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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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PETITIONS TO AMEND THE

CARLSBAD ENERGY CENTER PROJECT

Docket No. 07-AFC-06C

ENERGY COMMISSION STAFF BRIEF

I. Introduction

There are three important things the Committee should keep in mind as it writes the Proposed Decision for the Carlsbad Petition to Amend (PTA). First, the project analyzed by Energy Commission staff (Staff) is, as the name suggests, an amendment to an existing license for the Carlsbad Energy Center Project (CECP), a project that underwent extensive environmental analysis in the prior licensing proceeding. That analysis, conducted over five years of hearings and project changes, was necessitated by the staunch opposition to the project from the City of Carlsbad (City) and other intervenors. Much of the underlying environmental analysis for the licensed project—but not all—remains valid, and is part of the underlying evidence that Staff has requested be officially noticed.

Second, approval of the PTA would *reduce* the impacts of the licensed project. The licensed project analyzed earlier had virtually no adverse impacts that were not mitigated to a level of less than significant. However, despite this mitigation, the visual impact of new power plant structures for the licensed project, and the continued use of a small amount of ocean water for this air-cooled facility, were concerns of the local community and the San Diego Regional Water Quality Control Board. The PTA reduces visual impacts, and will use reclaimed water purchased from the City rather than water drawn from the ocean, avoiding any impact to that resource.

Third, the PTA offers substantial benefits over the licensed project. The City emphasized this point in its support for the PTA, which provides “extraordinary” local benefits by including the closure and removal of the old and massive Encina Power Station. The demolition and removal of this obsolete infrastructure will open up important redevelopment opportunities for the City, allowing it to finally implement its vision of coastal development in the project area. As important as this benefit is, there are others of similar importance that the PTA shares with the licensed project: among them (1) replacing the old power plant will allow its closure and allow the State to meet its goal to end the use of marine cooling for power generation at this site in 2018; and (2) providing new generation to increase electric system reliability while supporting the integration of burgeoning new intermittent renewable resources, such as solar and wind generation.

In light of the above, Staff urges the Committee to approve the PTA, and to make the override findings necessary for that approval.

Finally, Staff wishes to express its appreciation for the parties who intervened in the proceeding, and whose persistent scrutiny and advice resulted in improvements to the PTA, or at least consideration of issues and possibilities that otherwise might not have been presented.

II. The Impacts of the PTA Have Been Fully Analyzed

Although the PTA is at the same site, and for roughly the same megawatt capacity, as the licensed project, the extent of the project changes required new analysis in many environmental areas. It uses different turbine technology, requiring new air modeling of its emissions and a new Determination of Compliance from the air district. The City’s support for the PTA led it to amend all but one of its local requirements that were inconsistent (or arguably so) with the amended project. PTA changes in the visual profile required a new Visual Resources analysis. Project alternatives were once again discussed and debated. Staff has tried to be selective about the issues for briefing, which it discusses below by related topic area.

III. Land Use

A. The Commission should make override findings for the 35-foot height limit.

Staff's Final Staff Assessment (FSA) describes the project as consistent with all applicable land use and zoning laws with the exception of the 35-foot height limit that appears in the "policy" provisions of the Aqua Hedionda Land Use Plan. (Exh. 2000 [FSA] p. 4.6-17.) The Committee asked the City to explain whether it would normally merely issue a variance for a project that exceeds such a height limitation, and the issue was addressed by the Carlsbad Assistant City Manager, Gary Barberio. He testified that such variances were possible for the City to accomplish, but that the 35-foot limitation is part of the City's Coastal Land Use Plan, which would require a secondary approval action (actually, an amendment) by the California Coastal Commission. (4/2 RT 14-18.) He therefore reiterated the City's position that the Commission should make "override" findings pursuant to Public Resources Code section 25525. (4/2 RT 17-18.)

Staff agrees with the City's position that an override is prudent. Typically the Commission considers variances to ordinances to be within its purview, as variances are considered a "quasi-adjudicatory" entitlement issued by local agencies. (Longtin's Calif. Land Use (2d ed. 1987) Vol. 2, § 11.51, pp. 1028-1029.) Variances are thus "permit-like" actions that are subsumed within the Commission's siting authority (Pub. Resources Code, § 25500), allowing the Commission to exercise its own discretion in place of the agency's regarding such zoning restrictions.¹ However, in this instance, this approach is made problematic by shared authority with the California Coastal Commission, which would typically need to approve such variances after a lengthy process. Rather than trying to unravel the intricacies of multi-agency responsibilities and attitudes regarding whether a variance or amendment is appropriate, which would be time-consuming, the Commission should simply override the non-conformity by making the findings required by section 25525.

¹ Staff typically consults with the local agency to determine whether a particular variance would, under the circumstances and local agency practice, be appropriate.

B. The PTA project is not “Coastal Dependent,” but this does not matter.

The Final Staff Assessment describes the PTA as consistent with the provisions and policies of the California Coastal Act. (Exh. 2000 [FSA], pp. 4.6-13 and 14.) This is not surprising, as the Commission found the licensed project to likewise be consistent with the Coastal Act. (*Id.* at 4.6-13, fn.4, and citations therein.) However, Terramar has raised the fact that the PTA is, unlike the licensed project, not a “coastal dependent” facility, implying that such is required for a power plant to be licensed in the Coastal Zone. The Committee has requested that this issue be briefed.

Terramar is certainly correct that the PTA project is not coastal dependent. The licensed project was coastal dependent because it was opposed by the City, and could not purchase reclaimed water from the City. (Exh. 2000 [FSA], pp. 4.10-11, 19.) Without reclaimed water, the licensed project was required to build a small desalination facility to use marine water for the supply essential to its operation. (*Id.* at p. 4.10-19.) However, the City now supports the PTA, and will sell the project reclaimed water. (*Ibid.*) With this change, the PTA is not “coastal dependent,” as it could conceivably be built away from the coast, with no need for desalinization.

