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**STATE OF CALIFORNIA**

**Energy Resources Conservation  
and Development Commission**

In the Matter of:

THE CARLSBAD ENERGY CENTER PROJECT

DOCKET NO. 07-AFC-6C

**SIERRA CLUB BRIEF ON GREENHOUSE GAS RELATED ISSUES**

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Dated: April 24, 2015

**STATE OF CALIFORNIA**

**Energy Resources Conservation  
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**INTRODUCTION**

Environmental review of a project’s greenhouse gas (“GHG”) emission impacts under the California Environmental Quality Act (“CEQA”) is a critical part of California’s broad suite of climate policies that recognize the threat of climate change to the state’s economy and environment and the corresponding need to aggressively reduce GHG emissions as quickly as possible across the state. CEQA requires that projects impacts – including GHG emission impacts – be thoroughly evaluated and discussed, that alternatives and mitigation strategies for significant impacts be identified, and that public understanding of project-specific impacts and methods for addressing significant impacts be facilitated by the disclosure of relevant information.<sup>1</sup> In January 2015, building on the Global Warming Solutions Act of 2006 that requires California to reduce its GHG emissions to 1990 levels by 2020, Governor Brown announced new targets to increase California’s Renewables Portfolio Standard (“RPS”) from one-third to fifty percent by 2030. Compliance with CEQA procedures are key to reaching these GHG reduction and RPS enhancement goals.

At issue here is the California Energy Commission’s (“Commission”) CEQA review, via the functional equivalent of an Environmental Impact Report, of the proposed new, 600 MW natural-gas-fired Carlsbad Energy Center Project (“CECP”). The CECP is slated to replace generation lost as a result of the unplanned San Onofre Nuclear Generating Station (“SONGS”) retirement in 2013, an event deemed “unique and highly significant.”<sup>2</sup> In contrast with SONGS, a 2200 MW capacity facility that emitted zero greenhouse gases during its operations, the CECP,

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<sup>1</sup> See, e.g., *San Joaquin Raptor Rescue Ctr. v. Cnty. of Merced* (2007) 149 Cal. App. 4th 645; *Communities for a Better Env’t v. City of Richmond* (2010) 184 Cal. App. 4th 70.

<sup>2</sup> Exh. 6006, “Decision Authorizing Long-Term Procurement For Local Capacity Requirements Due to Permanent Retirement of the San Onofre Nuclear Generations Stations” (D.14-03-004) (March 14, 2014) at 9.

if built, is estimated to emit upwards of 846,076 MTCO<sub>2</sub>e per year.<sup>3</sup> This is an enormous amount of GHG emissions that California simply cannot afford, especially without the consideration of reasonable alternatives or mitigation. In its CEQA analysis, however, the Commission’s Final Staff Assessment (“FSA”) concludes that the CECP “would result in a cumulative overall reduction in GHG emissions from the state’s power plants ... and would thus not result in impacts that are cumulatively significant.”<sup>4</sup> As a result, no GHG-related alternatives or mitigation measures are provided.

The FSA’s analysis of GHG emissions is fundamentally and unlawfully flawed. Though SONGS’ unplanned retirement undeniably defines the context for the CECP proposal and the current realities of the electric system, including the volume of ongoing GHG emissions, the FSA intentionally omits any reference to the retirement of the zero-carbon SONGS facility and the related impact on baseline GHG emissions. Because of this omission, the FSA’s conclusions are grossly inadequate. In particular, the FSA’s description of the existing baseline against which CECP GHG emissions are measured is improperly limited and legally flawed. A proper analysis of SONGS in the CEQA review of GHG emissions for this project would show that the CECP will have, in fact, a highly significant GHG emission impact on the environment. The FSA’s omission of SONGS from its GHG impacts discussion violates CEQA’s substantive requirements, which are “designed to provide long-term protection to the environment”<sup>5</sup> and provide “the public ...with detailed information about the effect which a proposed project is likely to have on the environment.”<sup>6</sup>

## ARGUMENT

### **1. FSA’s GHG Analysis Fails to Take Into Account the CECP’s “Role” in Electricity System as Replacing SONGS’ Generation.**

The Commission takes an “electric system” approach to assessing GHG impacts under CEQA by “considering the project’s role(s) in the integrated electricity system.”<sup>7</sup> The FSA

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<sup>3</sup> Exh. 2000, Final Staff Assessment for Amended CECP (2015) at AQ1-12, Table 3.

