter, the Committee published an errata to the PMPD, dated June 15, 2011 (“Errata”), wherein the Committee cited to San Diego Gas & Electric Company’s announced intention to “enter into Power Purchase Agreements (“PPA”) with three separate power plant projects (Escondido Energy Center, Pio Pico Energy Center and Quail Brush Power.” (Errata at p. 30.) In its comments to the Errata, Center for Biological Diversity (“CBD”) argued that the Committee “failed to comply with CEQA by not considering [these three projects] in the cumulative impacts analysis” and that the Errata is “legally deficient because it fails to consider the three power plants.” (CBD’s Comment on the Errata, pp. 2-6.)

On June 30, 2011, the Commission remanded the PMPD back to the Committee to take evidence on this issue. As such, Staff filed its supplemental testimony on August 11, 2011. (See Staff’s Supplemental Testimony at pp. 5-6.) While Applicant believes Staff’s testimony is comprehensive and provides the information needed for the Committee to opine on this issue, it must be noted that each of the three projects identified above are speculative; that is, neither the California Energy Commission nor the California Public Utilities Commission has given the appropriate approvals for any of these three projects. Applicant currently does not intend to present a witness or additional testimony as to this issue.

B. Appropriate Modifications to and Issues Associated with Conditions of Certification LAND-2 and LAND-3¹

Applicant submitted written comments on the removal of conditions of certification LAND-2 and LAND-3 (herein after referred to as the “Land Use Enhancement Conditions”) on September 23, 2011. Therein, Applicant presented its position as to why these Land Use Enhancement Conditions did not injure or weaken the Project’s environmental analysis or LORS compliance. In fact, Applicant’s position is that the Land Use Enhancement Conditions were presented solely as enhancements to the Project. Since introducing these Land Use Enhancement Conditions, however, Applicant has determined that the language of the conditions impose upon the Project an unbearable financial burden that could render CECP financially unviable. Further discussion regarding the adequacy of Staff’s environmental analysis and proposed modifications to the Land Enhancement Conditions is set forth below.

1. Adequacy of Project Environmental Analysis with Conditions of Certification LAND-2 and LAND-3

As noted above, Staff submitted supplemental testimony for this topic on August 12, 2011. Applicant believes Staff’s testimony on this issue is comprehensive and provides the information needed for the Committee to opine on this issue. While Applicant believes complete removal of the Land Use Enhancement Conditions is most appropriate, even if the Committee determines that some form of the Land Use Enhancement Conditions are necessary, no further environmental analysis is necessary as all the relevant analysis has been conducted and presented in the record.

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¹ Testimony presented in Section B is sponsored by Scott Valentino. Mr. Valentino’s professional qualifications and signed declaration as to this testimony is presented in Exhibit A.

2. Absent Complete Removal of LAND-2 or LAND-3, Modifications are Necessary to Remove Certain Financial Burdens from CECP

Land-2 and Land-3 would burden the new generation project with the cost of demolition and clean up of the existing Encina Power Station (“EPS”) even though the new generation project is not in the footprint of the existing EPS and does not require it to be torn down, let alone developed for any particular new use. This burden could render CECP unable to obtain a Power Purchase Agreement (“PPA”) in the competitive procurement process.

Applicant advocates for proposed modifications to the Land Use Enhancement Conditions as set forth below in Section B.5. These proposed modifications will ensure that CECP does not bear the substantial and unbearable financial burden of the demolition and remediation of the existing generator building at EPS.

The proposed modifications are appropriate because CECP does not make substantial use of the existing EPS, but instead CECP will be located in the fuel oil storage tank area situated between the railroad tracks and Interstate 5. Applicant understands that it jointly proposed these two conditions along with the City of Carlsbad. The conditions were predicated on a cooperative City that was truly interested in advancing the CECP replacement project and then redeveloping the old EPS. Instead, almost on the same day that Applicant submitted the jointly agreed to conditions, the City of Carlsbad recommenced its scorched-earth campaign to kill CECP and eliminate the ability of the Warren-Alquist Act to ever again influence power development in the area. In light of the renewed hostility of the City Council and City of Carlsbad staff, Applicant realized that CECP would end up bearing the costs of redevelopment of the location of the existing EPS. This is an unbearable financial burden, which is further explained below. The proposed modifications to the conditions largely correct this problem by tying demolition and remediation to cooperative and approved redevelopment of the same land. This solution is fair, just and workable.

3. The Costs of Demolition and Redevelopment of the Encina Power Station Should Not be Borne by the Applicant

The cost of the South Bay Power Plant Demolition Project is cited at approximately \$63,000, 000 in a letter from Dynegy to the San Diego Unified Port District dated October 25, 2011.² While the obligations that Dynegy has assumed in the letter may not match exactly what will be required at the EPS site, this value does serve as a starting point. South Bay's steam units are of similar vintage as those of the EPS except that South Bay has four steam boiler units while EPS has five steam boiler Units and a Combustion Turbine. The South Bay Plant is not enclosed in a building as is EPS, which will result in additional cost to remove EPS. Without including the cost of the latter or the cost of removing the Combustion Turbine at EPS, Applicant adjusted the South Bay value to account for the removal of one additional unit and then escalate the value at three percent per annum to arrive at what a very rough cost estimate would be for EPS in 2017. The result of this exercise leads to a value of \$94 Million. The South Bay demolition cost also does not include the full removal of the concrete intake structures, removal of the cooling water discharge pipes, or any soil remediation below a four foot depth.