However, Terramar is incorrect to conclude that “coastal dependency” is a requisite. Terramar may have been confused by the Staff’s testimony in the prior licensing proceeding, where the issue of whether the project was consistent with the Coastal Act’s “Chapter 3” provisions was a contentious issue. In that proceeding, Staff contended that the licensed project was consistent with the Chapter 3 provisions, but that, in any case, it was also coastal dependent because of its lack of any water source other than the ocean. In other words, the issue of coastal dependency was raised by Staff because the issue of consistency with the Coastal Act was contentious, and the project’s coastal dependency would have allowed the project to be permitted consistent with the Coastal Act even if it did not otherwise conform.

Nothing in the Coastal Act requires a project to be “coastal dependent” to receive a permit. The Commission’s Final Decision for the licensed project discussed this issue at some length, finding, consistent with relevant case law and Coastal Commission interpretation of its statute, that coastal dependence is not a requirement for power

plants or other developments. (Exh. 3002 [Final Dec.], pp. 8.1-8 to 8.1-10.) The discussion of this matter in the Final Decision remains correct, and is corroborated by the City's testimony in the licensing proceeding, where the City witness was the former chief counsel of the Coastal Commission (Exh. 433, [Faust], p. 5 ["If the project as fully mitigated cannot be found to be fully consistent with these policies, the Commission would consider whether it could be approved . . . as a coastal dependent facility"]), and by the City's Mr. Barberio in the current proceeding. (4/2 RT 22.) Staff added further corroboration, noting that the Coastal Commission has not suggested that "coastal dependency" was required for other coastal-located, air-cooled power plants being considered by the Energy Commission. (4/2 RT 28-30 [corrected RT identifying Staff's Eric Knight].)

IV. Visual Resources

A. The PTA would have an overall positive effect on Visual Resources.

The Final Decision concluded that, while the licensed project would have potentially adverse impacts on the visual environment, specified mitigation would reduce such impacts to a level that is less than significant. (Exh. 3002 [Final Decision], p. 8.5-51-52 [Findings 5, 11, 12, 13; Conclusion of Law 2.]) The PTA would reduce project impacts with its lower visual profile, but also improve the visual environment by removing the existing massive obsolete power plant that sits squarely on the coast west of the project site. The photo simulations of this result from various "key observation points," or "KOPs," indicate the very dramatic improvement that would result from the PTA. The new CEC power plant becomes much more obscure from all KOPs, while the removal of the Encina Power Station eliminates this industrial element from the coastal landscape. (See, e.g., Exh. 2000 [FSA], p. 4.13-7, Vis. Res. Fig. 4b-4d [KOP 1], Fig. 5b-5d [KOP 2, Fig. 6b-6d [KOP 3].) There is no major disagreement on this beneficial effect of the PTA. Rather, all disagreement focuses on the potential effect of an entirely separate future project, the I-5 Widening Project proposed by Caltrans.

B. The I-5 Widening Project is potentially significant, but can be successfully mitigated.

The I-5 Widening Project was discussed in the Final Decision for the licensed project. It is a linear project that will move in increments from San Diego to Carlsbad, taking many years to accomplish. It has been analyzed as a separate future project, its impact cumulative in nature, with the potential for adverse impact when combined with the CECF project. (Exh. 2000 [FSA], p. 4.13-1, 35-38.) As when the Final Decision was adopted, the Carlsbad part of the Widening is still several years away. (*Id.* at p. 4.13-35.) The Widening Project intends to expand the current freeway right-of-way (ROW) west along the eastern edge of the CECF site, encroaching in some measure on the land and vegetation that separates CECF from the freeway. (*Ibid.*) This encroachment is problematic, inasmuch as the project site is currently screened by vegetation west of the ROW, in the area that is subject to encroachment. The removal of much of the vegetated “berm” by the ROW could leave the project site much more visible generally, and also from freeway viewers, which collectively is a potentially significant visual impact.

The Final Decision for the licensed project concluded that this encroachment could be successfully mitigated by augmenting the screening vegetation within (or upon) the remaining part of the berm between the project and the freeway. (Exh. 3002 [Final Dec.], p. 8.5-52 [Findings 9, 10, 11].) Accordingly, it found the cumulative effect of the Widening Project to be less than significant with the mitigation proposed. (*Id.*, at p. 8.5-52 [Finding 12].)

The PTA issue of the cumulative impact of the Widening Project is similar, but different in some important respects, from the impact discussed in the Final Decision. First, the PTA infrastructure is smaller and lower, with exhaust stacks reduced in height from 139 feet to 90 feet, and the removal of some of the other taller infrastructure. (Exh. 2000, pp. 4.13-7, 35-36; 4/1 RT 38-39.) This makes the amended project lower and easier to screen. (*Ibid.*) Conversely, the five transmission towers that connect the project to the switchyard have been moved from the west side of the CECF site to the east side, such that they are nearer the freeway, and more visible. (*Ibid.*) In addition, the proposed project footprint now explicitly indicates that the internal walls of the

“upper rim road” inside the berm around the project will not be vertical, but lie back at an angle, as requested by the Carlsbad Fire Department. (See 4/1 RT 36; Exh. 2000 [FSA], pp. 5.7-7-8 [“below ground bowl with sloped walls”].) This leaves less space to be used for vegetation outside the ROW and on the project site. (Exh. 2000, p. 4.13-46.)

Staff re-analyzed the project mindful of these differences, and concluded that there is still likely to be enough margin between the project site and the freeway to provide adequate visual screening. (Exh. 2000 [FSA], pp. 4.13-37, 46.) Staff testified that a minimum 20 foot width is required to allow room for the trees and shrubs required for effective screening. (Exh. 2001, p. 19.) However, at the narrowest “pinch points” between the freeway and project site, there may be less than 20 feet outside the ROW for vegetation screening, which suggests that a successful screening effort may require some screening to be accommodated within the ROW. (*Id.* at pp. 2-22.) Staff presented three different “scenarios” to illustrate that there are different ways that the screening can be made effective despite the pinch points. (*Ibid.*) However, success may, depending on the final alignment, require some accommodation by Caltrans for the vegetative screening to be complete and successful.

