

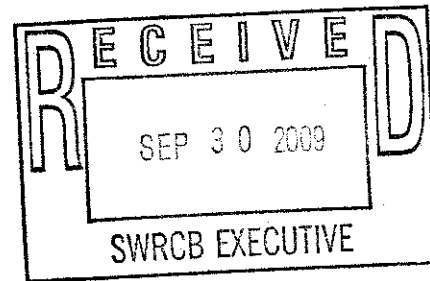
Dynegy Inc.
West Region Operations
4140 Dublin Blvd., Suite 100
Dublin, California 94568
Phone 925-829-1804
Fax 925-829-9406



September 30, 2009

Via Hand Delivery

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814



Re: **Comment Letter – OTC Policy
Dynegy Comments on the Draft Substitute Environmental Document**

I. INTRODUCTION

Dynegy Inc. ("Dynegy") submits these comments on the State Water Resources Control Board's Draft Substitute Environmental Document ("DSED"), dated July 2009, for the Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling ("Policy"). In a separately filed letter, Dynegy also has submitted to the Board detailed comments on the proposed Policy.

The DSED fails to meet the requirements of the California Environmental Quality Act ("CEQA"). The DSED does not provide sufficient information regarding environmental impacts to foster informed public participation and to enable the State Water Resources Control Board ("Board") to make a reasoned decision on the proposed once-through cooling ("OTC") Policy. The Board Staff's DSED is a legally inadequate document that fails to acknowledge, discuss and analyze reasonably foreseeable and significant negative environmental impacts that would result from implementation of the proposed Policy. The scope and depth of the DSED's analysis are insufficient and does not meet CEQA, CEQA case law precedent, or the Board's own CEQA standards. In short, the DSED requires significant revisions to satisfy the statutory requirements of the CEQA lead agency and provide the public and the Board a clear understanding of the environmental impacts and trade-offs associated with the proposed Policy.

II. CEQA DEFICIENCIES IN THE DSED

A. CEQA Requirements

The Board is "subject to the broad policy goals and substantive standards of CEQA", even though its water quality planning process, as a certified regulatory program, is partially exempt from certain aspects of CEQA. *Cal. Sportfishing Protection Alliance v. State Water Res. Control Bd.*, 160 Cal. App. 4th 1625, 1643 (2008); see Pub. Res. Code §

21080.5; 14 CCR §§ 15250-15253. Thus, the Board still has a responsibility to prepare functionally equivalent "programmatic substitute environmental documents (SEDs) in lieu of EIRs or other environmental documents which propose statewide water quality objectives and programs."¹ More specifically, Public Resources Code § 21159(a) requires that the Board perform "at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance ... [that] shall, at [a] minimum, include, all of the following: (1) An analysis of the reasonably foreseeable environmental impacts of the methods of compliance. (2) An analysis of reasonably foreseeable mitigation measures. (3) An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation."

While CEQA does not require a project level analysis if the agency has determined that a "Tier 1" or programmatic environmental document is appropriate, with later "tier" or project-specific environmental analysis to follow, Pub. Res. Code § 21159(d), "[t]he environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and *specific sites*." Pub. Res. Code § 21159(c) (emphasis added). Furthermore, "the agency may utilize numerical ranges or averages where specific data is not available; however, the agency shall not be required to engage in speculation or conjecture." Pub. Res. Code § 21159(a).

Although the Board is not required to prepare a Environmental Impact Report ("EIR"), the substitute environmental document must provide a comparable level of review and analysis such that, at a minimum, the agency "explain[s] the reasons for its actions to afford the public and other agencies a meaningful opportunity to participate in the environmental review process, and to hold it accountable for its actions." *City of Arcadia v. State Water Resources Control Board*, 135 Cal. App. 4th 1392 (2006).² CEQA case law clearly defines this standard by requiring:

- "[a] discussion of environmental impacts [that] reasonably sets forth sufficient information to foster informed public participation and to enable the decision makers to consider the environmental factors necessary to make a reasoned decision."³

¹ DSED at page 10.

² See also CEQA Guidelines Section 15151, Standards for Adequacy of an EIR (providing in relevant part: "An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.").

³ *Berkeley Keep Jets Over the Bay Com. v. Board of Port Commissioners*, 91 Cal. App. 4th 1344, 1355 (2001).

- “sufficient detail to help ensure the integrity of the process of decision making by precluding stubborn problems or serious criticism from being swept under the rug.”⁴
- “more than raw data; it requires also an analysis that will provide decision makers with sufficient information to make intelligent decisions.”⁵

At an absolute minimum, CEQA requires that significant impacts of compliance methods that are reasonably foreseeable must be identified and discussed. See *City of Arcadia* at 1426 (where the Water Board’s CEQA documentation was inadequate, “remand is necessary for the preparation of an EIR or tiered EIR, or functional equivalent, as substantial evidence raises a fair argument the [proposed regulation] may have significant impacts on the environment”).

B. The DSED Fails to Satisfy CEQA’s Requirements

The DSED fails to meet CEQA’s minimum requirements by a wide margin. It assumes more than a dozen wet or hybrid cooling towers would be built across the State, but ignores the potential for any significant cumulative impacts.⁶ It fails to mention the lack of available PM₁₀ air emission reduction credits, disregards potential negative impacts on the freshwater water resources, minimizes potentially significant visual impacts, lacks any analysis of land use impacts resulting from noise and visual conflicts with local ordinances, and inadequately assesses greenhouse gas impacts, to name a few examples. And, it disregards an earlier report to the Board which recommended case-by-case analyses of the various sites.⁷

Notably, beyond failing to identify significant and obvious negative environmental impacts that would be caused by the proposed Policy, the DSED is silent on both: (1) establishing the specific level of harm to various marine resources, and (2) quantifying the benefits to marine resources that are assumed to be achieved by the proposed Policy. Such factual information is essential if decision makers are to make an informed choice in weighing the trade-offs between the positive and negative environmental consequences of the proposed Policy. Nor is there any substantial evidence in the DSED that would justify adopting a statement of overriding considerations necessary to overcome the negative impacts to air quality, greenhouse gases, visual resources, noise, freshwater resources, etc.

⁴ *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692, 733 (1990).

⁵ *County of Amador v. El Dorado County Water Agency*, 76 Cal. App. 4th 931, 955 (1999).

⁶ While wet cooling is assumed by the DSED as the technology of choice to meet the requirements of the proposed Policy, other cooling technologies – dry or hybrid – also might be used to satisfy the proposed requirement for a 93% reduction in impingement mortality and entrainment the facility. All of the fundamental deficiencies in the DSED analyses apply to those technologies, as well.

⁷ Tetra Tech, *California’s Coastal Power Plants: Alternative Cooling System Analysis*, p. 6-10 (Feb. 2008) (recognizing that “case-by-case analyses should be conducted to identify important site-specific effects for any system chosen.”). All documents cited in these comments are public records that the Board should include in the rulemaking record by administrative notice. A copy of any cited document will be provided to the Board upon request.

With respect to marine resources, the DSED only provides a superficial and conclusory environmental analysis and completely ignores previous environmental analyses by the California Energy Commission's ("CEC") CEQA-equivalent process that included a robust analysis of potential impacts and mitigation measures. Most significantly, the DSED ignores the project-specific findings from the CEC's power plant siting proceedings at both Moss Landing and Morro Bay that closed-cycle cooling was neither feasible nor preferable to OTC at each of those sites.⁸ For example, at Morro Bay, the CEC's Conclusions of Law included that: "There is no need to consider alternatives to once-through ocean cooling pursuant to CEQA because *such cooling will not have a significant, adverse environmental impact* pursuant to CEQA." (emphasis added). Indeed, the CEC went so far as to state that even if dry cooling were feasible and cost nothing, it would *still* not recommend dry cooling at Morro Bay.⁹ These conclusions were reached after extensive site-specific hearings¹⁰ that relied heavily upon the Regional Board staff and the same experts being relied upon by the Board here. The DSED's sweeping and unsupported generalizations regarding the impacts of OTC (and the feasibility and merit of alternatives) cannot withstand an objective comparison to the hearing record and determinations of the CEC for either the Morro Bay or Moss Landing facilities. Any reasoned analysis consistent with CEQA must explicitly acknowledge these contrary findings and either accept them or explain in detail why (and on what specific record evidence) the Board is reaching a contrary conclusion. The DSED does neither.

The DSED also ignores conclusions of the Central Coast Regional Water Quality Control Board at Moss Landing, whose independent technical experts (i.e., Dr. Greg Cailliet, Moss Landing Marine Laboratories, and Dr. Peter Raimondi, University of California, Santa Cruz) are *the very same experts* on the Board's Expert Review Panel for the proposed Policy. Those experts concluded that adverse impacts from Moss Landing's OTC system were not clear and that OTC was BTA. For example, as stated by Dr. Raimondi: "I conclude that eliminating entrainment may result to Elkhorn proper little or no benefit to the fishes because most of the forces acting on them are other than the power plant." Testimony of Dr. Pete Raimondi, *Voices of the Wetlands v. State Water Resources Control Board*, Case No. M 54889 (Cal. Super. Ct., Monterey County, May 13, 2003).¹¹ Also, as stated by Dr. Cailliet: "There's no evidence that water from Elkhorn Slough specifically was entrained in sufficient volumes with the larvae in them to cause any of these changes in the ichthyoplankton of Elkhorn Slough property. We

⁸ Morro Bay 3rd Revised Presiding Member's Preliminary Decision ("Morro Bay 3rd RPMPD") (June 2004), incorporated in the CEC Adoption Order dated Aug. 2, 2004 (Docket No. 00-AFC-12); Commission Decision, Application for Certification Moss Landing Power Project, Docket No 99-AFC-4 (Nov. 2000).

⁹ Morro Bay 3rd RPMPD, at 10 and 377 ("[b]ased on the evidence in our record, we firmly believe that *even if dry cooling were feasible and cost free*, it would not offer the environmental benefits to the Morro Bay Estuary that a successful [Habitat Enhancement Plan] will provide.") (emphasis added).

¹⁰ Indeed, it is worth noting that these CEC hearings were far more rigorous and trial-like than the rulemaking proceedings being conducted by the Board here. The CEC hearings required the many experts to testify under oath and be subject to rigorous cross-examination in public and with two of the five Energy Commissioners hearing such testimony personally.