While it is uncertain what the final plan might require at EPS, it is safe to say that the cost to demolish and remove EPS can be reasonably expected to exceed \$100 Million when considering the differences between EPS and the South Bay Project referenced above.

4. Financing New Electrical Generation and the Function of a Power Purchase Agreement

New electrical generation projects in California are typically financed through non-recourse loans that are supported by long term purchase agreements for the output of the electric generating facility. The current market structure in California does not provide sufficient compensation to support the cost of construction of a new power plant, so financing and construction are directly dependent upon the ability to secure a long term Power Purchase

² The letter from Dynegy to the San Diego Unified Port District dated October 25, 2011 is presented in Applicant's Exhibit A1.

Agreement (“PPA”) with a load serving entity on a bilateral basis. This most often occurs through a competitive solicitation in a formal Request for Offers (“RFO”) process. New Generation RFOs are usually launched every two to five years and are dependent upon the local needs assessment and reliability determination. Through the competitive solicitation process and the needs assessment, the load serving entity is able to obtain approval from the California Public Utilities Commission to pass the cost it pays under the PPA onto its customers (beneficiaries of the PPA). The projects that are selected in the competitive solicitation process are those that deliver the greatest amount of benefits for the least cost to ratepayers and fill the procurement goal of the RFO as determined by the needs assessment.

Not unlike other new generation projects in the state, CECP will require a PPA with a load serving entity in order to secure project financing and commence construction. There are various forms of PPAs, but the important aspect is that it is a long term contract (typically in excess of ten years) under which the buyer is agreeing to purchase the output of the facility under agreed to, contractual terms and conditions. Financing for the project is delineated in the contract, which also specifies relevant dates of the project coming into effect, when the project will begin commercial operation, and a termination date for which the contract may be renewed or abandoned. All operational characteristics and parameters of the plant are monitored closely to provide the seller and the buyer with the most accurate information about the amount qualifying capacity available and the amount of electricity generated through the contract term. Rates for all products purchased under the agreement are stipulated in the contract and there are economic incentives and penalties specified for failure of either party to fulfill its contractual obligations.

A PPA is the central document in the development and construction of independent (non utility owned) power plants and is a critical component to obtaining project financing. Under this structure, the Project owner secures funding for the project and sells the products and services offered in the PPA (capacity, energy and ancillary services) to the buyer at a contractual

price for the duration of the contract. Most new generation PPAs in California are for a term of 10 to 25 years. One of the key benefits of the PPA is that by clearly defining the output of the generating asset and the credit of its associated revenue streams, a PPA can be used by the seller to raise non-recourse financing. Under a non recourse project financing, the only recourse available to the lenders is the collateral which is pledged (generally all project assets and property rights to continue to operate the facility). The lenders cannot hold the borrower personally liable for the loan in the event of a default. The lender(s) can seize (and sell) the collateral but cannot seize non pledged property. The most common financing vehicle available to projects of similar size and cost as CECP today are club deals that involve a large consortium of banks joining together to fund a project loan.

The underlying crux of the Applicants issue with proposed Land Use Enhancement Conditions as they are drafted is that the conditions attempt to place on the Project a significant financial burden that is in no way related to the construction of the new facility onto the project (estimated at \$100 million). This cost burden inhibits the ability for CECP to be competitive in an RFO process as well as incorrectly attempts to burden ratepayers with an inappropriate cost. The facility that CECP would be required to pay to demolish is on a portion of the EPS property of which CECP has no contractual rights to utilize nor from which it derives any benefit. Therefore, there is no asset or contractual right to pledge to lenders in exchange for the demolition cost – hence it is not a valid project cost. To Applicant’s knowledge, there have not been any projects that have been successfully financed and constructed when a cost of this magnitude unrelated to the project has been imposed. The most likely result of issuing a permit with these conditions unmodified would be that CECP never gets constructed and thus the Conditions have no merit. The end result here would be threefold. First, the CEC would issue a permit to a project that will most likely never get built due to its inability to secure a PPA. Second, EPS would remain in service longer than it would otherwise if CECP is built. And, finally, the City of Carlsbad and Cabrillo (owner of EPS) would have to mutually agree upon a

development plan that takes into consideration demolition and remediation costs to accommodate the eventual conversion of the property. Therefore, the only outcome that would be different from not removing the financial burden of these conditions from CECP is that all five units of EPS would remain in service longer. This is not the desired outcome for either the Applicant or the City of Carlsbad.

NRG and the City of Carlsbad do share a common vision for the western portion of the property to be redeveloped to something other than electrical generation. After all, that is the premise behind constructing CECP on the eastern portion of the property between the railroad tracks and the interstate which as contemplated, facilitating the shutdown of a portion of the EPS. The remainder of EPS will shut down once there is no longer a need for the plant, but at that point, the costs of converting the property into another use needs to be considered and borne by the development project that directly benefits from the use of the property. CECP has no rights to that property nor benefits in any way from a future alternate use and this is not a cost that should be borne by ratepayers for the new facility (in the event that CECP was ever able to secure a PPA).