<sup>4</sup> Id. at AQ1-38.

<sup>5</sup> *Mountain Lion Found. v. Fish & Game Comm’n* (1997) 16 Cal. 4th 105, 112.

<sup>6</sup> Cal. Pub. Res. Code § 21061.

<sup>7</sup> Exh. 2000 at AQ1-14. The Commission has acknowledged that this is not the “normal approach to CEQA analysis,” which typically considers project impacts as additive to existing ones. See *CEC Guidance on Fulfilling CEQA Responsibilities for GHG Impacts on Power Plant Siting Applications*

explains that GHG emissions are analyzed by Commission staff “in the context of the electricity sector as a whole ...the assessment is completed in the context of how the project will affect the electricity sector’s emissions based on its proposed role.”<sup>8</sup> Here, the record abundantly demonstrates that the CECP’s “role” in the electricity system is to fill the generation gap created by the retirement of a zero-carbon-emitting facility. Yet, the FSA’s GHG analysis ignores this fact entirely, choosing instead to define the CECP’s role in the electricity system, for GHG purposes, by using questionable assumptions that the CECP will displace generation by less efficient power plants.

There is no dispute that the CECP is slated to replace SONGS generation capacity in the electric system. The FSA states expressly in its introduction that “the purpose” of the amended CECP is to “respond to the unanticipated retirement of the San Onofre Nuclear Generating Station.”<sup>9</sup> Staff expert David Vidaver also confirmed during hearing cross-examination that CECP generation is “intended to provide for local and Southern California reliability given the loss of the San Onofre Nuclear Station.”<sup>10</sup> These statements reflect findings by the Public Utilities Commission (“PUC”) in its 2012 long-term procurement proceeding (“Track 4”) to address generation shortfalls in the San Diego and Los Angeles basins created by the abrupt and unexpected permanent closure of the 2,200 MW SONGS facility.

In its Track 4 decision, the PUC noted that “[t]he June 2013 permanent retirement of SONGS ... presented a *unique and highly significant event*. Until 2012, SONGS had supplied 2,246 MW of GHG-free base load power to the LA Basin and San Diego and played an important role in system stability in the San Diego Local Area.”<sup>11</sup> The PUC authorized San Diego Gas & Electric (“SDG&E”) to procure between 500 and 800 MW of generation by 2022 to address this need, explaining that this authorization was expressly intended “to meet local capacity needs stemming from the retired San Onofre Nuclear Generation Stations.”<sup>12</sup> Less than four months later,

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(March 2009) at 19, available at <http://www.valleyair.org/programs/CCAP/documents/CEC-700-2009-004.pdf>.

<sup>8</sup> Exh. 2000 at AQ1-13.

<sup>9</sup> Exh. 2000 at 1-3; see also *id.* at AQ1-19 (“Authorization for San Diego Gas & Electric to procure natural gas-fired generation or other least-cost resources to replace the San Onofre Nuclear Generating Station in the San Diego LCA was granted in D.14-03-004.”)

<sup>10</sup> Transcript of April 2, 2015 Evidentiary Hearing at 135 (Vidaver Testimony).

<sup>11</sup> Exh. 6006 at 9 (emphasis added).

<sup>12</sup> *Id.* at 2.

SDG&E submitted an application to the PUC for authority to fill this procurement need with the CECP.

The FSA's GHG analysis is comprised entirely of generalized, conclusory assumptions that fail to confront the fact-specific circumstances of SONGS' unplanned retirement, the intervening status of the electric system without SONGS and the role CECP is slated to play by meeting need created by SONGS' closure. The FSA concludes, rather, that "[h]olding the portfolio of generation resources constant, energy from new natural gas-fired plants displaces energy from existing natural gas-fired plants."<sup>13</sup> It also concludes that "[i]t is reasonable to assume that the amended CECP units would be dispatched (called upon to generate electricity) whenever they are a cheaper source of energy than an alternative."<sup>14</sup>

These assumptions, while true in theory in some instances, do not accurately describe the unique factual circumstances here and are unsupported by evidence in this context. The Commission's "displacement" theory is overly simplistic, failing to reflect the facts on the ground, such as the complexities of the system, current resource procurement authorizations and alternatives available to reduce GHG impacts. Indeed, staff testimony during evidentiary hearings conceded this and underscored the need to analyze the CECP proposal in the context of the SONGS retirement, related procurement authorizations and alternatives to the project. During cross-examination, Commission staff acknowledged that, if the CECP were a 400 MW project as opposed to a 600 MW project, the result would be "less GHGs."<sup>15</sup> This directly conflicts with the Commission's "displacement" theory that new gas-fired projects will lower GHG emissions by displacing older, higher emitting generation.