¹¹ See Commission Decision, Application for Certification Moss Landing Power Project, Docket No 99-AFC-4, at 149 (Nov. 2000) ("Dr. Peter Raimondi, of the Technical Working Group, later noted that based on his own studies, there is not a better technology available. (6/20/00 RT 160.)").

are saying that because the slough is compromised in so many other ways, ... that the mere fact of turning off the entrainment through the power plant, you would not necessarily be able to see a major change." Testimony of Dr. Greg Cailliet, *Voices of the Wetlands v. State Water Resources Control Board*, Case No. M 54889 (Cal. Super. Ct., Monterey County, May 13, 2003). Thus, the two most scientifically expert members of the Board's own Expert Review Panel (Dr. Raimondi and Dr. Cailliet) have testified under oath in at least one power plant siting case that, after having evaluated all the site-specific information at hand, OTC was the preferred control technology.

Lastly, other expert analysis has reached the same conclusion: "Therefore, the merits of a large economic investment in closed-cycle cooling and/or reduction in California's generation reserve capacity are not yet clear and these changes may result in no measurable benefit to California fish populations." Assessment of Once-Through Cooling System Impacts to California Coastal Fish and Fisheries, Electric Power Research Institute, December 2007.

In short, the DSED offers no context or factual analysis of alleged individual or collective harm that the current OTC plants are causing to various marine resources or species of concern. This failing must be remedied if decision makers are to be able to properly judge the relative environmental trade-offs of implementing the proposed Policy.

Other Unmet CEQA Requirements

The DSED also fails to meet several other CEQA requirements. These deficiencies are summarized below and more fully discussed in Attachment A.

- **Alternatives Analysis.** The DSED fails to identify and evaluate a reasonable range of alternatives that would reduce or avoid environmental impacts of the proposed Policy and still attain most of the basic Policy objectives (e.g., the DSED could evaluate installing partial wet (or dry) cooling technology combined with retaining partial OTC). Variations that could be analyzed to find the overall minimum environmental impact include 25, 50 and 75 percent conversion of current OTC to an alternative cooling technology. In addition, the DSED fails to adequately explain why certain alternatives were rejected (with no facts and analysis, and only bare conclusions and opinions).

The DSED also does not analyze the alternatives in terms of their comparative environmental impacts, and instead focuses on feasibility and ability to attain the Policy's stated goals. The DSED must evaluate the comparative merits of the alternatives, including their ability to reduce or avoid environmental impacts while still attaining most of the Policy's objectives.

- **Reasonably foreseeable alternative means of compliance with the rule or regulation.** The DSED may intend that the "front of pipe" technologies and seasonal operation identified satisfy this alternative means of compliance analysis. However, it not clearly stated in the document. These technologies

and operational controls cannot be both reasonably foreseeable methods of compliance and alternative means of compliance, yet they seem to be treated this way by listing them along with other compliance methods.

- **Mitigation.** The DSED either fails to identify impacts or, in other cases, does not adequately analyze reasonably foreseeable impacts from the proposed Policy. Therefore, the document lacks the required identification and discussion of mitigation measures to substantially lessen or avoid the otherwise significant adverse environmental impacts of the proposed Policy. In addition, there are other reasonably foreseeable alternative means of compliance with the proposed Policy that were not analyzed. For example, the DSED ignores use of Substratum Intake System, which would replace a plant's current cooling water intake system with a network of wells drilled horizontally beneath sand beds on the ocean floor.
- **Cumulative impacts.** The DSED has a single conclusive statement regarding cumulative impacts: "Implementation of the proposed Policy will not result in cumulative impacts." (p. 108). This single sentence does not meet the statutory requirements for a cumulative impacts analysis; the DSED needs to be revised to include this analysis.
- **Economic considerations.** The DSED evaluation of economic impacts and compliance costs is flawed because it does not fully and accurately analyze the costs of reasonably foreseeable compliance methods. The entire economic analysis covers only two pages and, among other things, fails to evaluate the cost of repowering, is limited to the cost of wet cooling retrofits, and does not include the costs of CO₂ emissions.
- **Tiered environmental analysis.** While CEQA does not *require* an agency to conduct a project level analysis in analyzing the reasonably foreseeable impacts of a rule or performance standard, in this case a more detailed, site-specific analysis is appropriate. The environmental analysis of a rule setting a performance standard "shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites." Pub. Res. Code § 21159(c). The DSED identifies 19 specific plants of which the environmental impacts of retrofitting these plants with closed-cycle cooling can be readily analyzed. Since the sites that will be subject to the proposed Policy are known, the DSED could have included more site-specific analyses in its Tier 1 environmental document. The DSED is deficient in that it defers more detailed analysis to a later date and therefore fails to identify significant effects of the proposed Policy.
- **Environmental Checklist.** For several subject areas the DSED states that because no impacts were identified, no detailed discussion is included. (p. 93) As indicated in *City of Arcadia*, this is an inadequate approach. In addition, because the DSED concludes there are no significant impacts in areas where

there may in fact be, the checklist contains factual errors that must be corrected.

- **Procedural Requirements of CEQA.** The Board failed to notice the completion of the DSED and include the requisite information. The Board also failed to provide public notice that the September 16, 2009 hearing would include an environmental review. The Board needs to remedy this failure before the hearing at which they will consider adopting the Policy.

Conclusion: The DSED's CEQA Analysis is Deficient

As explained above and detailed below, the DSED is fundamentally deficient. Staff must make significant revisions to the DSED to satisfy the statutory requirements of the lead agency and provide the public, other agencies and the Board a clear understanding of the environmental trade-offs associated with the proposed Policy.

III. FATAL FLAWS IN THE DSED'S ENVIRONMENTAL ANALYSIS

The DSED does not adequately identify and evaluate the reasonably foreseeable negative environmental impacts associated with closed-cycle wet cooling technology or other potential control technologies. Deficiencies in the DSED are discussed below.

A. Air Quality

The DSED does not appropriately and sufficiently address the following air quality-related issues that would result from implementation of the proposed Policy:

1. Inadequate air quality impact analysis of reasonably foreseeable increases in criteria pollutant and air toxics emissions - The DSED air quality analysis is incomplete and does not correctly or accurately assess potential air quality impacts from implementing the proposed Policy. Specifically, Staff did not assume the maximum air quality impacts, did not adequately analyze PM₁₀ and PM_{2.5} impacts, and ignored increases in toxic pollutants.

The DSED contains a preliminary evaluation of the resulting increase in criteria pollutant emissions from the energy penalty of retrofitting OTC plants to less efficient wet-cooling towers. Staff's estimate ranges from an 18% increase in emissions to a 26% decrease in emissions, depending on the criteria pollutant. However, the DSED states, "Staff cannot accurately assess air quality impacts related to criteria pollutants because it is difficult to estimate the method of compliance for each facility."¹² Despite this admitted inability to accurately assess air quality impacts, the Appendix B Environmental Checklist of potential environmental impacts concludes, without any supporting scientific evidence whatsoever, that there would be no significant air quality impacts. In fact, CEQA requires full disclosure of the reasonably foreseeable adverse impacts; the DSED must be revised to disclose the potential increase in emissions of both criteria pollutants and air

¹² DSED at page 101.

toxics from the increased fossil fuel combustion to compensate for the energy penalty and discuss possible mitigation measures.

With respect to PM₁₀ and PM_{2.5} emissions, the DSED does not adequately recognize the adverse air quality and health impacts associated with the increase in particulate emissions from wet cooling towers. All of the California coastal OTC plants are located in designated nonattainment areas for the state ambient air quality standard for PM₁₀,¹³ and four of the seven coastal districts containing the OTC plants are also designated nonattainment areas for the state PM_{2.5} standard.¹⁴ Wet cooling towers will significantly increase PM₁₀ and PM_{2.5} emissions in those areas where particulate air quality is already unhealthy. Nowhere in the air quality section does the Staff identify or analyze the significant adverse air quality impacts from additional criteria pollutant emissions, especially PM₁₀.

In addition, the DSED fails to address the increase in air toxics emissions from the combustion of additional fossil fuel to make up for the loss of electric energy that can be delivered to the grid after implementation of an alternative cooling technology. The required analysis must include not only an estimate of the increase in air toxics emissions, but also a health risk assessment associated with that increase. Because the pre-existing emissions of each coastal power plant using OTC already carries calculable health impacts, the public and the Board must be informed not only about the incremental increase in health impacts from the change in cooling technology, but also about the total health impacts of each power plant. Deferring this discussion and its public disclosure to project-specific environmental reviews are unlawful.

2. Absence of cooling tower PM_{2.5} emission analysis - The DSED is silent on the emissions of PM_{2.5}, despite the fact that (i) approximately 13 percent¹⁵ of the PM emitted by closed-cycle wet cooling towers is in the PM_{2.5} size range, and (ii) four of the seven coastal districts containing the OTC plants are designated nonattainment areas for PM_{2.5}. Moreover, the DSED fails to consider USEPA's final rule on "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})" promulgated on May 16, 2008. After the final rule transition period ends on January 1, 2011, increased condensable gaseous pollutant emissions (i.e., NO_x, VOC and SO_x from the extra fossil fuel combustion needed to make up the lost energy) that can form PM_{2.5} will also need to be considered in the calculation of PM_{2.5}-related emissions.

To meet CEQA's minimum requirements, Staff must identify and analyze the following reasonably foreseeable PM_{2.5} impacts:

- Potential PM_{2.5} emissions from the alternative cooling technologies (e.g., residue after evaporation of drift droplets);

¹³ Tetra Tech, *California's Coastal Power Plants: Alternative Cooling System Analysis*, at p. 3-12 (Feb. 2008).

¹⁴ ARB, *Area Designations, State Standard Designations, Area Designation Maps/ State and National, Figure 3, 2006 Area Designations for State Ambient Air Quality Standards PM_{2.5}*, http://www.arb.ca.gov/desig/adm/2006/state_pm25.pdf

¹⁵ See, e.g., CEC Docket 08-AFC-11 for Vaca Station CPV Vacaville, Applicant's Response to Data Request 15, April 17, 2009.

- Applicability of NSR to the estimated PM_{2.5} emissions;
- BACT analysis if the PM_{2.5} emissions exceed applicability thresholds in attainment or nonattainment areas, as appropriate; and
- Future requirements to offset the PM_{2.5} emissions with reductions of PM_{2.5} or PM_{2.5} precursor (i.e., NO_x, SO_x, or VOC) emissions from other sources through the creation of ERCs, using yet-to-be-determined interpollutant offset trading ratios between PM_{2.5} precursors and directly emitted PM_{2.5}.

By ignoring these impacts, Staff does not meet CEQA requirements to accurately identify the impacts of the implementation of the proposed Policy.