Caltrans cannot be subject to a Commission project condition for mitigation. However, there is reason to believe that Caltrans will cooperate in the design of such screening. First, it must purchase from NRG the area that it would encroach upon, and NRG will be subject to a legal requirement for vegetative screening that will constrain both parties and should push them to agree on an effective screening mitigation. Second, and equally important, Caltrans’ EIR/EIS for the project expresses an intent to provide screening mitigation, and references its Design Guidelines to suggest how that may be accomplished. (Exh. 2001, p. 21.) These guidelines indicate that Caltrans may use various screening approaches, and may include screening within its ROW. (*Ibid.*) Third, the City has indicated that it wants a “seat at the table” in discussing this issue with Caltrans to make sure the CECP site is effectively screened. (4/2 RT 25-27.) Finally, the California Coastal Commission has itself been analyzing the Widening Project, given its duty to protect visual resources in coastal areas, and is likely to strongly encourage or even require Caltrans to provide effective mitigation. (See

Coastal Comm. Staff Report re: Caltrans I-5 Widening Project—Enhancement Program, June 2014.)² All of these facts suggest that vegetative screening is likely to be part of the final alignment for the Caltrans ROW, which will determine the exact width of the margin for vegetation, as well as the manner in which screening will be deployed by Caltrans.

Based on the above, Staff believes that the visual impact of the Widening Project can be mitigated to a level that is less than significant with vegetative screening. However, since future cooperation from Caltrans may be required to make such screening fully effective, and since the final screening solution will be impossible before Caltrans has a final alignment and final design, Staff believes that the Commission should conclude that the cumulative impact of the I-5 widening is a potentially significant adverse impact, and make “findings of overriding considerations” for the PTA’s approval pursuant to CEQA Guideline section 15093. (Cal. Code Regs., tit. 14, § 15093.) This is a departure from the recommendations in Staff’s testimony, which instead recommended a finding under Guideline section 15091(a)(2)—stating that the mitigation is within the capacity of another public agency which “can and should” adopt such. This departure from its previous recommendation is explained under subsection “4,” below.

C. The visual impact of the PTA transmission lines can be successfully mitigated with vegetative screening.

Intervenor Power of Vision (POV) maintains that the five transmission poles on the project site are a significant impact which will not be effectively screened because of the Widening Project. It therefore argues that the visual impact of these poles be avoided by either moving the transmission line to the west side of the site, or by undergrounding. Staff respectfully disagrees.

² The Coastal Commission document emphasizes (as does Staff) the Caltrans Design Guidelines and Caltrans’ professed intent to provide mitigation for visual impacts from the Widening Project. (Coastal Commission Staff Report, p. 87.) There is express reference to vegetative screening along the corridor as a mitigation to reduce visual impacts. (*Ibid.*)

First, Staff testified that an effective screening plan will reduce impacts for the entire project. From most KOPs, the transmission poles are a subordinate feature of the project that are less important than the exhaust stacks and other features of the power plant itself. (Exh. 2000, p. 4.13-45.) Vegetative screening as required by condition VIS-5 should reduce all visual impacts to less than significant. (*Id.*, at pp. 4.13-45, 46.) Thus, moving the transmission line or undergrounding is unnecessary, given the robust mitigation requirement Staff would require. And in the absence of such screening, undergrounding or moving the transmission line would not effectively mitigate overall impacts, as the project itself would remain starkly visible from both the freeway and more distant views from the east. (*Ibid.*)

Second, POV overstates the impact of the transmission poles. The applicant has already, in response to this concern, moved three of the five poles to the floor of the recessed “bowl” to lower their visual profile (it was not technically feasible to place the other two lower, or “in the bowl”). (Exh. 2000, p. 4.13-32.) Moreover, the pole heights depicted in the simulations have been described by both Applicant and Staff as a “worst case” height depiction that will be reduced to the extent feasible (so long as applicable clearance requirements are met with a margin for safety) when the project goes to final design. (Exh. 1014; see Exh. 2000 [FSA], p. 5.5-14.) In addition, transmission lines are not an uncommon feature in the project area, which is already the location of significant transmission infrastructure. (See, e.g., Vis. Res. Figs. 10e [KOP 6a], 11a-11b [KOP 7].) POV’s focus is on the impact to freeway viewers. (See, e.g., Exhs. 3016-3037 [freeway photos].) While protecting the existing views of freeway viewers in the area is important, freeway viewers on this section of I-5 are already subjected to numerous short-term views of transmission line infrastructure.

Third, moving the transmission line to the west side of the project, assuming such is even feasible, would merely shift the impact to western viewers, a point the City has made in opposing such a move. (See 4/2 RT 38-39.) The City has expressed its intent to redevelop these areas west of the site, and closer to the coast, with unspecified high-end multiple-use projects that it believes would be adversely affected by moving the transmission line closer to these new uses. (*Ibid.*) Moreover, moving the line to the west side of the site would be problematic because constraints in that area, including

the location of other essential project infrastructure in that area, and potential obstruction of fire access with a power line down. (See Exh. 1000 [PTA], p. 3-2.)

Fourth, undergrounding the line, or using H-frames to lower heights (two POV proposals), would be problematic. Undergrounding the line is made more complicated, and more expensive, because of constraints of this site, including the railroad tracks (Exh. 2000 [FSA], pp. 5.5-14-15); physical feasibility (as well as economic feasibility) is doubtful. (*Ibid.*) H-frames, suggested by POV to lower transmission pole height, require more space than is apparently available. (*Id.*, at 5.5-15.) This makes the suggested relocation or undergrounding of the line in that area not only marginal as a mitigation measure, but apparently infeasible as well.

D. The Commission should make findings of “overriding considerations” for the cumulative visual impact of the Widening Project.

In its Visual Resources testimony, Staff recommended that the Commission find that the mitigation is within the authority of another public agency (Caltrans) which “can and should” adopt such mitigation, a CEQA finding that can be made pursuant to Guideline section 15091(a)(2). The Committee requested briefing regarding whether such a finding need be accompanied by “overriding considerations” findings pursuant to Guideline section 15093. This led Staff to reconsider the recommendation in the Staff testimony.