Indeed, the theory falls apart when applied to the CECP, which is not replacing older generation but is filling a specific need created by a zero-carbon facility.<sup>16</sup> If the displacement theory were correct here, it would follow that a smaller gas-fired project would displace *less* generation from older sources and result in fewer total reductions to GHG emissions as

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<sup>13</sup> Exh. 2000 at AQ1-20.

<sup>14</sup> *Id.*

<sup>15</sup> *See* Transcript of April 2, 2015 Evidentiary Hearing at 112 (Vidaver Testimony) ("Q: If this were a smaller project, say, this was 400 MW and then the other 200 was renewables, wouldn't that be less GHGs? Vidaver: Yes.")

<sup>16</sup> To the extent that the CECP is replacing older generation, it is presumably doing so to return the system from temporary generation-deficit circumstances, in which other generation sources extended capacity to fill the short-term gap in generation caused by SONGS' outage, back to pre-outage, typical capacity levels. Again, however, this is not explained in the FSA analysis.

compared to a larger, more efficient gas-fired project. But this is not true. If the CECP project were rejected by the PUC in favor of a 300 MW gas-fired project, for example, and the remainder of SDG&E's procurement authorization is filled with preferred resources, reductions to overall GHG emissions will be far greater than the "reductions" the FSA claims will result from the CECP project. The fact that a smaller gas-fired project would result in fewer GHGs on these facts demonstrates that the FSA's simplistic displacement theory does not adequately capture the dynamics of the GHG emissions scenario, and that alternatives would lower GHG impacts. Yet none of this is made clear in the FSA's existing GHG analysis.

Without discussing the particular facts surrounding the CECP's connection to SONGS, the CECP's real GHG emission impacts and the present state of the "electric system" simply cannot be understood. But for the SONGS retirement, the CECP proposal would not be slated for procurement. As a result, a variety of factors not mentioned in the FSA are essential to a proper understanding of the project's GHG emissions impacts. Factors warranting analysis include the enormous and unique generation deficit created by SONGS' unplanned retirement that prompted the findings in the PUC's Track 4 decision regarding electric system needs; the impact of SONGS retirement on GHG emissions; consideration that the system may be operating in excess of "normal" historic capacity rates in order to fill that deficit until procurement is complete; an understanding of how diverse projects slated to fill the generation gap would impact GHG emissions differently; and a discussion of how CECP would add to historic baseline GHG emissions once procurement returns the system to pre-SONGS capacity and reliability levels. These discussions and inquiries are critical to understanding the "electric system" and the role of the CECP in light of SONGS' replacement under CEQA, as well as to performing an accurate analysis of GHG emission impacts. Yet, the FSA's CEQA analysis fails to analyze any of these issues, rendering it wholly inaccurate.

"CEQA requires an EIR to reflect a good faith effort at full disclosure."<sup>17</sup> The analysis "must contain facts and analysis, not just the bare conclusions of the agency" with "detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project."<sup>18</sup> By relying only on generalized assumptions that are not substantiated by the specific facts in this record, the Commission fails to

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<sup>17</sup> *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal. App. 4th 1184, 1197-98.

<sup>18</sup> *Id.*

comply with CEQA’s information disclosure requirements. Specifically, it omits relevant information that precludes informed decision-making and public participation,<sup>19</sup> and prejudicially narrows the scope of the FSA’s GHG analysis.

## **2. The FSA “Baseline” Is Inaccurate.**

Consistent with its prejudicial failure to define the CECP as tethered to SONGS’ retirement, Commission staff relies on an improper “baseline” that excludes data of SONGS operations in order to justify the conclusion that the CECP’s GHG emissions will not cause significant impacts. Staff defends this approach by asserting that “the existing physical conditions against which the impacts of the amended CECP are required to be measured under CEQA are the *current* system, one in which SONGS produces no output.”<sup>20</sup> CEQA makes clear, however, that “the date for establishing baseline cannot be a rigid one. Environmental conditions may vary from year to year and in some cases it is necessary to consider conditions over a range of time periods.”<sup>21</sup> The baseline must be realistic so that it gives “the public and decision makers the most accurate picture practically possible of the project’s likely impacts.”<sup>22</sup>