5. Applicant's Proposed Modifications to LAND-2 and LAND-3.

Applicant's proposed modified Land Use Enhancement Conditions are as follows:

LAND-2 On or before January 1, 2016, the project owner shall prepare and submit a Demolition, Removal, and Remediation Plan (DRRP) to the CPM, the City of Carlsbad, and the Carlsbad Redevelopment Agency. The DRRP shall propose the process, schedule, and legal requirements for the demolition, removal, and remediation of the Encina Power Station (Units 1 through 5), associated structures, the black start unit and the exhaust stack. As part of completion of the DRRP, project owner shall consult with the California Energy Commission, the California Coastal Commission, the City of Carlsbad, the Carlsbad Redevelopment Agency, the San Diego Regional Water Quality Control Board, the San Diego Air Pollution Control Board, and the California Independent System Operator to ensure the DRRP best reflects the procedural and substantive requirements that will apply to the site.

On or before January 1, 2017, project owner shall prepare and submit to the CPM, the City of Carlsbad, and the Carlsbad Redevelopment Agency, a study of the estimated costs associated with implementing the DRRP.

Verification: On or before January 1, 2016, project owner shall provide the DRRP to the CPM for review and approval and to the City of Carlsbad, the Carlsbad Redevelopment Agency, and the California Coastal Commission for review and comment. The City of Carlsbad and the Carlsbad Redevelopment Agency shall provide comments on the DRRP to the CPM and project owner within 60 days or a date mutually agreeable to project owner and the City of Carlsbad and the Carlsbad Redevelopment Agency.

On or before January 1, 2017, project owner shall submit the results of the study on estimated costs of implementing the DRRP to CPM for review and approval and to the City of Carlsbad and the Carlsbad Redevelopment Agency for review and comment.

The City of Carlsbad and the Carlsbad Redevelopment Agency shall provide comments on cost estimate to the CPM and project owner within 60 days or a date mutually agreeable to the project owner and the City of Carlsbad and the Carlsbad Redevelopment Agency.

LAND-3 Project owner shall seek partners to complete redevelopment of the Encina Power Station according to the Demolition, Removal, and Remediation Plan (DRRP) approved by the CPM pursuant to LAND-2.

Upon the permanent retirement of Units 1 through 5 and the black start unit at Encina Power Station, Project Owner shall actively pursue fiscally viable redevelopment of the Encina Power Station. Such pursuit could include selling or transferring the land and facilities to a developing entity or entering into a joint venture with one or more developers. By the requirements of this condition of certification, the project owner is not expected to pursue demolition and remediation of the Encina Power Station absent a viable and funded redevelopment plan that includes future uses of the site that provide the revenue or funds necessary to pay the costs of demolition and remediation.

Upon the commencement of commissioning activities of the project, project owner shall request permission from the California Public Utilities Commission (CPUC) to permanently shutdown Units 1 through 5 at the Encina Power Station and the black start unit.

Verification: Project Owner shall report to CPM on annual basis the status of the redevelopment efforts at the Encina Power Station.

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C. Grid Reliability Issues Raised by the California Independent System Operator at the June 30, 2011 Business Meeting

At the June 30, 2011 Commission Business Meeting, CAISO representative Dennis Peters raised grid reliability issues as such relate to CECP. Specifically, Mr. Peters stated on the record that CECP will add to grid reliability and will enable the San Diego Region and the

Project subarea to maintain power when demand fluctuates. (Dennis Peters, California ISO, June 30, 2011, CEC Business Meeting Transcript at p. 68, lines 13-24.) Further, Mr. Peters stated:

[T]he proposed Carlsbad Energy Center would help insure a more reliable electric system in the San Diego area. And based on current supply and load forecasts, ISO believes that the PMPD correctly concludes that without construction of the Carlsbad Energy Center Project retirement of Encina Power Station Units 1 to 3 may be difficult to accomplish.

(Dennis Peters, California ISO, June 30, 2011, CEC Business Meeting Transcript at pp. 59:21-60:2.)

To highlight this issue, on September 8, 2011 much of San Diego County lost power in a blackout within San Diego Gas & Electric's coverage area on September 8, 2011. The blackout started shortly before 4 p.m. PDT and stemmed from an incident in Yuma, Arizona on a key transmission line between Arizona and California. All 1.4 million SDG&E customers were without power. While investigations continue to determine all the causes for the widespread power outage, the blackout served as a reminder that the San Diego area is in critical need of new generation. (See Exhibit B, Prepared Testimony of Brian Theaker.)³

D. Project Impacts Related to the Federal Prevention of Significant Deterioration Permit

In the November 9th Order, the Committee indicated it will accept evidence and argument relating to the Federal Prevention of Signification Deterioration Permit. To that end, Applicant presents its testimony below and provides the declaration of its witness, Gary Rubenstein, at Exhibit C. As this Committee is aware, Mr. Rubenstein has appeared as a witness in this proceeding and, thus, his professional qualifications have been previously provided and are part of the record. In addition, Exhibits D and E are provided in support of the testimony set forth below.

³ Mr. Theaker's signed declaration and professional qualifications are also provided in Exhibit B and Exhibit B1.