Neither CEQA nor its Guidelines are explicit as to whether an override finding is legally required when an agency finds that environmental mitigation is within the purview of another public agency which “can and should” provide such mitigation. Apparently the issue has not been directly addressed by the case law. However, Remy and Thomas’ treatise *Guide to CEQA* provides prudent guidance to agencies that would make such a finding:

In the authors’ view, the use of a statement of overriding considerations makes sense where a lead agency finds that mitigation duties lie with a responsible agency, because the lead agency has no way to be sure that the responsible agency, acting later, will adopt the mitigation measures necessary to render the impact less than significant The authors

therefore recommend that lead agencies adopt statements of overriding considerations whenever the only measures that can reduce significant effects to less than significant levels are within the control of responsible agencies. (Remy & Thomas, Guide to CEQA (11th ed.) 2007, Chap. X., subd. N. [Statement of Overriding Considerations], p.403.)

Caltrans, of course, is not a “responsible agency,” but rather a lead agency for a separate future project that is here considered cumulative. However, the principle is the same, and the prudent course is for the Commission to make the override findings.

However, Staff now believes that the better course would be to simply find the cumulative impact potentially significant and make the “overriding considerations” findings, with no reference to Guideline section 15091(a)(2) and to Caltrans’ duties in that regard. Staff believes the reference to the “can and should” provision leads to other issues that are best avoided. For example, the “can and should” finding pursuant to section 15091(a)(2) “shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives.” (Cal. Code Regs., tit. 14, § 15091(c).) Arguably the Commission does have “concurrent jurisdiction” to deal with the mitigation: it will prescribe mitigation (presumably some version of Staff-proposed condition VIS-5), and it will have continuing enforcement authority over all of its conditions of certification, including VIS-5. This makes it doubtful whether a finding under 15091(a)(2) is appropriate. Since prudence dictates that the cumulative impact be addressed by override findings in any case (even for the “can and should” finding), there is simply no offsetting advantage for making the somewhat questionable section 15091(a)(2) finding that Caltrans “can and should” adopt mitigation.

In sum, Staff believes that the cumulative impact of the Widening Project can and will be successfully mitigated, but has no ultimate control over Caltrans’ actions to be certain that such will happen when that project finally occurs. For that reason Staff recommends that the Commission find the cumulative impact of the Widening Project to be potentially significant, and make override findings pursuant to Guideline section 15093. It further recommends that the Commission NOT make “can and should” findings pursuant to Guideline section 15091(a)(2).

V. Air Quality

There was little or no real controversy regarding the PTA project's impact on Air Quality, apart from impacts on "greenhouse gas" (GHG) emissions, which are discussed separately below. The San Diego Air Quality Management District (air district) provided a Preliminary Determination of Compliance earlier in the proceeding, and filed its Final Determination of Compliance (FDOC) late in the proceeding after responding to public comments, including comments from intervenors Terramar and Robert Sarvey. The FDOC found the PTA project to be in compliance with all state, federal, and air district requirements for a stationary facility, with the extensive conditions that it included in the FDOC. (Exh. 2002 [FDOC], p. 47.) Those conditions in the FDOC in turn become "conditions of certification" recommended by Staff, and will be adopted by the Commission in its Final Decision.

The FDOC included a review of Applicant's "health risk assessment" (HRA) for the impacts of the relatively small amount of toxic emissions that are inherent in gas-fired generation. (Exh. 2002 [FDOC], Append. B.) That HRA review, like the separate HRA performed by Staff, indicated no substantial toxic risk from the project for any persons, regardless of proximity, age, or health condition. (Exh. 2000 [FSA], pp. 4.8-5, 10, 16.)

Many of the FDOC provisions that will be part of the license limit the operating times and emission amounts of regulated pollutants that the project is permitted to emit. Absent emergency, operating hours are limited to hours between 6 a. m and midnight. (Exh. 2000 [FSA], p. 4.1-29.) The emissions levels are subject to monitoring at the stack by electronic methods known as "continuous emissions monitoring, or "CEM". (*Id.*, at pp. 4-29-30.)

The only controversy that was raised to the air district that carried forward into the Energy Commission proceeding was that of what "baseline" should be used for the operation of the obsolete EPS facility that will be retired when CECP goes on-line. The "baseline" issue pertains to the average level of emissions from the existing EPS facility, and the degree of increase that could occur when CECP goes on-line, effectively replacing EPS. The baseline determination is important inasmuch as it determines

whether the PTA project (which is treated as a “modification” of the EPS facility under federal law) will result in emission increases that are substantial enough to require the project to provide “emission reduction credits” as mitigation to compensate for its emissions.

Terramar and Robert Sarvey contended that the air district should not, as it originally proposed, use a two-year baseline that included the time period shortly after the San Onofre Nuclear Generation Station (SONGS) shut down (as it turned out, permanently) for mechanical problems. (Exh. 2001, p. 11.) They contended that such a baseline was misleading, as certain changes in the electric system make that level of EPS generation unlikely to reoccur, allowing the project proponent to avoid emission reduction credit requirements. The air district, after analyzing the issue, including consultations with the California Independent System Operator (Exh. 2002 [FDOC], pp. 19-20), agreed with Terramar and Sarvey; this meant that under air district rules the analysis would use a five-year baseline. (Exhs. 2001, pp. 2, 4; 2002 [FDOC] p. 20; 4/2 RT 50-51.) Use of this baseline will require CECP to provide offsets for its emissions of NO_x. (Exh. 2001, p. 4.) The source of such emission reduction credits were identified. (Exh. 2000 [FSA], p. 4.1-45; 4/2 RT 29.)

Terramar suggested that the changed baseline should also result in a requirement that the project get a federal Prevention of Significant Deterioration, or “PSD” permit. (Exh. 2001, p. 11.) That permit is, however, entirely separate from the Commission license, and is not issued by the air district. (*Ibid.*) Rather, it is issued by U.S. EPA after its own permitting process, and the applicability of the permit is determined by the federal agency. Both Staff and the air district testified (and the FDOC concluded) that the PTA project as conditioned does not trigger the emissions thresholds that would require the project to seek this federal permit. (*Ibid.*)

Intervenor Robert Simpson filed comments purporting to raise a great number of additional issues, but did not participate in the hearings or attempt to file testimony.³ Simpson’s “comments” are, at least in large part, comments that he filed on the air quality issue several years ago in the original licensing proceeding. Thus, they are for a

³ Simpson’s attorney did participate by webex concerning the GHG discussion, asking questions and commenting.

different set of turbines, a totally different “baseline,” different emissions profiles, and so forth, presenting a significantly different set of issues. The filed comments are thus irrelevant to the present proceeding.