3. Underestimate of the inability to offset increased PM₁₀ emissions with ERCs -

The DSED attempts to estimate the amount of PM₁₀ that would be produced by wet cooling towers at only 13 of the 19 coastal power plants, excluding six plants without explanation. After a cursory analysis that does not include discussion of the availability of PM₁₀ ERCs or possible exemptions from offsetting, Staff only notes that five of the facilities evaluated may trigger federal NSR requirements due to increased PM₁₀ emissions. This analysis may need to be revised because the PM₁₀ emission rates shown for the 13 selected power plants using the alternative calculation method may not reflect local district calculation requirements; that is, not all California districts have accepted the alternative method for calculating cooling tower PM₁₀ emissions.

The DSED fails to consider that the availability of PM₁₀ ERCs would be a key issue for each of the OTC facilities. Unless the local air district exempts a new control system required by other regulations from offset requirements,¹⁶ an affected OTC power plant would not be able to build or operate a wet cooling tower without first obtaining sufficient local PM₁₀ ERCs. In many districts, PM₁₀ ERCs are not realistically available.¹⁷

For example, at Moss Landing, analysis at the time of the NPDES permitting of Units 1 and 2 demonstrated that the quantity of PM₁₀ ERCs required to offset the additional PM₁₀ emissions associated with wet cooling for just Units 1 and 2 exceeded the total inventory of all PM₁₀ ERCs in the Monterey Bay Unified Air Pollution Control District ("APCD").¹⁸ This is still true today. Wet cooling towers at Moss Landing would increase PM₁₀ emissions by 466 tons per year,¹⁹ qualifying as a federal major modification subject to NSR offset requirement. This emission increase is over five

¹⁶ For example, Monterey Bay Unified Air Pollution Control District Rule 207 Section 1.3.2.1 exempts the PM₁₀ emissions from a wet cooling tower required by another state regulation if the PM₁₀ increase does not qualify as a federal major modification. This exemption would not apply to Moss Landing.

¹⁷ For example, 183 tons per year of PM₁₀ ERCs are banked in the Monterey Bay Unified APCD, but the oil company owners are not apt to part with them for business reasons. In addition, all power plant development within the South Coast Air Basin has been essentially blocked as a result of a lack of available PM₁₀ ERCs.

¹⁸ Testimony of Duke Energy Moss Landing LLC, State of California, Regional Water Quality Control Board, Compliance with Remand of a Portion of NPDES Permit re: Cooling Water Intake of New Units 1&2, NPDES Permit No. CA0006254, at 58-60 (2003).

¹⁹ Tetra Tech, *California's Coastal Power Plants: Alternative Cooling System Analysis*, at J-9 (Feb. 2008).

times the amount of PM₁₀ emissions currently produced by the Moss Landing power plant. Moreover, the Monterey Bay Unified APCD's rules require that 1.2 to 2 tons of ERCs be procured for every expected ton of incremental emissions, depending on the location of the facility from which each ERC originated. This suggests that somewhere between 559 and 932 tons of PM₁₀ ERCs would be required for a Moss Landing retrofit. However, the current total inventory of PM₁₀ ERCs in the Monterey Bay Unified APCD emission registry is only 183 tons, none of which is likely accessible by Moss Landing as they are owned by oil companies for projects of their own or by the Community Bank, which is not available for power plant use.²⁰ In fact, even including the allowed use of NO_x and SO_x ERC credits as PM₁₀ interpollutant credits, the total credits perhaps available for purchase by Moss Landing is only 49 tons— less than 10% of the potential requirement.

As another example, in a far more exhaustive analysis that was subject to testimony under oath and cross-examination, the CEC concluded that the wet cooling towers at Morro Bay were infeasible at this site²¹ because they would increase PM₁₀ emissions by 190 tons per year,²² which is 16 times the PM₁₀ emissions from the existing Morro Bay power plant and high enough to trigger NSR as a major modification. Yet, the total inventory of PM₁₀ ERCs in the San Luis Obispo Air District emissions bank is currently only 31 tons. Furthermore, the May 19, 2009 Joint Proposal by the Energy Agencies (i.e., CEC, CPUC, and Cal-ISO)²³ explicitly stated that this issue of obtaining sufficient ERCs for implementation of the proposed Policy on the OTC power plants in the South Coast Air Quality Management District is unresolved.²⁴

Even if Dynegy were successful in purchasing all currently available PM₁₀ ERCs for Moss Landing and Morro Bay, there would be, by a wide margin, insufficient ERCs to support the wet cooling projects, making them infeasible. Because each of the OTC facilities identified in the DSED is located in a PM₁₀ nonattainment area, the potential increase in PM₁₀ emissions resulting from implementation of the proposed Policy would create significant adverse environmental impacts that could not be mitigated for many OTC plants.

4. Lack of assessment of the impacts of federal New Source Review requirements on the range of cooling alternatives - The DSED discusses Best Technology Available ("BTA") and best available technology as defined in the Clean Water Act ("CWA") and applied them to alternative cooling technologies, but these CWA concepts do not substitute for the independent Clean Air Act requirement of a top-down Best Available Control Technology ("BACT") analysis of the air emission levels from the alternative cooling technology units, some of which generate PM₁₀. Notwithstanding any order by

²⁰ Monterey Bay Unified APCD. Telephone conversation with Mike Sewell, District Air Quality Engineer, August 28, 2009.

²¹ Morro Bay 3rd RPMPD at 328 (recognizing that the Morro Bay area contains insufficient emission offset credits to compensate for saltwater drip particulate that would come from salt water cooling towers).

²² Tetra Tech, *California's Coastal Power Plants: Alternative Cooling System Analysis*, at I-6 (Feb. 2008).

²³ DSED at Appendix C.

²⁴ Implementation of Once-Through Cooling Mitigation through Energy Infrastructure Planning and Procurement, Draft Joint Agency Staff Paper, publication. Page C-6 (2009).

the Board (or any other water agency) mandating the installation of alternative cooling systems, an EPA-prescribed top-down analysis²⁵ must be applied to wet cooling towers at those power plants for which the potential increase in PM₁₀ emissions qualifies as a federal major modification of a major source. The Moss Landing and Morro Bay power plants, as noted above, are merely two examples of facilities where such an analysis will be required.

The DSED does not fully evaluate the ramifications of this New Source Review requirement. To the extent that certain cooling alternatives would not satisfy federal BACT requirements at certain site, those alternatives must be rejected as infeasible.

5. Errors in the Findings of the CEQA Checklist for Air Quality (page B-3) - The DSED text that precedes the first four of the five air quality-related questions in the checklist does not provide adequate support for the conclusions marked "No Impact" or "Less Than Significant Impact." The following two questions require additional discussion in the DSED:

- i. **Conflict with or obstruct implementation of the applicable air quality plan?** - The DSED fails to analyze whether the air quality plan(s) to reach attainment of the PM₁₀ ambient air quality standards in each of the seven air districts account for the increase in PM₁₀ emissions that would result from implementation of the proposed Policy. In all probability, those plans do not. Hence, the burden is on the Board, as the Lead Agency, to demonstrate that the maximum potential increase in air emissions would not "conflict with or obstruct implementation of the applicable air quality plan."
- ii. **Violate any air quality standard or contribute substantially to an existing or projected air quality violation?** - This analysis requires not only air dispersion modeling of the new emissions, adding the maximum ground-level concentrations to background levels, and comparison with ambient air quality standards, but also comparison of the maximum project concentrations against Significant Impact Levels to determine if a significant air quality impact is produced.

The latter analysis was conducted²⁶ for implementation of sea water mechanical draft cooling at Moss Landing. The resulting 24-hour PM₁₀ maximum modeled impact was 8.2 µg/m³, which would exceed the federal Significant Impact Level of 5 µg/m³, and hence be determined to be a significant adverse air quality impact. Use of fresh water in a mechanical draft cooling system would reduce the impact to 5.9 µg/m³, which would still be a significant adverse air quality impact. Use of sea water in a natural draft cooling tower system would increase the impact to 35 µg/m³, which not only would be a significant adverse air quality impact, but also would most likely be considered unacceptable for permitting by the air district. EPA's recent proposal of Significant Impact Levels for PM_{2.5} at levels as low as 1.2 µg/m³ on a 24-hour

²⁵ USEPA, *Draft New Source Review Workshop Manual*, 1990.

²⁶ Ibid.

average basis²⁷ could also present a siting constraint impossible for wet cooling towers to meet.

In the context of federal PSD significance levels, the DSED fails to evaluate the significance of air quality impacts from alternative cooling technologies at existing sites. To the extent that certain cooling technologies would have air quality impacts that exceed available air quality increments at certain sites, those technologies would have to be found to be infeasible at those sites.

B. Greenhouse Gases

The greenhouse gas ("GHG") analysis in the DSED is incomplete, inaccurate, and does not meet the guidance from the CEC or the draft CEQA Guidelines for assessing GHG impacts.

1. Incompleteness of GHG emission inventory estimate because of missing methane emissions - While the DSED acknowledges that "Implementation of the Policy may result in a net increase in the amount of carbon dioxide and nitrous oxide emissions for all OTC facilities combined,"²⁸ the DSED completely disregards the reasonably foreseeable increase in methane. Methane is another GHG generated by combustion of natural gas and other fossil fuels, whose contribution to total CO₂-equivalent GHG emissions is approximately four times that of nitrous oxide ("N₂O") emissions. Like the increase in CO₂ and N₂O, implementation of the Policy may result in a net increase in the amount of methane emissions from the OTC facilities as a result of increased combustion of natural gas to make up for the electric energy output lost to run the alternative cooling equipment. Based on the scenarios in the Air Quality section, Staff indicates that GHG emissions will increase between zero and five percent (net), and concludes this will be a less-than-significant impact. This conclusion is unsupported and does not follow CEQA guidelines as discussed below.

2. Analysis of GHG emission impact is insufficient under CEQA - The DSED estimate, based as it is on an estimated average impact, is inappropriate under CEQA, which requires analysis of the potentially highest impacts, not the average. Hence, the GHG impact analysis should be based on the 14 percent increase in CO₂ emissions, 18 percent increase in N₂O emissions, and yet-to-be calculated increase in methane emissions. The issue of significance not only depends on the absolute magnitude of the GHG emission increase that would accompany changing from OTC to another cooling technology, but also the consistency of the policy-induced cooling technology change with meeting the GHG emission reduction goals of the California Global Warming Solutions Act of 2006 (AB32).

²⁷ USEPA, *Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}) - Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC)*, Proposed Rule, 72 Fed. Reg. 54112 (Sept. 21, 2007).

²⁸ DSED at page 102.