1. PSD Program - Requirements

EPA promulgated Prevention of Significant Deterioration (“PSD”) regulations for areas that are in compliance with national ambient air quality standards (40 C.F.R. 52.21). The San Diego County is classified as an attainment area with regards to the national ambient air quality standards for NO₂, SO₂, CO, PM₁₀, and PM_{2.5}. Therefore, these criteria pollutants, along with Greenhouse Gas (“GHG”) emissions, are regulated by the PSD regulations in the San Diego Air Pollution Control District (“SDAPCD”). The PSD program allows new sources of air pollution to be constructed, or existing sources to be modified, while preserving the existing ambient air quality levels, protecting public health and welfare, and protecting Class I areas (e.g., specific national parks and wilderness areas). There are five principal areas of the PSD program: (1) Applicability; (2) Best Available Control Technology; (3) Pre-Construction Monitoring; (4) Increments Analysis; and (5) Air Quality Impact Analysis. The federal PSD requirements apply on a pollutant-specific basis to any project that is a new major stationary source or a major modification to an existing stationary source. (These terms are defined in federal regulations.) (40 C.F.R. 52.21.b) Issuance of PSD permits for projects located in the SDAPCD is currently the responsibility of EPA Region 9.⁴

a. PSD Program - Applicability

Since the Encina Power Station is an existing major source, PSD applicability is based on evaluating the emissions changes associated with the Proposed Project and determining if the project is a major modification to an existing major source. To determine whether the Proposed Project will trigger PSD review as a major modification to an existing major facility, EPA policy and regulations require a two-step test. First it is necessary to determine whether emission increases associated with the proposed modification (in this case, the proposed new equipment) is significant under the PSD regulations. If the emission increase for the new equipment is

⁴ Although it is possible that the SDAPCD will receive delegation from EPA Region 9 to issue PSD permits for CECP and other projects, this testimony is based on the assumption that EPA remains the permitting authority. The substantive PSD requirements are the same whether the permit is issued by EPA, or by the SDAPCD under a delegation of authority.

significant for one or more attainment pollutants, the next step is to compare the facility wide net emission change for each of these pollutants, along with all contemporaneous increases and decreases at the project site, with the PSD significance levels. A project is a major modification subject to PSD review if there is a net emission increase above a PSD significance level.

The emission increases for the new equipment associated with the Proposed Project, based on the proposed potential to emit, are summarized below in Table 1 (below). As shown in Table 1, the emission increase for the proposed new equipment is above the PSD significance levels for the attainment pollutants NO_x, CO, PM₁₀, PM_{2.5}, and GHG. Therefore, for these pollutants it will be necessary to determine whether there is a facility-wide net emission increase above PSD significance levels. Because the San Diego County is classified as a federal nonattainment area for ozone, the PSD regulations do not apply to VOC emissions. Consequently, VOC emissions are not included for purposes of PSD applicability for the Proposed Project.

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Table 1 CECP Project – Emission Increases		
Pollutant	Emission Increase for New Equipment* (tons/year)	PSD Significance Level** (tons/year)
NO _x	75.6	40
CO	217.3	100
VOC	20.1	N/A
SO _x	5.6	40
PM ₁₀	39.0	15
PM _{2.5}	39.0	10
GHG	932,630	75,000

Note (Table 1):

* See PMPD for Carlsbad Energy Center Project, May 2011, Air Quality Table 8 and Greenhouse Gas Table 1. GHG emissions converted from MTCO_{2e} to CO_{2e} in short tons using a factor of 1.1023 short ton/MT.

** 40 CFR 52.21.b.23.

To determine the facility-wide net emission increases for NO_x, CO, and PM₁₀, PM_{2.5}, and GHG associated with the proposed installation of the new equipment, it is necessary to sum the new equipment emission increases with other emission increases and decreases at the power plant during the contemporaneous period. Under the PSD regulation, the contemporaneous period begins five years before the anticipated start of construction of the proposed new equipment, and ends with the date of the emission increase associated with the new equipment. (40 C.F.R. 52.21.b.3.ii.) The final SDAPCD permit along with the CEC approval for the proposed CECP project is expected to occur in the next few months. Consequently, construction could begin as early as 2012. Therefore, for the Proposed Project the contemporaneous period under the PSD regulations could begin as early as January 1, 2007 (5-year look back from start of construction) and would end when the proposed new equipment begins normal operation. Because this period, however, defined, will include the shutdown of Encina Power Station Units 1, 2, and 3, it is necessary to calculate the emission decrease associated with the shutdown of these units to determine the facility-wide net emission changes for the proposed project.

Previous submittals to the EPA included the facility-wide net emission change for the Proposed Project including the shutdown of Encina Power Station Units 1, 2, and 3.⁵ While these calculations concluded that the Proposed Project would not trigger PSD review, with the new GHG PSD pollutant and a possible change to the 5-year baseline period due to the delay in the issuance of the Final SDAPCD permit/CEC approval, the Proposed Project may trigger PSD review for GHG emissions and could possibly trigger PSD review for additional criteria pollutants. It is important to keep in mind that the time periods for the contemporaneous window and for the baseline for emissions from existing units are not the same under the federal PSD regulations; these periods are determined separately, and will likely be different time periods, under federal PSD regulations. The Applicant has not made final assessments of either time period, or of the net emissions increase for purposes of PSD applicability, at this time.

b. PSD Program – Compliance

If the Proposed Project triggers PSD review, the next step is to determine whether the Proposed Project will be able to comply with the following principal applicable requirements of the PSD regulations on a pollutant-specific basis:

- Best Available Control Technology;
- Pre-Construction Monitoring;
- Increments Analysis; and
- Air Quality Impact Analysis.