The Air Quality issue was thoroughly analyzed and addressed by both Staff and the air district, and there are elaborate conditions proposed for the PTA license. No party has contested the conclusion that the project as licensed will meet all legal requirements, or that the project’s cumulative impacts have been fully and proportionally mitigated.

VI. GHG Emissions

A. The project will result in an overall reduction of GHG emissions.

The PTA proceeding, like the licensing proceeding before it, included extensive testimony describing why operation of the CECP will reduce, rather than add to, overall GHG emissions. (Exh. 2000 [FSA] pp. AQ1-1 to 44.) The fundamental reasons are that (1) gas-fired facilities are “dispatched” (called into operation) according to their variable (in essence, fuel) costs (*Id.* at pp. AQ1- 20-21; 4/2 RT 109-110); (2) new facilities like CECP, whether under the current license or the proposed PTA “peaker” technology, are far more efficient, and thus cheaper, than the older facilities that CECP will displace in the dispatch order, thus emitting fewer GHG emissions (*Id.* at pp. AQ1-20-24; 4/2 RT 110); (3) the State’s “loading order” gives primacy to all efficiency, storage, and demand reduction programs, as well as renewables, such that these sources of energy and generation will not be displaced by gas-fired generation. (*Id.*, at p. AQ1-22.) In addition, gas-fired generation will never, as a practical economic matter, displace nuclear generation. (*Id.*, at p. AQ1-22.) This analysis is set forth in the Staff testimony for this proceeding, and is captured in the Findings made in the Final Decision for the prior licensing proceeding. (Exh. 3002 [Final Dec.], pp. 6.1-23, 24.) There is *no* testimony to the contrary.

A comparison of CECP to the aging Encina Power Station (EPS) in Carlsbad is illustrative. EPS is an aging 935 MW facility, with three units built in the 1950s and two units built in the 1970s. (See Exh. 3002 [Final Dec.], p. 3-19.) The units were originally

oil-fired (now converted to natural gas), employ boilers that must be kept hot to be ready for dispatch, and rely on “once through cooling” with marine water, to the detriment of ocean biology. (*Ibid.*) These units are obsolete and inefficient, as well as environmentally suboptimal. Originally commissioned to provide “baseload” power, they are now kept running merely to provide “backup” or “peaking” power to the system on those occasions when needed. (See, e.g., Exhs. 2000 [FSA] AQ1-17, 2002 [FDOC], p. 19.) The EPS facility will finally be closed when CECP goes on-line. CECP’s generation will be significantly more efficient than EPS, as well as other aging “peakers” in the region (Exh. 2000 [FSA], AQ1-26, GHG Table 4), resulting in an interconnected electric system that will have *fewer* GHG emissions. To use a very rough analogy, the effect is similar to replacing a 1955 Cadillac with a late model hybrid: both cars have emissions, but the modern hybrid has significantly fewer of them. CECP is an example of how modernizing infrastructure can have environmental benefit.

The displacement phenomenon described above has been described in previous Commission decisions, and was the subject of a 2008 precedent decision for the Avenal Energy Project (08-AFC-01). In that decision, the Commission enunciated three criteria for the licensing of new gas-fired power plants: (1) that they not increase the overall heat rate for natural gas plants; (2) that they not interfere with generation from existing renewable facilities, or with the integration of new renewable generation; and (3) that they reduce system-wide GHG emissions and support the goals and policies of AB 32. (Exh. 2000 [FSA], pp. 27-29.) CECP will meet these criteria. (*Ibid.*)

No substantial evidence was offered to contradict the above discussion. However, in comments on the FSA, intervenors questioned how the PTA project (with a heat rate of approximately 9500 btu/MMbtu/kW hour), could not increase the overall system heat rate for natural gas plants (described to currently be approximately 8500 btu/MMbtu/kW hour in California). (Exh. 2000 [FSA], p. AQ1-32.) The answer is that the system heat rate is comprised of various different kinds of gas-fired plants with different purposes; many are more efficient “combined cycle” plants that provide “baseload” or “load-following” purposes; others are less-efficient “peakers” called upon only occasionally in emergencies or to provide short term service for reliability. (*Id.*, at pp. 22-28.) Among peaker plants, CECP will be one of the most modern and efficient,

and when it operates it will be displacing other, less efficient peaking facilities, with higher heat rates. (*Id.*, at p. AQ1-28.) Hence, the overall effect of CECF operation is to reduce the system-wide heat rate.

Thus, system-wide heat rates for natural-gas facilities have steadily declined as more efficient gas generation is added. (*Ibid.*) The beneficial effect of newer, more efficient gas-fired facilities displacing ones that are less efficient has been documented: even as the number of megawatt hours of gas-fired generation has *increased* significantly in recent years, the GHG emissions from this increased generation has *declined* significantly. (Exh. 2000 [FSA] p. AQ1-21 [between 2001 and 2010, there has been a 23 to 24 percent reduction in GHG emissions from gas fired plants despite a 3.5 percent increase in gas-fired generation] 4/2 RT 110-111.)

B. It does not matter whether the PTA project has lower GHG emissions than the licensed project.

Intervenor Sarvey filed testimony contending that the currently licensed combined-cycle facility (that the PTA would replace with a simple-cycle project) would be more efficient, and thus result in fewer GHG emissions, than the PTA project. (Exh. 6002.) It is unclear, and likely impossible to determine, whether this contention is correct, but it is not a relevant consideration for the Commission's approval of the PTA in any case.