As in the Air Quality section, Staff fails to fully evaluate -- or in this case even acknowledge -- the potential significant negative impacts from implementation of the proposed Policy. The potential for increased GHG emissions directly conflicts with State requirements to reduce GHG emissions (AB32 and Executive Order June 2005). Of particular importance to an adequate CEQA analysis are the two following Draft Appendix G analytical questions. Would the Project:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
2. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions?

Section 15064.4 of the Draft CEQA Guidelines discusses the determination of the significance of impacts from GHG emissions. **One important consideration is "the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. ... If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project."**

The DSED needs to address whether the potential increase of GHG emissions from the cooling alternatives would be cumulatively considerable, and hence require a CEQA analysis for each project. The Draft CEQA Guidelines indicate that a finding of less than significant needs to be based on showing that the proposed project is consistent with identified State plans and programs adopted to implement AB32, or that the proposed **project is a critical component of reducing the state's overall GHG emissions in the electrical sector.** The latter basis will be difficult to establish if the alternative cooling technologies increase GHG emissions to generate the same net electrical energy.

The assessment of the increase in GHG emissions must also be performed on a system-wide basis, and not just a project-specific basis. As discussed in the CEC guidance for the evaluation of GHG emissions from proposed new power generating facilities, changes at individual power generating facilities cannot be evaluated in isolation because of the **inherent linkages within California's electric system.**²⁹ The DSED fails to undertake the GHG analysis required by CEQA and should be revised to evaluate the total increase in electrical energy that will be needed to replace that loss as a result of eliminating OTC; determine the most likely marginal generating resources that will be used to provide this incremental energy; and assess the increases in GHG emissions associated with those generating resources.

3. Lost Carbon Sequestration Opportunities - There are several new technologies in development that would utilize the seawater from a plant's cooling system to reduce the power plant's greenhouse gas emissions and could potentially reduce GHG emissions from other sources as well. Should the use of seawater for cooling purposes become

²⁹ CEC, *Siting Committee Guidance on Fulfilling California Environmental Quality Act Responsibilities for Greenhouse Gas Impacts in Power Plant Siting Applications*, March 2009.

infeasible upon implementation of the proposed Policy, this potential means of GHG reductions would be lost, thereby exacerbating the GHG impact of the proposed Policy.

A potential sequestration opportunity currently being pursued at a pilot plant level at Moss Landing Power Plant involves processing power plant emissions using the calcium and magnesium in seawater to make cement. Calera Cement has demonstrated the viability of its process on a small scale, batch-processing basis and is now building a larger facility at Moss Landing to demonstrate the efficacy of the process on a large, continuous-processing scale. Calera Cement's demonstration facility, which should be in operation in 2010, would create cement from the CO₂ contained in 10 MW worth of exhaust diverted from Moss Landing Unit 2. Not only would more than 90% of the CO₂ be captured from Unit 2's exhaust, but each ton of cement created would ultimately displace one ton of cement created the traditional way, which uses large kilns and is one of the larger sources of industrial GHG emissions.

A second proposed project at Moss Landing would use an Accelerated Weathering of Limestone ("AWL") process whereby CO₂ gas is converted into compounds that can be disposed in the ocean. The process involves reacting CO₂ from the power plant with water and calcium carbonate (from crushed limestone). A DOE grant has been applied for to fund the design of a pilot plant utilizing this technology at Moss Landing.

While both of these technologies are as yet commercially unproven, and there remains a great deal to be done before it is clear whether either represents a viable means of significant CO₂ sequestration, they each hold promise for cost-effective carbon capture and storage, particularly when compared with traditional methods of large scale CO₂ capture, transportation, and storage in underground reservoirs.

C. Fresh Water Resources

There are several fundamental freshwater issues that the DSED fails to consider:

1. Freshwater Impacts - The DSED does not quantify the additional freshwater needed to comply with the Policy. Instead, the DSED inadequately refers to the Board's policy for promoting the use of reclaimed water. "Staff recommends Alternative 2: require that power plant owners consider the feasibility of using recycled wastewater for power plant cooling, either to supplement OTC or as makeup water in a closed-cycle system, when developing their implementation plans."³⁰

The DSED needs to be revised to provide the reader with a straightforward assessment of how much additional freshwater will be necessary to comply with the proposed Policy. Instead the DSED merely asserts that the Board would "encourage use of reclaimed water". As demonstrated in the DSED, the availability of reclaimed water for such purposes is limited and cannot fully mitigate the millions of gallons of freshwater needed to comply with the Policy, but this is no substitute for disclosing the amount of necessary freshwater. For instance, the CEC determined that the quantities of

³⁰ DSED at page 69.

available freshwater at Moss Landing or Morro Bay are insufficient to cover each plant's respective needs for wet or wet/dry hybrid cooling.³¹ Either significant additional quantities of freshwater resources will need to be diverted from their current use to the power plants or use of additional freshwater will not be feasible.

2. Desalinization - The DSED does not evaluate the impacts of the proposed Policy on desalinization plants in California, including the resulting diminished freshwater resources. Rather, the DSED states, "Alternative 2 would reserve the desalination issue for another mechanism outside of the proposed Policy.... By limiting the proposed Policy to OTC facilities only, the State Water Board can most effectively address the unique characteristics of the coastal OTC power plants. Desalination facilities are more appropriately addressed in a separate plan or policy." (Page 53-54) This approach fails to recognize that many of the current and planned desalinization plants are co-located at OTC power plants and use a portion of the same saltwater that passes through the power plant. Nor does the current document assess and quantify the potential significant adverse impact of the loss of freshwater resources to coastal communities that desalinization plants do or could provide and which may be lost if the Policy is adopted, as proposed. Alternatively, if the Staff chooses to conclude there would be no impacts to current or planned desalinization plants, then Staff needs to establish the ongoing impacts to marine resources from the use of saltwater resources to "feed" the desalinization plants.

Seven desalination plants have been proposed to be co-located at California OTC power plants. The desalination facilities would use the power plant's seawater intake and outfall. It is anticipated that these desalination facilities will provide a minimum of 183 million gallons per day ("MGD") of freshwater³² (e.g., about 75 percent of the water the City and County of San Francisco uses each day).

If the power plants subject to the proposed Policy eliminate OTC or shut down, the existing co-located desalination plants will have to either continue to use seawater or the communities they serve will have to find alternatives to replace this source of scarce freshwater. For example, the proposed desalination plant to be located at Moss Landing is anticipated to produce 12 MGD.³³ If the power plant ocean intakes/outfalls are no longer available to the desalinization facilities, this project may well not move forward and communities will have to find other sources of freshwater. Given the difficulty of permitting coastal industrial uses, it is unclear that these desalination plants would be able to secure the necessary approvals and build any necessary infrastructure to continue providing an uninterrupted supply of freshwater to local communities. The assessment of these impacts needs to be part of any legally sufficient DSED.

As required by CEQA, in order for decision makers and the public to have the requisite understanding of the potential impacts of the proposed Policy to make informed

³¹ Morro Bay 3rd RPMPD at page 349, Finding 3.

³² San Francisco Public Utilities Commission, Urban Water Management Plan for the City and County of San Francisco. 2005.

³³ Hart, Ian (ed.), *Desalination, with a Grain of Salt: A California Perspective*. The Pacific Institute. 2006.

decisions, the DSED must anticipate and analyze these potential adverse environmental impacts and evaluate if mitigation options are available.

3. Costs of makeup water - Using reclaimed water for make up water will be expensive. Staff's own analysis concludes, "The overall cost savings may be negligible, ... if the cost to procure, treat, and transport the reclaimed water is substantial." Such rhetoric misses the point: under CEQA, it is the Board's responsibility to disclose the potential adverse impacts from the potential increase in demand for additional fresh water resources, notwithstanding the Board's policy on the use of reclaimed water or its possible costs.

For many of the State's OTC facilities, reclaimed water would require extensive new infrastructure (e.g., underground or offshore piping and pumps) that would be installed in urbanized areas³⁴ and, as recognized by the DSED, increasing demands for reclaimed water in other uses (e.g., irrigation, ground water injection, salt water intrusion barriers), particularly in southern California, may compete for this resource and make it unavailable.³⁵

Moreover, the CEC determined that the quantities of available recycled or freshwater at Moss Landing or Morro Bay are insufficient to cover each plant's respective needs for wet or wet/dry hybrid cooling.³⁶ That conclusion was not considered by the Board Staff or its consultant. According to the Board Staff's own analysis on Moss Landing, diverting all the recycled water in the area to the power plant (assuming 100 percent was available for this use) would only constitute 71 percent of the required make up water (40 MGD of the required 56 MGD).³⁷ Any effort to require recycled water, in whole or in part, would create an impossibility of performance standard, impose significant increases in operating costs, and would jeopardize the plant's availability and reliability.

Errors in the Findings of the CEQA Checklist for Freshwater Resources (page B-11)
The DSED text that precedes the utilities and service systems-related questions in the CEQA checklist in Appendix B does not provide adequate support for the conclusions marked "No Impact." The following question requires additional discussion in the DSED:

Have sufficient water supplies available to service the project from existing entitlements and resources or are new or expanded entitlements? As noted above, significant volumes of freshwater could be required to provide make up water to the cooling towers. The DSED must acknowledge impacts to freshwater resources or determine the impacts or the feasibility of using freshwater at these sites.

³⁴ DSED at page 67.

³⁵ DSED at page 69.

³⁶ Morro Bay 3rd RPMPD at page 349, Finding 3.

³⁷ DSED at page 67.

D. Aesthetics

The DSED summararily concludes there are no significant aesthetic impacts for "most facilities" as they are already located in industrial and/or rural areas. Staff found less than significant impacts for Morro Bay, El Segundo, Scattergood and SONGS despite their proximity to popular recreational, residential, or commercial areas. These conclusions gloss over the significant impacts of placing large cooling towers in communities and underestimate local opposition to cooling towers that can make building them infeasible. Additionally, cooling towers at several locations potentially conflict with local laws, ordinances, regulations, and standards ("LORS") protecting scenic views and areas.