2. CECP's Compliance with BACT

The Proposed Project's compliance with BACT for criteria pollutants is discussed in the PMPD.⁶ Consequently, the Applicant believes that the Proposed Project currently complies with BACT for all criteria pollutants, and that this determination will not change in the course of a

⁵ See June 24, 2009 letter from NRG to the EPA (Applicant's Exhibit 91) and August 24, 2009 letter from Sierra Research to the EPA (Applicant's Exhibit 103).

⁶ PMPD for Carlsbad Energy Center Project, May 2011, Air Quality pages 5 and 6.

PSD review. With regards to BACT for GHG emissions, in a recent determination by EPA Region 9 for a natural gas fired combined-cycle gas turbine project similar to the Proposed Project (see for example, Exhibit D, Palmdale Hybrid Power Project's BACT Analysis), EPA concluded that BACT for GHG is the use of new thermally efficient combustion turbines and a GHG emission limits of 774 lbs CO₂/MWh for source-wide net output, and 117 lbs CO₂/MMBtu heat input for each gas turbine.⁷ Because the Proposed Project includes the installation of high efficiency combined-cycle gas turbines with GHG emissions similar to those of the Palmdale Hybrid Power Project (approximately 890 lb CO₂/MWh⁸ and 117 lbs CO₂/MMBtu⁹), the Proposed Project is expected to comply with BACT requirements for GHG emissions. Therefore, the Applicant does not foresee any problems with the Proposed Project complying with PSD BACT requirements.

a. Pre-Construction Monitoring

The pre-construction meteorological and ambient air quality monitoring data used for the analysis of the Proposed Project is discussed in the CEC final staff assessment.¹⁰ Data collected at these monitoring stations would also be used to prepare the analyses needed for a PSD permit application. Therefore, the Applicant believes that this data is readily available and will comply with PSD regulatory requirements.

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⁷ Fact Sheet and Ambient Air Quality Impact Report, Palmdale Hybrid Power Project, PSD Permit Number SE 09-01, August 2011, page 30 (see Exhibit E attached hereto).

⁸ PMPD for Carlsbad Energy Center Project, May 2011, Greenhouse Gas Table 1. GHG emissions converted from MTCO₂e to CO₂e in short tons using a factor of 1.1023 short ton/MT.

⁹ AFC for Carlsbad Energy Center Project, September 2007, Appendix 5.1B, Table 5.1B-16, gas turbine CO₂ emission factor of 53.05 kg/MMBtu converted to lbs/MMBtu.

¹⁰ CEC Final Staff Assessment of the Carlsbad Energy Center Project, Revised December 2009, (Staff's Exhibit 200), Air Quality Table 10 regarding background ambient concentrations for project area and pages 4.1-4 to 4.1-5 regarding meteorological data collected for project area.

b. Increments Analysis

For the criteria pollutants that trigger PSD review, as part of a PSD permit application it will be necessary to address project compliance with applicable increment thresholds. An increments analysis is not required for project impacts below EPA significant levels. As shown in the AFC,¹¹ the Proposed Project's ambient impacts are below many of the EPA significant levels. Therefore, while a more detailed increments modeling analysis may be necessary as part of a PSD permit application for the Proposed Project, the Applicant does not foresee any problems with complying with the requirement to perform such an analysis, if required.

c. Air Quality Impact Analysis

For the criteria pollutants that trigger PSD review, as part of a PSD permit application it will be necessary to perform a modeling analysis to show that the Proposed Project will not result in significant deterioration of ambient air quality in the project area. As discussed in the PMPD,¹² air quality modeling results show that the Proposed Project will not cause or contribute significantly to violations of any federal air quality standards. In addition, as discussed in the Errata to the PMPD,¹³ modeling results show that the Proposed Project will not cause or contribute to a violation of the new 1-hr NO₂ federal air quality standard. Therefore, the Applicant does not foresee any problems complying with the PSD air quality impact analysis requirements if such an analysis were necessary as part of PSD permit application.

3. PSD Program – Permit Issuance

As discussed above, due to the new GHG PSD applicability threshold, it may be necessary for the Applicant to submit a PSD Permit Application to EPA Region 9 for the

¹¹ Project Enhancement and Refinement Document for the Carlsbad Energy Center Project, July 2008, (Applicant's Exhibit 35), Table 5.1-31 (Revised 5/11/08).

¹² PMPD for Carlsbad Energy Center Project, May 2011, Air Quality pages 4 and 5.

¹³ Errata to PMPD for the Carlsbad Energy Center Project, June 2011, Air Quality Table 10.

Proposed Project. The Applicant expects that the preparation of a PSD Permit Application would take approximately 3 to 4 months to complete. Once the PSD permit application is submitted to EPA Region 9, the Applicant expects EPA to take at least 12 months to issue the draft PSD permit for the Proposed Project. Depending on the comments received by EPA on the draft PSD permit, it could take the EPA an additional 6 months to respond to comments and issue the final PSD permit. Following the issuance of the final PSD permit by EPA, there is a 30-day appeals period. If an appeal is filed on the final PSD permit for the Project, it could take the EPA Environmental Appeals Board from 6 to 12 months to rule on the appeal.