Sarvey is certainly correct that combined-cycle projects are *in general* more efficient than simple-cycle projects. Combined-cycle projects serve a different purpose from that of the PTA: they are designed to run as either "baseload" or "load-following" generation, operating more steadily and for longer hours. (See Exh. 2000 [FSA] p AQ1-24; 4/2 RT 131-131.) By contrast, the role of "peakers" is to meet system peak emergencies, or to integrate rapidly fluctuating generation from other sources, such as wind and solar generation. (*Ibid.*) This is because peakers are more agile and flexible in their deployment; they reach full load faster, and can be dispatched more flexibly in accordance to the needed amount of generation. (See, e.g., Exh. 2000, pp. AQ 1-1, 2, 22-24.) For instance, the PTA will have six modular turbines, each of 100 MW, and each of which can be dispatched separately. (*Ibid.*)

However, the Staff witness, David Vidaver, testified that it is unclear, and perhaps unknowable, whether the licensed combined-cycle facility would be more efficient than the PTA simple-cycle turbines for the intended use of CECF. (4/2 RT 117-118; Exh. 2000 [FSA] pp. AQ 1-22, 23.) CECF will be a peaker facility used for short periods of time, at often rapidly fluctuating generation levels, to provide system reliability and integrate intermittent renewables. (Exh. 2000 [FSA] pp. AQ1-22-24.) This would require a combined-cycle facility to be constantly ramping up and down, which undercuts the efficiency it would otherwise be credited with. (*Ibid.*) The PTA simple-cycle project is modular and can be dispatched in smaller units; these units ramp up and down more quickly, and with less overall reduction in their efficiency. (*Ibid.*) Mr. Vidaver testified that, for the intended role that SDG&E intends for this power plant, it is simply unclear whether the licensed combined-cycle would be more efficient than the PTA simple-cycle. (*Id.* at pp. 22-24; 4/2 RT 117-118.) One could attempt to model their efficiencies under differing load requirements, but such modeling would be subject to numerous assumptions that could be debated. (*Ibid.*)

Fortunately this comparison, with all its ambiguities, is not important to the findings the Commission must make to license the PTA. Both the licensed project and the PTA project will reduce the system heat rate by displacing less efficient peakers.⁴ Thus, the PTA meets the Avalon precedent decision criteria, just as the licensed combined-cycle project does. Nor does it matter, as Mr. Sarvey posited, that the terms of the PPA are unknown; the displacement will occur regardless of the PPA terms themselves (4/2 RT 110-111, 114-115.)

Intervenor Rob Simpson docketed a proposed EPA regulation generally known as the "Clean Power Plan." (Exh. 500; 4/2 RT 120-121.) No testimony accompanied this filing from the Federal Register, but Mr. Simpson's representative at the evidentiary hearings asked questions of the witnesses regarding the proposed rule that implied that it was in some unspoken way relevant to the PTA. The Clean Power Plan is a highly

⁴ Any difference in GHG emissions between the two facilities would likely be vanishingly small, in addition to being incalculable. Peaking facilities have few hours of operation. The testimony is that the PTA project will likely operate at a capacity factor of six percent, or roughly 500 hours of the year. (FSA, p. AQ1-28.)

controversial proposed federal rule that would require all states to have a plan for showing reductions of power plant emissions generally, with possible credit for various programs not related to generation, such as efficiency programs and renewable generation. It is a complex proposed regulation and thus subject to change, and even if it becomes law, there is no way of knowing what the California plan will include. Significantly, the plan does not even apply to the emissions from peaking projects such as the PTA. (4/2 RT 118-130.) Even if the PTA project operated at its permit limit of approximately a 31 percent capacity factor (rather than the estimated six percent), this capacity factor would not bring it within the proposed rule's scope. Thus, the Clean Power Plan has no relevance to the Commission's considerations.

C. The CEQA Guideline provisions are consistent with, but do not replace, the Avenal Decision approach.

As discussed above, the more efficient CECP will result in lower GHG emissions compared to current conditions, and is thus not a significant adverse cumulative impact under CEQA. No evidence to the contrary was offered. The CEQA Guidelines are thus not really applicable to the project, inasmuch as they are directed to the issue of how GHG emissions impacts should and can be mitigated for projects that increase emissions compared to current conditions. Thus, the Avenal precedent decision provides the relevant criteria for evaluating the project. Even so, it is informative to know how the Guideline provisions might apply if the project did result in increased emissions.

Where a project results in increased GHG emissions, a lead agency must consider feasible means to mitigate such impacts. (Cal. Code Regs., tit. 14, § 15126.4, subd. (c).) Among the measures that can be employed to mitigate GHG emissions are those "in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision." (*Ibid.*) Such an existing plan, of course, is the "cap and trade" program established pursuant to AB 32, which requires major point source emitters of GHG to purchase "allowances" (or in some instances, "offsets") to programmatically compensate for GHG emissions in a program that results over time in their abatement. CECP will be a point source, and will be required to purchase such

allowances under cap and trade, despite the fact that its greater efficiency will also reduce GHG emissions. Thus, even if the project's GHG emissions were considered in isolation from the electric system as a whole, and thus considered significant, the project's participation in the state cap and trade program (already required by state law) would provide the project's cumulative mitigation.

Such an approach is consistent with other CEQA Guideline provisions. Guideline section 15064(h)(3) provides that “[a] lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including, but not limited to, water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, *plans or regulations for the reduction of greenhouse gas emissions*) that provides specific requirements that will avoid or substantially lessen the cumulative problem Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement . . . the law enforced by the public agency” (Cal. Code Regs., tit. 14, § 15064, subd. (h)(3).) Cap and trade is a law specifically intended to reduce GHG emissions from point sources, and was adopted by the California Air Resources Board in a public proceeding that implements AB 32.

Cap and trade provisions requiring projects to purchase allowances in a carbon market are also consistent with CEQA's emphasis on proportionality for cumulative impact mitigation, and the use of programmatic approaches. Guideline section 15130 provides that “[a] project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.” (Cal. Code Regs., tit. 14, § 15130, subd. (a)(3).) Allowances purchased by emitters under cap and trade are based on source emissions, providing a precisely drawn “fair share.”

The emphasis on the programmatic approach to cumulative impact mitigation is also found in Guideline section 15130(d): “Previously adopted . . . plans for the reduction of greenhouse gas emissions . . . may be used in cumulative impact analysis .

. . . No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the Lead Agency determines that the regional or areawide cumulative impacts of the proposed project have already been adequately addressed.” (Cal. Code Regs., tit. 14, § 15030, subd. (d).)