For example, Morro Bay has scenic views from and towards Morro Rock and is located along a State Designated Scenic Highway. The CEC proceeding for the proposed modernization project at the Morro Bay Power Plant explicitly found that cooling towers "would have substantial adverse visual impacts relative to the proposed facility and would eliminate one of the principal benefits on the modernization Project from the perspective of the City residents."³⁸ In fact, the City of Morro Bay specifically adopted several resolutions in opposition to dry and hybrid cooling systems based on their massive visual impacts. The City concluded closed-cycled wet cooling towers would "adversely affect the City's beauty and uniqueness, would cause or exacerbate adverse effects on visual, noise, air quality, health, socioeconomics, hazardous materials, traffic and transportation, and other local natural resources compared to the proposed project [once through cooling]."³⁹

As another example, the Moss Landing Power Plant is also located along Highway 1 (in an area designated as a State Scenic Byway) and adjacent to Elkhorn Slough. Duke Energy analyzed the visual impacts of closed-cycle sea water cooling towers in the remand proceeding for Moss Landing. The testimony concluded, "More development on the Project site would draw further attention to the amount of infrastructure on the site and change the visual character of the overall viewshed, particularly in relationship to the Elkhorn Slough with the presence of visible plumes, it is likely that there would be a cumulative visual impact under CEQA. Overall, the mechanical draft cooling creates adverse and potentially significant visual impacts because of the near permanent plumes that are nearly 160 feet tall and nearly 1,300 feet in length, and because of the larger number of views having relative long duration view from Highway 1."⁴⁰

Additionally, the CEC concluded at Moss Landing: "...[S]eawater towers were eliminated due to environmental harm from discharge of concentrated effluent, visibility impacts of the towers themselves, noise, saltwater drip impacts to agriculture, visible vapor plume emissions, additional energy requirements, and capital costs. ... Since the

³⁸ Morro Bay 3rd RPMPD at page 350, Finding 9.

³⁹ Morro Bay 3rd RPMPD at pages 337, 339-349.

⁴⁰ Testimony of Duke Energy Moss Landing LLC, State of California, Regional Water Quality Control Board, Compliance with Remand of a Portion of NPDES Permit Re Cooling Water Intake of New Units 1&2, NPDES Permit No. CA0006254, at 67-68 (April 11, 2003).

evidence establishes that significant impacts from entrainment can be mitigated, the cooling tower alternative is not preferred.”⁴¹

Visual Conflicts

There are multiple provisions in the Coastal Act, as well as local land use policies, that require protection and improvement of the visual corridors in both Moss Landing and Morro Bay. For example, Section 30251 of the Coastal Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas to minimize alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Additionally, there are several other local laws, ordinances, regulations and standards (“LORS”) that must be complied with. Examples of local policies include: 1) the County of Monterey North County Land Use Plan Policy 2.2.2, which states “views to and along the ocean shoreline from Highway One, Molera Road, Struce Road, and public beaches, and to and along the shoreline of Elkhorn Slough from public vantage points shall be protected,” and 2) The City of Morro Bay’s Local Coastal Plan Policy 5.02, which states: “Power Plant expansion shall be limited to small facilities whose location would not further effect the views of Morro Rock from State Highway One and high use visitor-serving areas, consistent with Policy 12.11.” See Attachment B for a summary of LORS conflicts for Morro Bay and Moss Landing.

Night Time Light and Glare

Lastly, in addition to the negative aesthetic impacts noted above, the construction of cooling towers would expand the footprint of the industrial sites and would increase the night time light and glare impacts. These impacts are not addressed in the DSED.

Errors in the Findings of the CEQA Checklist for Aesthetics (page B-2)

The DSED text that precedes the aesthetic-related questions in the CEQA checklist in Appendix B does not provide adequate support for the conclusions marked “No Impact” or “Less Than Significant Impact.” All of the questions require additional discussion in the DSED:

⁴¹ Commission Decision, Application for Certification Moss Landing Power Project, Docket No 99-AFC-4, at 159-160 (Nov. 2000).

a) **Have a substantial adverse effect on a scenic vista?** - Cooling towers and their associated plumes would impact the scenic views along the coast near the OTC plants. As noted above, the visual impacts of closed-cycle wet cooling towers were considered a significant impact by the CEC and the City of Morro Bay during the relicensing hearings. The DSED finding of "Less Than Significant" ignores this previous finding and does not include a full analysis of scenic view impacts.

b) **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?** Five OTC power plants are located on eligible scenic byways:

- o Encina Power Station (Carlsbad)
- o Huntington Beach Generating Station (Huntington Beach)
- o San Onofre Nuclear Generating Station (San Clemente)
- o South Bay Power Plant (Chula Vista)
- o Morro Bay Power Plant (Morro Bay)

Additionally, Moss Landing is located on a designated scenic byway. The DSED's finding of no impact is incorrect as the wet cooling towers and associated plumes would be visible from the highway.

c) **Substantially degrade the existing visual character or quality of the site and its surroundings?** - Wet cooling towers and their associated plumes could impact the scenic views near OTC plants. As noted above, visual impacts were considered a significant impact by the CEC and the City of Morro Bay during the relicensing hearings. Additionally, Moss Landing is surrounded by the scenic Elkhorn Slough and also located along Highway 1; the addition of a large cooling tower and plume would further impact the view-shed and was cited as a reason by the CEC for rejecting closed-cycle wet cooling at this site. The DSED finding of "Less Than Significant" ignores the previous findings and does not include a full analysis of scenic view impacts.

d) **Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?** - New cooling facilities will create additional sources of glare; the DSED is silent on this issue.

E. Noise

The DSED relies on the Tetra Tech report's conclusions that the OTC facilities can meet local noise ordinances by installing barrier walls and insulation, and fails to identify significant noise impacts resulting from the implementation of the proposed Policy. This conclusion ignores the analysis conducted during the CEC relicensing process at Morro Bay and Moss Landing.

At Morro Bay, a first order analysis of alternative cooling options showed increased noise at several sensitive receptors using "best case" modeling that incorporated all possible mitigation strategies. Even with mitigation, the alternative cooled project was on the cusp of compliance and it was unclear if a vendor would guarantee the necessary noise

levels;⁴² once constructed, if the project exceeded the noise limit, no additional mitigations would be available, resulting in a significant adverse impact to the surrounding communities. The City of Morro Bay also adopted several resolutions in opposition to alternative cooling system proposals at this facility and concluded closed-cycle cooling would cause or exacerbate adverse effects on noise compared to the proposed [OTC] project.⁴³

Additionally, the CEC eliminated consideration of seawater cooling towers at Moss Landing due to environmental harm from, among other things, noise. More specifically, the CEC found that: "Cooling tower[s] would be a significant source of increased noise. For these reasons, the 316(b) study preferred the proposed once-through cooling system. Since the evidence establishes that significant impacts from entrainment can be mitigated, the cooling tower alternative is not preferred."⁴⁴

Errors in the Findings of the CEQA Checklist for Noise (page B-8)

The DSED text that precedes the noise-related questions in the CEQA checklist does not provide adequate support for the conclusions marked "Less Than Significant Impact." The following questions require additional discussion in the DSED:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

As noted above, the installation of closed-cycle cooling towers may exceed noise requirements at some OTC sites. Previous analysis at Morro Bay found this technology may not be able to comply with local LORS, resulting in a significant impact that cannot be mitigated. The "Less Than Significant" finding in the DSED is in direct conflict with this previous analysis.

b) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Cooling towers will produce additional ambient noise near the Morro Bay facility. As noted above, this could violate local noise ordinances.

F. Utilities

While the DSED acknowledges the role OTC plants play in grid stability and reliability (pgs. 36, 44), Staff downplays the potential negative impacts of the proposed Policy and concludes that, by 2015, sufficient power will be online to compensate for older OTC plants that may choose to shut down rather than comply with the Policy. However, Staff's conclusion is contingent upon the State's ability to "ensure the transmission system is capable of delivering power from those plants to the loads presently served by

⁴² Duke Energy Morro Bay, LLC, *Updated Analysis of Alternative Cooling Systems for the Morro Bay Modernization Project*, January, 2002.

⁴³ Morro Bay 3rd RPMPD at 337, 339-349.

⁴⁴ Commission Decision, Application for Certification Moss Landing Power Project, Docket No 99-AFC-4, pages 159-160 (Nov. 2000).

OTC plants.”⁴⁵ The DSED goes on to conclude new power plant siting, repowering and transmission projects will have less than significant impacts on the environment as long as the proposed Policy allows the Board to consult with the state’s energy agencies.

Staff’s analysis is overly simplistic and optimistic. Staff’s view of transmission siting does not reflect reality: over the past four years, on average, it has taken 14 months to complete the permitting process. Once projects were permitted, it took an average of 29 months for transmission projects to become operational.⁴⁶

The proposed Policy also does not allow for meaningful input from the CEC, CPUC, and the CAISO. The role of these agencies in the Task Force is limited to advising on each facility’s proposed implementation schedule every two years. Given the dynamic nature of the energy industry and the long lead times necessary to repower or build new generation and transmission facilities, this infrequent input period of every two years will not be able to address issues in a timely manner. Ultimately, the state’s energy agencies overseeing the state’s electric infrastructure and supply should determine the timeline for OTC plant operation, not the state agency in charge of water quality.

Finally, the DSED does not acknowledge the important role many of the OTC plants play in helping integrate renewable power into the state’s energy grid. The older OTC plants, while they do not have high capacity utilization, are able to ramp up and channel energy onto the grid much faster than newer generation. For example, Moss Landing Units 6 & 7 can each ramp up at a rate of 30 MW/minute (from 200 MW to 730 MW), as compared to the new combined-cycle combustion gas turbine generation (Units 1 & 2) which can ramp up no faster than a rate of 20 MW/minute (from 290 MW to 510 MW). The rapid ramping characteristics of some of the older units allow them to adjust energy output to the grid when the power level falls off and picks up from less predictable wind and solar renewable sources. To replace the ramping abilities of Moss Landing Units 6 & 7, four new 510 MW combined cycle units would have to be built. It is difficult to see how this would have no material environmental impacts.

Errors in the Findings of the CEQA Checklist for Utilities (page B-11)

The DSED text that precedes several of the utilities-related questions in the CEQA checklist does not provide adequate support for the conclusions marked “No Impact” or “Less Than Significant Impact.” The following questions require additional discussion in the DSED:

- a) **Result in electrical transmission grid impacts?** - The DSED glosses over the potential impacts of upgrading the transmission infrastructure; no analysis is provided to support the “Less Than Significant” finding in the checklist. Examples of potential impacts of transmission lines include aesthetics, limitations on aviation, Electric and

⁴⁵ DSED at page 106.

⁴⁶ California Public Utilities Commission, Transmission Project Tracking Spreadsheet. September 2009. <http://www.cpuc.ca.gov/NR/rdonlyres/3ED667F7-B622-4DB3-A068-6512A0DEC539/0/9109TransmissionProjectTrackingSpreadsheetexternalversion.xls>

Magnetic Fields ("EMF"), impacts to Endangered/Threatened and Protected Species and their habitat, and impacts on cultural resources.

- b) **Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?** - The DSED defers analysis of impacts to desalinization facilities to a later proceeding. However, as discussed below, this proceeding may negatively impact nine proposed co-located desalinization facilities and freshwater supplies in local communities.