The final PSD permit for the Proposed Project will include a number of operating and emission limits and testing/monitoring requirements for the criteria pollutants that trigger PSD review. The Applicant expects these operating/emission limits and testing/monitoring requirements to be similar to those developed by the EPA recently for the Palmdale Hybrid Power Project. (See Exhibit E Palmdale Hybrid Power Project's PSD permit.)

While there remains some question as to which pollutants will trigger PSD review for the Proposed Project, as discussed above the Applicant does not foresee any significant problems with complying with the applicable PSD requirements.

E. Applicability of City of Carlsbad's Recent Land Use Amendments

Below is the testimony of Applicant's witness for this topic, Ronald Rouse. Mr. Rouse's declaration is provided at Exhibit F. Mr. Rouse has testified previously in the proceeding and thus, his professional qualifications are a part of the record.

The Warren-Alquist Act provides the Commission with exclusive jurisdiction regarding the siting, design and permitting of electric generating facilities. (Pub. Resources Code §§ 25000 *et seq.*) The Carlsbad City Council and Carlsbad Redevelopment Agency (collectively, the "City") belatedly adopted various resolutions and ordinances on September 27 and October 11, 2011 in yet another of its multiple attempts to defeat CECP and circumvent the Commission's

authority to certify the Project. The City's recent actions are simply another attempt by the City to prevent CECP from being built within the City's Coastal Zone or the City, period. In fact the City Staff Report acknowledges that the purpose of the recent amendments is to "reinforce the city's opposition to the proposed CECP" and frustrate the CEC proceedings. (See City Planning Commission Staff Report, dated September 7, 2011, at p. 4.) The recent land use amendments do not meet the requirements of California's zoning laws, nor were they adopted in accordance with the provisions of the California Environmental Quality Act.

Resolution 2011-230 approves and adopts various recommendations of the City of Carlsbad Planning Commission. (See City's Resolution 2011-230 at pp. 1-2.) Resolution 2011-230 adopts and approves Local Coastal Program Amendment ("LCPA") 11-06 and incorporates by reference the findings in Planning Commission Resolution No. 6805 regarding the same, but expressly notes that "approval of LCPA 11-06 shall not become effective until it is approved by the California Coastal Commission and the California Coastal Commission's approval becomes effective." (See City's Resolution 2011-230 at p. 2.) The LCPA will not go into effect unless and until the Coastal Commission approves it; thus, it is not an effective LORS.

In the same vein, by the express language of Zoning Ordinance CS-158, it does not go into effect until thirty (30) days from the date of its adoption. (Ordinance CS-158.) Further, the Ordinance expressly states that it "shall not be effective until approved by the California Coastal Commission." (*Id.*) Thus, the Ordinance is not an effective LORS and has no affect on the CECP AFC Proceeding.

The only other recent land use amendment that the City requested be officially noticed by the Committee (See City's October 17, 2011 Request to Take Official Notice) is General Plan Amendment ("GPA") 11-06, which was adopted by the City in its approval of Resolution 2011-230 on September 27, 2011. GPA 11-06 removes the use of "generation of electrical energy" from the definition of the Public Utilities (U) land use designation and carves out an exception to the generation of electrical energy if it is located outside of the Coastal Zone and only if it is

conducted by a governmental entity or a company and such use is authorized or approved by the California Public Utilities Commission. Throughout the entire four-plus year AFC proceeding, and until just six weeks ago, the CECP fell squarely within the City's "U" land use designation.

The City acknowledged that the sole purpose of the recent amendments to the land use designation at this extremely late stage in the CEC AFC proceeding is to "reinforce the city's opposition to the proposed CECP" (See City Planning Commission Staff Report, dated September 7, 2011, at p. 4), and is yet another attempt to thwart the CEC's sole jurisdiction over power plant licensing pursuant to the Warren-Alquist Act.

In addition, on October 11, 2011, the City also adopted Ordinance CS-159 (PDP 00-02(E)) and Ordinance CS-160 (SP-144(N)). As part of its obstructionist strategy, these ordinances purport to amend Specific Plan 144 ("SP-144") and the Encina Power Station Precise Development Plan ("PDP 00-02") to incorporate the City's changes to its Zoning Ordinance and General Plan in a further belated attempt to render the CECP inconsistent with local LORS.

PDP 00-02 "serve[s] as an information and regulatory document to meet the City's zoning requirements for the Public Utility Zone as the zone applies to the Encina Power Station (EPS)." (PDP 00-02 at p. 7.) Under the City's land use regulatory program, PDP 00-02 in fact functions as an implementing permit for development on the EPS property, rather than an applicable LORS regulating allowable land uses. Its function is simply to document and identify the actual development of the EPS property and compliance with applicable use and other standards; it does not impose standards per se, nor is it the vehicle for establishing allowable land uses. A precise development plan generally, and in particular, PDP 00-02, does not itself establish permitted uses or regulations and must be consistent with applicable LORS. Accordingly, PDP 00-02 was amended to conform with the City's amendments to its Zoning Ordinance and General Plan. New "conforming" language in PDP 00-02 summarizes the amended "U" General Plan land use designation and P-U zone.

The EPS is located inside the Coastal Zone. Because of its location, primary function and generating capacity, the EPS is inconsistent with the General Plan and not a permitted use in the P-U Zone or this PDP.

...

It should be noted that the EPS is not considered a permitted use within the PDP. It is not consistent with the General Plan or the Zoning Ordinance.