Of course, the above provisions from the CEQA Guidelines have no direct application because they go to the issue of how to mitigate the cumulative impact of project GHG emissions when the effect of the project is to *increase* emissions compared to “current conditions.” (See Cal. Code Regs., tit. 14, §§ 15125 [“baseline” for impacts is conditions “as they exist” at time of notice of preparation of environmental document], 15126 [significant impact involves “changes in existing physical conditions”].) CECP will not have that adverse effect, as it will reduce GHG emissions by providing a more efficient generator than those currently operating, lowering overall electric system emissions whenever it generates, as discussed above.

Thus, the Avalon precedent decision has enduring usefulness, as it provides a rational basis for determining whether the impacts of a new power plant are a significantly adverse cumulative impact. The Guideline provisions suggest ways to mitigate a GHG cumulative impact that is determined to be adverse. They are of interest here because they indicate that the programmatic mitigation that would or could be required for an adverse impact is mitigation that all power plants in California are already required to provide—participation in cap and trade, including of the purchase of carbon allowances for all GHG emissions.

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VII. Project Alternatives⁵ and Override Findings

A. The extensive analyses of two proceedings confirm that there is no preferable alternative to the PTA project.

In the licensing proceeding that preceded the PTA, Staff performed an extensive analysis of project alternatives that included site alternatives (including alternative sites proposed by the City), technological alternatives (including preferred resources such as renewable generation, demand side management, or conservation), the “no project” alternative, and the potential for other proposed power plants (such as Pio Pico) to meet project needs. (Exh. 200 [2009 FSA], pp. 6-1 *et seq.*) The Final Decision’s discussion and Findings of Fact echo the Staff’s prior analysis for the licensed project. The Findings include: (1) no alternative technology or generation alternative would meet project objectives; (2) no site alternative would meet project objectives; (3) no alternative, including the “no project” alternative, would avoid or lessen potentially significant environmental impacts; (4) the “no project” alternative would forego significant project benefits; (5) if CECP is not built, the obsolete EPS facility must continue to generate indefinitely, delaying compliance with State OTC policy; and (6) the CECP is environmentally preferable to the other alternatives considered. (Exh. 3002 [Final Dec.], pp. 3-21, 3-22.) These conclusions from the prior Final Decision continue to be applicable to the PTA.

Staff’s analysis for the PTA re-examined and re-confirmed this prior alternatives analysis. Differences in the PTA analysis included (1) an examination of the “no project” alternative using both the current conditions as baseline and the licensed project as baseline; (2) consideration of a somewhat smaller 400 MW alternative at the

⁵ Although Staff performed an extensive project alternatives analysis for the PTA, it is doubtful that such an analysis is required by law. First, the PTA is an amendment to an existing license of a project that already has vested rights in a license and a site. It is incongruous—and redundant--that a new project alternatives analysis is required for an amendment of the underlying license for a gas-fired project of the same size at the same site, issues that were already fully considered in the prior environmental document and Final Decision. Moreover, given the prior licensing proceeding, the revisiting of issues from the prior proceeding is inconsistent with CEQA. (See, e.g, *Benton v. Board of Supervisors* (1991) 226 Cal.App.3d 1467, 1475-1482; *Temecula Band of Luiseno Indians v. Rancho Cal. Water Dist.* (1996) 43 Cal.App.4th 425, 437.)

same site; and (3) a more elaborate discussion of why programs for distributed generation, demand-side management, storage, and other preferred resources are not alternatives that would satisfy project objectives.

B. The Alternatives testimony supports Override Findings.

Relevant to override findings for an amendment, the Staff testified that the PTA project offers the following important advantages compared to the existing project:

- The addition of the shutdown and decommissioning of the EPS's once-through cooled Units 1 through 5 and small combustion turbine, and the subsequent above grade removal of those units, the enclosure building that houses them and other existing buildings and support facilities at the EPS, including the 400-ft exhaust stack. The amended CECP would allow better grid support from the shutdown of the San Onofre Nuclear Generating Station, an advantage lost by the "no project" alternative.
- Redesign of the CECP into a simple-cycle combustion gas turbine power plant that would be able to better serve the region's electrical need of flexible, fast-start generating technology, to more fully integrate renewable energy and ensure a reliable and stable electrical grid.
- Reduced visibility of the new generating units and exhaust stacks, which would have considerably lower height and profile than the licensed CECP.
- Improved site access, mobility and fire suppression that would satisfy the city of Carlsbad Fire Department.
- Support from the city of Carlsbad that would make the use of reclaimed water much more feasible and likely.
- Improved conformity to local land use ordinances and elimination of overrides of LORS that would no longer be necessary.
- Permanent elimination of seawater OTC at the generating station site.
- Coordination of the project as part of a larger settlement agreement with the city of Carlsbad and SDG&E that would benefit the environment, and promote open space and coastal access for both residents and visitors alike.

(Exh. 2000 [FSA], p. 4.2-22.)

The above was Staff's testimony in the current proceeding. But it is also instructive to look to the Findings for override in the Commission's Final Decision for the licensed project, which found the following project benefits:

- a. Provide 540 MW net . . . of generation in a subarea of the San Diego load area subarea for which the [CAISO] has identified a need.
- b. Further the goals of the State's Once Through Cooling Policies by facilitating closure of the Encina Power Station.
- c. Reduce the effects of climate change by supporting the integration of renewable energy resources into the electricity system and reducing, on average, the greenhouse gas emissions of the generating system.
- d. Facilitate the redevelopment of the ocean front portion of the Encina power plant site and replace the existing generator with modern, efficient, less-obtrusive generating units, placed below grade on the portion of the site that is furthest from the shoreline.
- e. Reduce California's dependence on fossil fuels.
- f. Reuse existing infrastructure for fuel delivery and transmission.
- g. Boost the economy due to the purchase of major equipment, payroll, and supplies, and increased sale tax revenue. Additional indirect economic benefits, such as indirect employment, and induced employment, will result from these expenditures as well.
- h. Provide construction jobs for an average and peak workforce of 237 and 357, respectively

(Exh. 3002 [Final Decision], pp. 9-10 and 9-11.)

Staff testified that these prior findings for the licensed project are in large part also applicable to the PTA, and would similarly support override findings for the PTA.

(4/2 RT 144.)