G. Land Use

The DSED does not identify any impacts to Land Use.⁴⁷ This directly contradicts the findings of the CEC, the City of Morro Bay, and the previous owner of Moss Landing and Morro Bay (Duke Energy).

For Moss Landing, the CEC concluded: "...[S]eawater towers were eliminated due to environmental harm from discharge of concentrated effluent, visibility impacts of the towers themselves, noise, saltwater drip impacts to agriculture, visible vapor plume emissions, additional energy requirements, and capital costs. ... Cooling tower salt water drift would significantly increase PM₁₀ emissions, harm nearby agriculture, and be a significant source of increased noise. For these reasons, the 316(b) study preferred the proposed once-through cooling system (Ex. 57 pp. 7-6 to 7-7, 7-23 to 7-30.) Since the evidence establishes that significant impacts from entrainment can be mitigated, the cooling tower alternative is not preferred."⁴⁸

The CEC also found dry and hybrid (wet/dry) cooling conflicted with the City of Morro Bay's zoning policies and plans.⁴⁹ The CEC specifically rejected wet cooling at Morro Bay due to its "serious noise and visual impacts" and "that it could not meet local noise standards."⁵⁰

In addition, the City of Morro Bay actively opposed the use of any technology other than OTC and adopted several resolutions opposing dry and hybrid closed-cycle cooling systems and testified that it would not permit the plant to obtain the site control that was needed for construction of dry or hybrid cooled plant.⁵¹

Duke Energy identified land use conflicts resulting from installing seawater cooling towers on the Moss Landing. At least 19 specific policies in the Coastal Act, the Certified Land Use Plan, Coastal Implementation Plan, as well as the County Land Use plans⁵² cannot be met due to cumulative visual impacts, air quality impacts, and conflicts

⁴⁷ DSED at page 93.

⁴⁸ Commission Decision, Application for Certification Moss Landing Power Project, Docket No 99-AFC-4, at 159-160 (Nov. 2000).

⁴⁹ Morro Bay RPMPD at page 339.

⁵⁰ Morro Bay RPMPD at page 328.

⁵¹ Morro Bay RPMPD at page 339-348.

⁵² See discussion in Aesthetics section.

with the Moss Landing Power Plan Master Plan. An analysis by Duke Energy during the Morro Bay relicensing process also identified at least nine specific conflicts with existing land use regulations and ordinances stemming from the construction of alternative cooling technologies at this site.⁵³ See Attachment B for a full analysis of local LORS conflicts.

Lastly, at Morro Bay, site control was an issue as large cooling towers would not fit with the current facility's property boundaries; a portion of the towers would have to be built on adjacent PG&E property. It is highly questionable if Morro Bay would be able to lease or purchase additional property from PG&E that is currently being used for PG&E's switchyard.

Errors in the Findings of the CEQA Checklist for Land Use (page B-8)

The DSED text that precedes the land use-related questions in the CEQA checklist does not provide adequate support for the conclusions marked "No Impact." The following question requires additional discussion in the DSED:

- a) **Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

As noted above, the installation of closed-cycle wet or other cooling towers would create multiple conflicts with existing state and local LORS at both Moss Landing and Morro Bay. These conflicts result in significant impacts that cannot be mitigated (without amending the Coastal Act or local General Plans, local coastal plans, etc.) at both sites.

H. Agricultural Resources

The DSED does not acknowledge salt drift from seawater closed-cycle wet cooling towers as a potentially significant adverse environmental impact on agricultural resources. Staff assumes drift eliminators will greatly reduce salt deposition and the release of particulate matter from the cooling towers (reduce the volume to 0.0005 percent of the circulating water flow). The DSED states, "No agricultural or forest areas were identified in close enough proximity to potentially warrant concern over drift deposition."⁵⁴

Mosso Landing is located in the midst of prime agricultural land, and is in fact the upwind, next-door neighbor of a dairy. The accretion of significant salt drift on these farm lands raises potentially serious concerns regarding possible adverse impacts on the fertility of this and agricultural production. For this reason, the CEC rejected sea water cooling, in

⁵³ Duke Energy Morro Bay, LLC. *Updated Analysis of Alternative Cooling Systems for the Morro Bay Modernization Project*, page 10. January 7, 2002.

⁵⁴ DSED at page 95.

part, due to "saltwater drip impacts to agriculture."⁵⁵ At Morro Bay, the CEC rejected salt water wet cooling, in part, due to concern about salt from the cooling tower.⁵⁶

The DSED must be revised to evaluate potential impacts to agricultural resources.

I. Traffic Impacts

The DSED discusses the aesthetic impact of installing wet cooling towers and mentions the generation of visible water vapor plumes under appropriate atmospheric conditions of temperature and humidity. Not discussed, however, were the potential water vapor plumes from natural draft wet cooling towers that would add an additional visual aesthetic impact to the already substantial height needed for such towers (e.g., up to 450 feet above grade for the Moss Landing Power Plant).⁵⁷

The DSED does not discuss the potential public safety impacts of visible water vapor plumes in those situations where the placement of new closed-cycle wet cooling towers might allow the water vapor plumes to cross nearby grade-level or elevated roadways. These plumes could potentially cause traffic hazards or might be in the vicinity of airports and/or flight paths.

Analysis conducted for implementation of sea water mechanical draft cooling at Moss Landing indicated that a water vapor plume would be visible approximately 95 percent of the time.⁵⁸ This is likely to be typical for other central and northern California sites.

Errors in the Findings of the CEQA Checklist for Transportation/Traffic (page B-10)
Question (d) asks if the project would "Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?" Because the replacement of OTC with wet cooling towers at some locations can lead to visible water vapor plumes on most days, an analysis is needed to determine if the resulting plumes might cause safety problems on nearby interstate highways and other roadways, or at nearby airports or flight paths.

J. Terrestrial Biology and Cultural Resources

The DSED does not identify any impacts to terrestrial biology or cultural resources. (Page 93) However, many of the OTC facilities have environmentally sensitive habitat on or adjacent to their site and/or cultural resources on their site that must be identified and any impacts mitigated to avoid any potential conflicts with local LORS.

⁵⁵ Commission Decision, Application for Certification Moss Landing Power Project, Docket No 99-AFC-4, at 159-160 (Nov. 2000).

⁵⁶ Morro Bay 3rd RPMPD at 328.

⁵⁷ Testimony in the proceeding Compliance with Remand of a Portion of NPDES Permit RE: Cooling Water Intake of New Units 1&2, Waste Discharge Requirements Order No. 00-041, NPDES Permit No. CA0006254, page 90, April 11, 2003.

⁵⁸ *ibid*, page 65.

The DSED must be revised to acknowledge, analyze and, if possible, propose mitigations for these negative environmental impacts.

Errors in the Findings of the CEQA Checklist for Biological Resources (page B-3-B4)

The DSED text that precedes the terrestrial biology-related questions in the CEQA checklist does not provide adequate support for the conclusions marked "No Impact." The following questions require additional discussion in the DSED:

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?** - The CEC licensing proceeding identified candidate, sensitive, or special status species and/or habitat (i.e., banded snail, red-legged frog, etc.) at both Moss Landing and Morro Bay which required mitigation. The DSED should analyze potential impacts to candidate, sensitive, or special status species caused by the installation of closed-cycle wet cooling towers.
- b) **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?** - The CEC licensing proceeding identified riparian habitat at Morro Bay which required mitigation. The DSED should analyze potential impacts to riparian habitat caused by the installation of closed-cycle wet cooling towers.
- c) **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?** - The CEC licensing proceeding identified wetlands at both Moss Landing and Morro Bay sites which required mitigation. The DSED should analyze potential impacts to wetlands caused by the installation of closed-cycle wet cooling towers.

Errors in the Findings of the CEQA Checklist for Cultural Resources (page B-4)

The DSED text that precedes the cultural resources-related questions in the CEQA checklist does not provide adequate support for the conclusions marked "No Impact." The following question requires additional discussion in the DSED:

- a) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to §Section 15064.5?** - The CEC licensing proceeding identified cultural resources at the Morro Bay site which required mitigation. The DSED should analyze potential impacts to cultural resource sites caused by the installation of closed-cycle wet cooling towers.

IV. CONCLUSION

The DSED fails to meet the requirements of CEQA. The DSED does not provide sufficient information regarding environmental impacts to foster informed public participation and to enable the Board to make a reasoned decision on the proposed OTC Policy. The Board Staff's DSED is a legally inadequate document that fails to acknowledge, discuss and analyze reasonably foreseeable and significant negative environmental impacts that would result from implementation of the proposed Policy. The scope and depth of the DSED's analysis is fundamentally deficient. In short, the Staff must make significant revisions to the DSED to satisfy the statutory requirements of the CEQA lead agency and provide the public and the Board a clear understanding of the environmental impacts and trade-offs associated with the proposed Policy.

* * * * *

Dynegy appreciates the Board's consideration of our comments on the DSED. If you have any questions concerning these comments, please contact Barb Irwin, Director Environmental Western Fleet Operations, at 925-803-5121.

Sincerely,

Daniel P. Thompson
KAM

Daniel P. Thompson
Vice President
Dynegy Western Fleet Operations

Enclosures:

Attachment A, CEQA Deficiencies
Attachment B, Local Laws, Ordinances, Regulations, and Standards (LORS)
That Conflict with Alternative Cooling Options At Moss
Landing and Morro Bay

cc: Office of the Governor
California Energy Commission
California Public Utilities Commission
California Independent Systems Operator

Attachment A: CEQA Deficiencies

Alternatives Analysis

The SWRCB's CEQA regulations require a discussion of reasonable alternatives to the proposed activity. 23 CCR § 3777(a). The DSED is exempt from CEQA's provisions regarding the contents of draft EIRs, including the specific format and requirements for an EIR's alternatives analysis. However, the DSED is subject to CEQA's substantive standards, including the standards for what is considered an adequate alternatives analysis.

A legally adequate alternatives analysis for an EIR includes a "reasonable range" of alternatives that offer substantial environmental advantages over the project proposal and may be feasibly accomplished in a successful manner considering the economic, environmental, social, and technological factors involved. *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 566. In addition, although alternatives do not need to be discussed with the level of detail required for the preferred alternative, mere identification of the alternatives is not sufficient. *Id.* at 571; *Laurel Heights Improvement Assoc. v. Regents of the Univ. of California* (1988) 47 Cal. 3d 376, 404, 406. The discussion should "evaluate the comparative merits of the alternatives." 14 CCR § 15126.6(a). "The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation." 14 CCR § 15126.6(b). A proper discussion of alternatives should "contain facts and analysis, not just the agency's bare conclusions or opinions," and should include "meaningful detail" to provide sufficient information to the public to enable it to understand, evaluate and respond to the agency's conclusions. *Citizens of Goleta Valley*, at 571; *Laurel Height Improvement Assoc.*, at 404, 406.