(PDP 00-02 at pp. 7, 27.) The City also blatantly deleted language related to the compatibility of the EPS and neighboring land uses. With its latest amendment to PDP 00-02, the City removed the following passage:

The Encina Power Station and surrounding neighborhoods have co-existed for approximately 50 years with minimal day to day interaction or disturbance. The EPS operations are self-contained and do not generally extend beyond the limits of the PDP. The EPS and implementation of the Precise Development Plan will facilitate continued compatibility with the EPS and surrounding developments in the area.

(PDP 00-02 at p. 16.) How this language could, overnight, no longer be true or relevant, when there has been no change in use or operation on the EPS property, is baffling. Even with the City's recent actions, however, PDP 00-02 cannot restrict the design or operation of the CECP, as the PDP acts as a catalogue of authorized uses, not a separate authorization of use.

SP-144 provides standards and requirements for development within the Specific Plan area, including the proposed CECP site and the remainder of the EPS property. SP-144 was amended on October 11, 2011 solely to delineate that EPS is no longer a permitted use in the P-U zoning district and under the U designation of the General Plan Land Use element.

The EPS is not a permitted use in the P-U zoning district or within the boundaries of PDP 00-02(E). Further, both the P-U Zone and PDP 00-02(E) clarify generation of electrical energy is permitted in the Coastal Zone only if (1) by a government entity or by a utility company authorized or approved for such use by the California Public Utilities Commission and (2) it is an accessory use that generates fewer than 50 megawatts. Both the P-U Zone and PDP 00-02(E) also clarify that a generating capacity of 50 megawatts or more is prohibited in the Coastal Zone.

...

The Encina Power Station is not consistent with the General Plan Public Utilities designation since its primary function is generation of electrical energy and it is located within the Coastal Zone.

(SP-144 at pp. 14, 16.) Just as the City's ploy to have new zoning and General Plan restrictions render the CECP inconsistent with local LORS, the amendments of SP-144 and PDP 00-02 to reflect these restrictions should have no bearing on the Commission's consideration of the benefits of the CECP and its overarching consistency with LORS.

As noted above, the Commission has exclusive jurisdiction regarding the siting, design and permitting of electric generating facilities. The City's recent land use amendments are an attempted retroactive prohibition of the CECP at its proposed site. The biased amendments lend nothing to the Committee's analysis of the CECP AFC and the CECP's compliance with applicable LORS. However, in the event that the Committee determines that CECP does not conform to any of the City's recent land use amendments, then an override is justified as set forth in Section F, *supra*.

F. An Override is Appropriate

There are two types of overrides in power plant siting cases: environmental overrides and nonconformance overrides. Where a project will result in significant environmental impacts that cannot be mitigated, an agency cannot approve that project unless it finds that "the benefits of the project outweigh the unavoidable significant adverse environmental effects." (20 Cal. Code Regs. § 1755 (d)(2).) Further, the Commission cannot license a project that conflicts with one or more LORS unless it finds "that such facility is required for public convenience and necessity and that there are not more prudent and feasible means of achieving such public convenience and necessity." (Pub. Resources Code § 25525.)

Here, since all potentially significant environmental impacts are mitigated, an environmental override pursuant to CEQA is not necessary. Regarding a nonconformance override, Public Resources Code section 25525 expressly provides as follows:

The commission may not certify a facility contained in the application when it finds, pursuant to subdivision (d) of Section 25523, that the facility does not conform with any applicable state, local, or regional standards, ordinances, or laws, unless the commission determines that the facility is required for public convenience and necessity and that there are not more prudent and feasible means of achieving public convenience and necessity. In making the determination, the commission shall consider the entire record of the proceeding, including, but not limited to, the impacts of the facility on the environment, consumer benefits, and electric system reliability.

(Pub. Resources Code § 25525.) Thus, the findings in support of a nonconformance override must demonstrate (a) that CECP is required for public convenience and necessity, and (b) there are not more prudent and feasible means of achieving public convenience and necessity.

Although no legal decisions interpret the phrase “public convenience and necessity” as it is used in Public Resources Code section 25525, numerous decisions address the phrase “public convenience and necessity” as it appears in Public Utilities Code section 1001. In those cases, the phrase is construed broadly and “any improvement which is highly important to the public convenience and desirable for the public welfare may be regarded as necessary.” (CEC Metcalf Energy Center (99-AFC-3) Final Decision, at p. 464 (Sept. 24, 2001); *see also* El Segundo Power Redevelopment Project (00-AFC-14) Final Decision, at p. 296 (Feb. 2, 2005).) In previous Energy Commission decisions where an override was adopted, the CEC has stated that it “must logically first ascertain whether [the] project is reasonably related to the goals and policies of . . . the Warren-Alquist Act [which] expressly recognizes that electric energy is essential to the health, safety, and welfare of the people of California, and to the state’s economy.” (*Id.*) In previous licensing proceedings, the CEC has determined that it “is inescapable that electrical energy is essential to the functioning of contemporary society” and since the project “will provide a portion of the electrical energy supply essential to the well-

being of the state's citizens and its economy,” the CEC has concluded that the project is required for public convenience and necessity. (CEC Metcalf Energy Center (99-AFC-3) Final Decision, at p. 464 (Sept. 24, 2001); *see also* El Segundo Power Redevelopment Project (00-AFC-14) Final Decision, at p. 297 (Feb. 2, 2005).)