C. A smaller project alternative would not be environmentally preferable.

Terramar and POV requested that Staff add to its FSA discussion consideration of a smaller project at the site, such as one using similar modular technology but generating 400 MW rather than 600. (Exh. 2000 [FSA], p. 4.2-25.) Staff did so, but

found that it reduced project impacts only marginally, and was not environmentally preferable. (See Exh. 2000 [FSA], pp. 4.2-19 to 21.)

The intervenors contend that the smaller size of the project would allow the transmission lines at the site to be reconfigured, reducing visual impacts. (Cite.) Staff testified that, while eliminating the two southernmost generating units (10 and 11) would allow some degree of reconfiguration of the transmission poles, including placement below grade, with some measure of benefit from reduced visibility, such changes would not affect the significance of the project's overall impact. (Exh. 2000 [FSA], pp. 4.13-45, 46.) The only effective way to reduce overall project visual impacts is with the screening vegetation required by VIS-5. (*Ibid.*) Thus, the smaller project alternative would not avoid or substantially reduce significant environmental impacts. (Exh. 2000 [FSA], pp. 4.2-20, 21; 4.13-45, 46.) Other benefits were either minimal or speculative. (*Id.*, pp. 4.2-20, 21.) The Staff further testified that, should 400 MW provide less dispatchable generation than is ultimately required for reliability, the smaller size alternative could result in the need for additional gas-fired generation located at an alternative site, with potentially greater environmental consequence. (*Ibid.*)

D. The “no project” alternative of disallowing a simple-cycle project provides no important environmental benefit.

Intervenor Bob Sarvey contended that the licensed combined-cycle alternative would be more efficient, emit fewer GHG emission, and thus be a superior project to the proposed project's deployment of six modular simple-cycle units. (Exh. 6002.) Staff's disagreement with this contention is discussed under the GHG topic briefed above, and is not repeated here.

VIII. No Demolition Bond is Necessary

Intervenor Bob Sarvey argues, in substance, that as a part of this Petition to Amend proceeding the Commission should require that the project owner obtain a bond for the eventual demolition of the CECP. Intervenor Sarvey writes that “The Commission must require a set aside of funding for demolition of the amended CECP to eliminate the

land use inconsistency and prevent NRG from again extorting the City of Carlsbad to accept yet another power plant that does not meet their land use or the Coastal Commissions land use LORS after the useful life of the amended CECP as the project will no longer be needed for the public convenience and necessity.” (Docket TN203859, “Direct Testimony of Robert Sarvey on Compliance and Closure”) Not only is Intervenor Sarvey’s argument outside the scope of this Petition to Amend proceeding, it lacks factual and legal justification.

A. The issue of a “demolition bond” was considered and rejected by the Commission in the underlying licensing proceeding, and there is no change in circumstances that would allow for this issue to be relitigated.

Intervenor Sarvey asserts that the Commission “sidestepped the issue” of a demolition bond in the original decision. On the contrary, the Commission fully considered this issue and rejected it. The Commission Final Decision, on p. 4-2 provided the following discussion:

“Intervener Rob Simpson asks, in an RPMPD comment, that funding be set aside for the retirement of the CECP facility, specifically a condition that the ‘Developer is to deposit \$10,000,000 per year with the Commission until it can demonstrate adequate funds to dismantle the facility upon retirement.’ The Commission has not previously imposed such a requirement. No evidence suggests that failing to remove this facility after it ceases generating electricity will have any unmitigable signific[ant] environmental impacts. The policy question raised by Mr. Simpson’s request is worthy of further study, however, and we refer it to the Commission’s Integrated Energy Policy Report Committee for future consideration.”

Title 20 of the California Code of Regulation, section 1769, requires that a project owner file a petition to amend for any changes to the “design, performance, or operation” of a facility licensed by the Energy Commission. Here, there are no changes in circumstance regarding the eventual closure of the CECP which have changed. The CECP, both as originally licensed and as proposed in the instant Petition to Amend, will still most likely be decommissioned and demolished at some future and undetermined

time. Absent some change in this particular fact, it would be improper to re-open the record from the underlying licensing proceeding and relitigate this issue.

B. There are no facts that support the requirement of a demolition bond.

Intervenor Sarvey urges the Commission to require a demolition bond for the purpose of “eliminate[ing] the land use inconsistency and prevent NRG from again extorting the City of Carlsbad to accept yet another power plant.” He also asserts that “[a]bandoned power infrastructure litters the landscape of California,” noting that “abandoned or soon to be abandoned power plants are located on [Energy Commission Jurisdictional] proposed project sites.” But neither of the “abandoned” sites referred to by Intervenor Sarvey in his testimony, the “Mariposa Energy Site Abandoned cogen” or the Rancho Seco Nuclear Generating Station, were subject to the licensing jurisdiction of the Energy Commission.

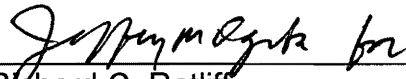
While there is no evidence in the record as to what closure requirements were placed on those facilities by the entities that licensed them, Staff notes that the Final Decision for the CECP includes compliance and closure conditions of certification that will ensure both compliance with all LORS and that all adverse environmental impacts are mitigated to a level of less than significant. (Exh. 3002 [Final Dec.] pp. 4-1-13.) Moreover, CECP will lie in the coastal zone on property with potentially very high real estate values and pressure for development, as evidenced by the City’s push to redevelop the area currently occupied by the existing Encina Power Station. In such circumstances, the need for a bond to require infrastructure removal seems unnecessary. Sarvey’s request that the Energy Commission require a demolition bond for the future decommissioning of the CECP is questionable solution to an illusory problem.

IX. Conclusion

The PTA amends an already worthy project to make it better, and to lower environmental impacts. The singular LORS nonconformity is a building height limit that the City has recommended the Commission override. The only potentially significant environmental effect is a cumulative impact from a separate future project that would be potentially significant even by itself—the I-5 Widening Project. Although there are ways to effectively mitigate that impact, and Staff believes that it likely will be successfully mitigated, Staff recommends CEQA override findings for this impact because of the inherent uncertainty regarding how Caltrans will cooperate with Applicant to provide screening mitigation. The record contains much evidence to support override findings both for LORS and for the cumulative effect of the Caltrans project.

Date: April 24, 2015

Respectfully Submitted,



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