The DSED fails to identify and evaluate a reasonable range of alternatives that would reduce or avoid environmental impacts of the proposed Policy and still attain most of the basic Policy objectives (e.g., the DSED could evaluate installing partial wet (or dry) cooling technology combined with retaining partial OTC). Variations that could be analyzed to find the overall minimum environmental impact include 25, 50 and 75 percent conversion of current OTC to an alternative cooling technology. In addition, the DSED fails to adequately explain why certain alternatives were rejected (with no facts and analysis, and only bare conclusions and opinions).

The DSED also does not analyze the alternatives in terms of their comparative environmental impacts, and instead focuses on feasibility and ability to attain the Policy's stated goals.

Reasonably Foreseeable Alternative Means of Compliance with the Rule or Regulation

As part of the environmental analysis of methods of compliance, the agency is required to analyze "reasonably foreseeable alternative means of compliance with the rule or regulation." Pub. Res. Code § 21159(a)(3). The DSED may intend that the "front of pipe" technologies and seasonal operation identified satisfy this alternative means of compliance analysis. However, it not clearly stated in the document. These technologies and operational controls cannot be both reasonably foreseeable methods of compliance and alternative means of compliance, yet they seem to be treated this way by listing them along with other compliance methods.

Mitigation

In this case, the DSED need not comply with the CEQA provisions regarding the content of draft EIRs, but it must follow the substantive standards of identifying mitigation measures that avoid or lessen identified impacts. CEQA requires an analysis of reasonably foreseeable mitigation measures. Pub. Res. Code § 21159(a)(2). Under CEQA, draft EIRs must include mitigation measures that substantially lessen or avoid the otherwise significant adverse environmental impacts of proposed projects. Pub. Res. Code § 21002. Mitigation measures should avoid the impact by not taking a certain action or parts of an action, minimize impacts by limiting the degree or magnitude of the action and its implementation, rectify the impact by repairing, rehabilitating or restoring, or reduce and eliminate the impact over time. 14 CCR § 15370. In this case, as discussed in the next section, the DSED either fails to identify impacts or in other cases does not adequately analyze reasonably foreseeable impacts from the proposed Policy. Therefore, the DSED lacks the required identification and discussion of mitigation measures.

Cumulative Impacts

Although the DSED need not comply with CEQA's provisions regarding the content of an EIR, an agency conducting review pursuant to a certified regulatory program must meaningfully assess a project's cumulative environmental impacts, even if the agency's own regulations do not require it. *EPIC*, 170 Cal.App.3d 624-625, 631 (p. 176). While an agency need not prepare a cumulative impact analysis precisely as set forth in the CEQA Guidelines, the agency must consider cumulative impacts where relevant. *Laupheimer v. State of California* (1988) 200 Cal.App.3d 440, 462, 466. A cumulative impact analysis assesses "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." 14 CCR § 15355(b). The DSED has a single conclusive statement regarding cumulative impacts: "Implementation of the proposed Policy will not result in cumulative impacts." (p. 108) This single sentence does not meet the statutory requirements for a cumulative impacts analysis; the DSED need to be revised to include this analysis.

Economic Considerations

CEQA requires economic considerations to be included in environmental review in two places: 1) In evaluating the significance of an environmental effect, any agency must consider direct physical changes and economic or social effects may be used to determine that the physical change is a significant effect on the environment (14 CCR § 15064); and 2) In the analysis of reasonably foreseeable impacts of the identified methods of compliance, the agency shall take into account economic factors, including compliance costs (Pub. Res. Code 21159(c)). The DSED evaluation of economic impacts and compliance costs is flawed because it does not fully and accurately analyze the costs of reasonably foreseeable compliance methods. For example, it fails to evaluate the cost of repowering, is limited to analyzing the cost of wet cooling retrofits, and does not include the costs of CO₂ emissions. Moreover, it substantially underestimates costs.

Tiered Environmental Analysis

Tiering is defined as “the coverage of general matters and environmental effects in an environmental impacts report prepared for a policy, plan, program or ordinance followed by narrower or site-specific environmental impact reports which incorporate by reference the discussion in any prior environmental impact report and which concentrate on the environmental effects which are (a) capable of being mitigated, or (b) were not analyzed as significant effects on the environment in the prior environmental impact report.” Pub. Res. Code § 21068.5. In addition, CEQA does not require a project level analysis within an agency’s assessment of the reasonably foreseeable methods of compliance with a performance standard. Pub. Res. Code § 21159(d).

Tiered environmental analysis may be appropriate where a first tier environmental analysis can be prepared for a broadly applicable plan or policy with subsequent, project-level analysis that contains more detailed analysis. In this case, a programmatic or first tier environmental document may be appropriate. However, the proposed Policy identifies 19 specific plants of which the environmental impacts of retrofitting these plants with closed-cycle cooling can be readily analyzed.

The DSED is not adequate even as a first tier environmental document. In *City of Arcadia v. State Water Resources Control Board* (2006) 135 Cal.App.4th 1392, 1426, the court held that although tiering was appropriate, the Board failed to provide an adequate first tier document. In that case, the environmental analysis identified compliance methods with reasonably foreseeable impacts that were not discussed; it ignored the temporary impacts of construction and of maintenance for the pollution control measures identified. In this case, the DSED fails to completely analyze the environmental impacts of retrofitting the OTC plants with closed-cycle cooling and fails to analyze any environmental impacts of “alternative technologies” or operational measures.

In addition, a first tier document “must not defer all analysis of important environmental issues.” Remy and Thomas, Guide to CEQA, at p. 606. “Tiering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental

effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration; however the level of detail contained in a first tier EIR need not be greater than that of the program, plan, policy, or ordinance being analyzed.” 14 CCR § 15152(b). In a first tier document for a large scale planning program, the court in *Al Larson Boat Shop, Inc. v. Board of Harbor Commissioners* (1993) 18 Cal.App.4th 729, 741-746, held that the agency may permissibly defer analysis where site specific information is not feasible until such time as the agency prepares future environmental analysis of a project with more limited geographical scale, provided that “deferral does not prevent adequate identification of significant effects of the planning approval at hand.”

The sites that will be subject to the proposed Policy are known; the DSED could have included more site-specific analyses. In fact, the Board is required to take into account a reasonable range of site specific factors in its environmental analysis of reasonably foreseeable environmental impacts of compliance methods. Pub. Res. Code § 21159(a)(1), (c). The DSED is deficient in that it defers more detailed analysis to a later date and therefore fails to identify significant effects of the proposed Policy.

Environmental Checklist

SWRCB’s CEQA regulations require that any rule or regulation proposed for board adoption be accompanied by a completed Environmental Checklist. 23 CCR § 3777. In *City of Arcadia v. State Water Resources Control Board* (2006) 135 Cal.App.4th 1392, 1424, the court held that the SWRCB’s environmental documentation was inadequate because it consisted solely of an environmental checklist that denied the proposed project would have any environmental impacts. There was no discussion of the various factors such as soil displacement, noise, traffic, or natural resources. *Id.* at 1423. The court explained that even a negative declaration requires documentation showing the potential environmental impacts the agency considered in reaching its conclusions. *Id.* at 1424.

Although the DSED includes some discussion of the certain factors listed in the Environmental Checklist contained in Appendix B, for several subject areas the DSED states that because no impacts were identified, no detailed discussion is included. (p. 93) As indicated in *City of Arcadia*, this is an inadequate approach. The DSED should have provided documentation showing the potential environmental impacts considered. In addition, because the DSED concludes there are no significant impacts in areas where there may in fact be, the checklist contains factual errors that must be corrected.

Procedural Requirements of CEQA

SWRCB’s CEQA regulations provide that “[u]pon completion of the [DSED], the board shall provide a Notice of Filing of the report to the public and to any person who requests, in writing, such notification.” 23 CCR § 3777(b). Under CEQA, a public notice of the availability of a draft EIR must specify the period during which comments will be received, the date, time, and place or any public meetings or hearings on the proposed project, the significant effects on the environment, if any, anticipated as a result

of the project, a brief description of the project, and the address where copies of the draft EIR are available. 14 CCR § 15087(c). An agency must “substantially” comply with these notice requirements. Pub. Res. Code § 21092(b)(2). The Board failed to notice the completion of the DSED and include the requisite information.

The CEQA Guidelines provide that “if an agency provides a public hearing on its decision to carry out or approve a project, the agency should include environmental review as one of the subjects for the hearing.” 14 CCR § 15202(b). The Board failed to provide public notice that the September 16, 2009 hearing would include an environmental review. The Board needs to remedy this failure before the hearing at which it will consider adopting the Policy.

The Board must prepare written responses to written comments raising significant environmental points received at least fifteen days “before the date the board intends to take action on the proposed activity.” 23 CCR § 3779(a). If written comments are received later than fifteen days before, the Board should prepare written responses if feasible; otherwise, the Board must respond orally to those late written comments and to any oral comments received at the Board meeting. 23 CCR § 3779(b).