The second requirement for the Commission to issue an override is that there are not more prudent and feasible means of achieving public convenience and necessity. (Pub. Res. Code § 25525.) This determination must be made based on the totality of the evidence of record and consider environmental impacts, consumer benefits, and electric system reliability. (*Id.*) In balancing these factors, the Commission gives “substantial but not overwhelming weight to avoiding LORS noncompliance.” (CEC Metcalf Energy Center (99-AFC-3) Final Decision, at p. 466 (Sept. 24, 2001).)

To that end, CECP has no significant, unmitigatable environmental impacts. CECP’s numerous benefits that would justify an override include:

- Retirement & decommissioning of existing units 1-3, 320 MW of older, less efficient generation;
- Installation of two low profile, high-efficient, new Units totaling 558 MW (gross combined);
- Operation as soon as 2013;
- Achievement of goals of the South Carlsbad Coastal Redevelopment Plan;
- Provision of new revenues to the City of Carlsbad of about \$5MM per year;
- Provision of new energy supplies that are critically needed in San Diego by 2012;
- Consistency with State policy places the highest priority in new power projects that: (i) retire aging seawater cooled power plants; (ii) are “peaking” plants that provide backup power to intermittent renewable resources; (iii) are brownfield projects that reuse existing infrastructure; and (iv) improve GHG emission performance for the electric sector;
- Use of highly efficient natural-gas fueled generating units burn 30% less fuel, resulting in 30% better GHG performance;

- Replacement of 225 million gallons per day of ocean water for cooling with air cooling to protect marine life;
- Consistency with the City's goal to phase-out existing power plant for community and commercial redevelopment;

Furthermore, CECP will result in the following economic and development benefits:

- Construction workforce of 357 peak jobs and 237 jobs on average over a two-year construction period;
- Construction payroll exceeding \$55 million;
- Locally purchased materials estimated at \$30 million;
- Sales tax to California of approximately \$22 million;
- Induced and indirect employment estimated to be over 500 jobs and additional indirect local income of \$21 million;
- Use of existing infrastructure;
- Use of existing coastal property on which a power plant already exists;
- Reduction of impingement and entrainment of marine organisms; and
- Reduction in reliance on the Aqua Hedionda Lagoon.

Lastly, as noted in Section C above, *infra*, CECP at its proposed location will provide significant reliability and value within the Carlsbad area, the entire San Diego region, and the State of California. The proposed CECP location and the Encina Power Station site, located in the coastal zone, is the most logical place for CECP. The Coastal Act specifically contemplates the continued use of existing facilities and reasonable expansion of such uses within the Coastal Zone because the resources, infrastructure, and compatible uses already exist in the vicinity of existing power plants. (*See* Pub. Resources Code § 30260.) The CECP represents a long-standing planned effort to improve the region's critical electrical energy production infrastructure through the construction of a modern, more efficient power plant with the concurrent retirement

of three of the existing, older, less efficient units at the Encina Power Station.

It is clear that CECP is required for public convenience and necessity and has significant benefits. Further, there are not more prudent and feasible means of achieving public convenience and necessity. Therefore, the requirements of Public Resources Code section 25525 are met, thus mandating the issuance of override findings if the Commission first determines that CECP requires an override for Project approval.

Applicant believes that the case has been made to justify and override and is presenting no further testimony as to this subject matter.

III. APPLICANT'S WITNESSES

Witnesses identified to testify on behalf of Applicant are identified in the below table. Witnesses are identified by the area of expertise and an estimated time for direct examination is provided. However, Applicant reserves the right to revise time estimations based upon other parties' supplemental testimony. In addition, Applicant will provide to the parties a time estimate as to its time estimate for direct examination of Applicant's witnesses.

<u>Topic</u>	<u>Witness</u>	<u>Time Estimate</u>
PPA Impacts & Analysis	None	NA
LAND-2 & LAND-3 Issues	Scott Valentino	10 mins.
Grid Reliability	Brian Theaker	5 mins.
Air Quality, PSD Issues Only	Gary Rubenstein	NA
City Land Use LORS	Ronald Rouse	10 mins.
Override Issues	None	NA

IV. APPLICANT'S EXHIBITS

Applicant provides herein Exhibits A through F as such relate to the above related topics.

THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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APPLICATION FOR CERTIFICATION
FOR THE CARLSBAD ENERGY
CENTER PROJECT

Docket No. 07-AFC-6
PROOF OF SERVICE
(Revised 10/24/2011)

**CARLSBAD ENERGY CENTER LLC'S
Supplemental Testimony, Exhibits, Witness List, and Time Estimates for
Examination of Witnesses dated November 18, 2011**

CALIFORNIA ENERGY COMMISSION

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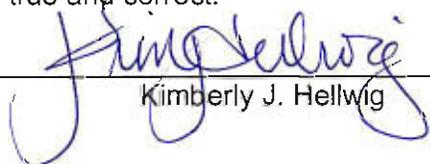
DECLARATION OF SERVICE

I, Kimberly J. Hellwig, declare that on November 18, 2011, I deposited copies of the aforementioned document in the United States mail at 500 Capitol Mall, Suite 1600, Sacramento, California 95814, with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

AND/OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.



Kimberly J. Hellwig