Without including GHG emissions data from the electric system when it was operating at normal capacity, the baseline is arbitrarily increased and inaccurate. By using a short-term baseline that accounts only for post-SONGS shutdown conditions, a period of only eleven months between the announcement of permanent SONGS retirement in June 2013 and the May 2014 amendment to the CECP that triggered CEQA review, the Commission artificially inflates the baseline GHG emissions to erase the reality of CECP’s massive GHG impacts relative to historic, typical conditions. The existing physical environment in 2013 and 2014, significantly, is not typical: It reflects an unplanned circumstance during which the southern California electricity system is operating without a 2,200 MW generation source and awaiting new resource procurement. Generation by existing facilities during this deficit thus does not provide a historically accurate baseline for GHG purposes, as the electric system is compensating for a

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<sup>19</sup> Id. (A “prejudicial abuse of discretion” occurs “when the omission of relevant information has precluded informed decision making and informed public participation, regardless whether a different outcome would have resulted if the public agency had complied with the disclosure requirements.”)

<sup>20</sup> Exh. 2000 at AQ1-37.

<sup>21</sup> Id. at 327-8; see also *Save our Peninsula Comm. v. Monterey Cnty. Bd. of Supervisors* (2001) 87 Cal. App. 4th 99, 104, citing Cal. Pub. Res. Code § 21000 et seq. (baseline water use should properly have been set at a figure that more closely represented water actually used historically on the property).

<sup>22</sup> *Neighbors for Smart Rail v. Exposition Metro Line Const. Auth.* (2013) 57 Cal. 4th 439, 449 (2013), *reh’g denied* (Sept. 18, 2013).



significant loss of generation. “A temporary lull or spike in operations that happens to occur at the time environmental review for a new project begins should not depress or elevate the baseline; overreliance on short-term activity averages” can result in establishing artificially higher baselines.<sup>23</sup>

An accurate, realistic baseline here must include historic GHG emissions information pre-dating SONGS shut-down. In so doing, the baseline will properly describe the pre-existing and historically accurate, not temporary, physical conditions against which the CECP’s impacts must be measured. The fact that SONGS will not resume operations in the future does not exclude it from the baseline, and the Commission offers no authority to the contrary.<sup>24</sup> Moreover, though the CEQA term “baseline” is “normally” treated as existing physical conditions in the affected area as they exist at the time the environmental analysis is commenced,<sup>25</sup> the circumstances of the CECP proposal are wholly abnormal. Indeed, the record reflects that this is a “unique and highly significant” circumstance, and CEQA expressly provides flexibility in baseline descriptions to permit accurate portrayal of existing conditions. The Commission should not benefit here to the detriment of the environment and California’s clean energy goals from the fact that SONGS retirement was unplanned and thus not operating at the time environmental review began. Such a narrow-sighted, artificial approach to the baseline renders the GHG analysis meaningless and undermines CEQA’s robust disclosure requirements and environmental protection goals.

## CONCLUSION

As explained herein, the Commission’s FSA for the CECP fails to include relevant information in its GHG emissions impact analysis regarding the role of the CECP in the electric system as a partial replacement for the zero-carbon emission SONGS facility. As a result, the baseline supporting the Commission’s GHG analysis is inaccurate and fails to reflect the significant impacts of the CECP. The FSA must be revised to include an analysis of the CECP’s 846,000-plus tons of GHG emissions in light of the generation gap created by the zero-emission facility SONGS, which is the basis for the CECP proposal. The FSA must also contain a

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<sup>23</sup> *Communities For A Better Env't v. S. Coast Air Quality Mgmt. Dist.* (2010) 48 Cal. 4th 310, 328.

<sup>24</sup> Exh. 2000 at AQ1-37.

<sup>25</sup> Cal. Code Regs, tit. 14 § 15126.2, subd.(a).

corresponding finding of significant GHG emissions impacts, accompanied by a discussion of mitigation and alternatives, as required by CEQA.

Dated: April 24, 2015

Respectfully submitted,

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/s/

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I, Rikki Weber, declare that on February 20, 2015, I served and filed copies of **SIERRA CLUB BRIEF ON GREENHOUSE GAS RELATED ISSUES** dated April 24, 2015. The most recent Proof of Service List, which I copied from the web page for this project at: <http://www.energy.ca.gov>, is attached to this Declaration.

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Dated: April 24, 2015

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