Attachment B

**Local Laws, Ordinances, Regulations, and Standards (LORS)
That Conflict with Alternative Cooling Options at Moss Landing and Morro Bay**

**LAND USE PLANS AND POLICIES THAT CONFLICT
WITH ALTERNATIVE COOLING OPTIONS AT MORRO BAY POWER PLANT**

Policy #	POLICY TEXT	WHY ALT COOLING IS NOT CONSISTENT WITH PROGRAM, POLICY, OR REGULATION
<p>CALIFORNIA COASTAL ACT (PRC Section 30000 et seq.) (CCA) CCA 30253(3)</p>	<p>New development shall be consistent with the requirements imposed by an air pollution control district or the State ARB as to each particular development.</p>	<p>The additional PM10 emissions from wet cooling towers will not met local Air District requirements.</p>
<p>CCA 30251</p>	<p>The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas to minimize alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.</p>	<p>The additional cooling towers would have significant negative impacts on the views of Morro Rock and from visitor serving areas in Morro Bay and will not be subordinate to the setting.</p>
<p>CITY OF MORRO BAY - GENERAL PLAN</p>		
<p>II. Land Use, Open Space, and Conservation Elements</p>		
<p><i>Sensitive Lands and Open Space</i></p>		
<p>GP Program LU-62.1</p>	<p>All developments at or adjacent to the harbor or beach areas shall provide for physical and visual public access to these features.</p>	<p>The additional cooling towers would have significant negative impacts on the views of Morro Rock and from visitor serving areas in Morro Bay</p>
<p>CITY OF MORRO BAY - COASTAL LAND USE PLAN (LUP)</p>		
<p>Chapter VII. Energy/Industrial Development</p>		
<p>LCP text</p>	<p>According to a CEC report entitled "Feasibility of Expansion of Existing Coastal Zone Power Plants," the power plant site is the minimal adequate for expansion of small facilities whose location would not further affect the unique view corridor of Morro Rock and the report indicates that conversion is unfeasible due to a variety of factors. The study does conclude that expansion is feasible for a small-scale facility utilizing either steam turbine, the existing generating system, combined cycle, or combustion. (LUP.</p>	<p>The additional cooling towers would have significant negative impacts on the views of Morro Rock and from visitor serving areas in Morro Bay.</p>

p. 107 & 109)	
F. Policies on Energy Related Development	
General Policies	
LCP Policy 5.01	... Power plant expansion on PG&E owned property shall have priority over other coastal dependent industrial uses. Power plant expansion shall be limited to small facilities whose location would not further effect the views of Morro Rock from State Highway One and high use visitor-serving areas, consistent with Policy 12.11. (General Plan policy # LU-39.1)
LCP Policy 5.21	Substantial landscaping and screening to mitigate the visual impacts of existing and future facilities; with particular emphasis on screening the facilities located between the power plant and Highway One. (General Plan policy # LU-40.16)
Chapter XIII Visual Resources	
E. Visual Resources Policies	
LCP Policy 12.01	The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic and coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic area such as those designated on Figure 31, shall be subordinate to the character of its setting.
LCP Policy 12.02	Permitted development shall be sited and designed to protect views to and along the coast and designated scenic areas and shall be visually compatible with the surrounding areas. Specific design criteria shall be established for the following areas: The Embarcadero (as defined in Policy 2.03) Downtown commercial area. The criteria shall include the following specific requirements and shall be applied to proposed projects on a case-by case basis during architectural review: Building height/bulk relationship compatible with existing surrounding uses; landscaping to restore and enhance visually degraded areas using native and drought resistant plant and tree species; Preservation and enhancement of views of the ocean, bay, sandspit and Morro Rock; Any other requirements applicable from
	The additional cooling towers would create significant adverse impacts on the view of Morro Rock and from visitor serving areas in Morro Bay.
	The additional cooling towers would create significant adverse impacts on the view of Morro Rock and from visitor serving areas in Morro Bay.
	MBPP is designated on Figure 31 as an area of visual significance. The additional cooling towers would create significant adverse impacts on the view of Morro Rock and from visitor serving areas in Morro Bay.
	The additional cooling towers would create significant adverse impacts on the view of Morro Rock and from visitor serving areas in Morro Bay.

	<p>Coastal Commission conceptual approval of the Urban Waterfront Restoration Plan.</p>	<p>MBPP is identified on figure 31. The additional cooling towers would create significant adverse impacts on the view of Morro Rock and from visitor serving areas in Morro Bay. The cooling towers will introduce two large bulky obstacles to the coastal viewer and degrade view corridors.</p>
<p>LCP Policy 12.06</p>	<p>New development in areas designated on Figure 31 as having visual significance shall include as appropriate the following: Height/bulk relationships compatible with the character of surrounding areas or compatible with neighborhoods or special communities which, because of their unique characteristics, are popular visit destination points for recreation uses. Designation of land for parks and open space in new developments which because of their location are popular visitor destination points for recreation uses. View easements or corridors designed to protect views to and along the ocean and scenic and coastal areas.</p>	<p>The additional cooling towers would create significant adverse impacts on the view of Morro Rock and from visitor serving areas in Morro Bay.</p>
<p>LCP Policy 12.11</p>	<p>Industrial development shall be sited and designed in areas specifically designated in the Land Use Plan to protect views to and along the ocean and scenic coastal areas, to minimize land alteration, to be visually compatible with the character of the surrounding areas, and where feasible, shall include measures to restore and enhance visually degraded areas. In addition, industrial development shall be subordinate to the character of its setting.</p>	
<p>CITY OF MORRO BAY ZONING ORDINANCE (Municipal Code Section 17) (MC)</p>		
<p>MC 17.24.150</p>	<p>Coastal Dependent Industrial (M2) District</p>	<p>While the modernization and replacement project, as originally proposed in the AFC, complies with the height requirement, compliance of an air-cooled or hybrid system could be challenged as the additional structures could be considered a new facility and therefore a non conforming use due to the height limit.</p>
	<p>Thermal power plant and support facilities which must be located on or adjacent to the sea in order to function (may be allowed with the appropriate permits and licenses). Conditional Use Permit is Required. Thirty foot building height limit. (For new construction only). Does not apply to replacement or repair of existing structures).</p>	

**LAND USE PLANS AND POLICIES THAT CONFLICT WITH
ALTERNATIVE COOLING OPTIONS AT MOSS LANDING POWER PLANT**

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
CALIFORNIA COASTAL ACT (PRC Section 30060 et seq.)							
30253	Coastal-dependent developments shall have priority over other developments on or near the shoreline.	Installing either the freshwater mechanical draft or dry cooling towers to the MLPP will make it a non coastal dependent facility.		*			*
MONTEREY COUNTY COASTAL IMPLEMENTATION PLAN (PART 1 - TITLE 20, ZONING ORDINANCE)							
Chapter 20.26: Regulations for Heavy Industrial Zoning Districts (HI/CZ)							
20.28.070.A	The maximum structure height is 35 feet unless superseded by a structure height limit noted on the zoning map. Additional height may be allowed subject to a Use Permit (ZA).	While the modernization and replacement project, as approved by the CBC, complies with the height requirement, compliances of natural draft system could be challenged as the additional structures could be considered a new facility and therefore a non conforming use due to the height limit.			*		

Chapter 20.64, Height Exceptions

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
20.62.030.C	Any structure in an Industrial District may be erected to a greater height than the district allows, provided that the <i>cubic contents</i> of the structure shall not be greater than the possible for a structure erected within the height limit, and provided the design, exterior lighting, siting and landscaping plan for the project is approved by the Planning Commission.	CONFLICT It is not feasible to construct a 35-foot high natural draft cooling tower.			*		
MONTEREY COUNTY COASTAL IMPLEMENTATION PLAN (PART 2 - REGULATIONS FOR DEVELOPMENT IN THE NORTH COUNTY LAND USE PLAN AREA) REFERENCING MOSS LANDING COMMUNITY PLAN							
Land Use and Development Standards							

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
20.144.140. B.S.c.	<p>Development of new or expanded industrial facilities shall only be permitted where able to meet the following criteria:</p> <ol style="list-style-type: none"> 1. The industry shall be coastal-dependent. 2. The industry shall not use quantities of water that will exceed or adversely impact the safe, long-term yield of the local aquifer. 3. Where not preempted by the exclusive authority of a state or federal agency, the County shall require that the industry contribute only low levels of air and water pollution and reduce project pollution to the lowest levels possible for the particular industry. As a condition of approval, all available and feasible mitigation measures shall be incorporated into project design to minimize the amount of air and/or water pollution. 4. The industrial use shall incorporate appropriate buffer zones where located adjacent to agricultural areas, as per Section 20.144.080.D.6. 5. The development shall meet visual resource, environmentally sensitive habitat, and other development standards of this ordinance. <p>(Ref. Policy 4.3.5.6 and 4.3.6.F.1 and F.4)</p>	<p>Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will not meet the visual resource and other development standards of this ordinance.</p>	x	x	x	x	x

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
20.144.140. B.5.e.	<p>Development of new or expanded industrial facilities shall only be permitted where able to meet the following criteria:</p> <ol style="list-style-type: none"> The industry shall be of a coastal or agricultural -dependent type. The industry shall not use quantities of water that will exceed or adversely impact the sage, long-term yield of the local aquifer, as determined through a hydrologic report prepared in accordance with Section 20.144.070.D. The development shall meet the visual resource, environmentally sensitive habitat, and other development standards of this ordinance. 	<p>Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will not meet the development standards of this ordinance. Lastly, freshwater mechanical draft cooling will use an unreasonable amount of the County's water resources.</p>	*	*	*	*	*
Mass Landing Community Development Standards 20.144.160. C.1.e	<p>Future expansion, improvement or other development including fuels conversion at PG&E, National Refractories and any other heavy industry in the area shall be considered in accordance with the Master Plan and associated Environmental Impact Report which has been developed for these facilities. This Master Plan requirement shall not apply to emergency or administratively approved developments under Section 30624 of the Coastal Act.</p> <p>The Master Plan must have been developed by the applicants and submitted to Monterey County for review and approval prior to approval by the County of any development permits for these industries.</p>	<p>The additional of alternative cooling technologies is not anticipated by and does not conform with the current MLPP Master Plan</p>	*	*	*	*	*
		<p>The additional of alternative cooling technologies is not anticipated by and does not conform with the current MLPP Master Plan</p>	*	*	*	*	*

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
	<p>The Master Plans shall address the long-range development and operation of the facilities including:</p> <ol style="list-style-type: none"> 1) Physical expansion and new construction; 2) Major operational changes in fuels or fuel delivery systems; 3) Circulation or transportation improvements; 4) Electrical power transmission; 5) Alternative development opportunities; 6) Environmental considerations; 7) Potential mitigation of adverse environmental impacts; and 8) Conformance to all other policies of the North County Land Use Plan and other State and Federal regulations. <p>Subsequent to approval of these Master Plans, permit request not in conformity with the Master Plans shall be considered only upon completion and approval of necessary amendments to the Master Plan. This requirement shall not be construed to require disclosure in the Master Plans of trade secrets, proprietary or confidential information, but only location of buildings and other land use matters necessary for planning purposes. (Ref. Policy 5.5.2.2 Moss Landing Community Plan.)</p>	<p>CONFLICT</p> <p>The additional of alternative cooling technologies is not anticipated by and does not conform to the current MLPP Master Plan. Additionally, the Master Plan could not be revised in such a way to conform to the policies of the North County Land Use Plan and other State and Federal regulations.</p>	*	*	*	*	*

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
20.144.160. C.1.f	Potentially hazardous industrial development (that development which is shown to be, through the various required and available documents, to be harmful to the environment of the area or is shown that the establishment, maintenance or operation of the use applied for will be detrimental to the health, safety, peace, morals, comfort and general welfare of persons residing or working in the neighborhood of such a proposed use or be detrimental or injurious to property and improvements in the neighborhood or general welfare of the County) shall not be located adjacent to developed areas. (Ref. Policy 5.5.2.5 Moss Landing Community Plan)	The addition of cooling towers to the MLPP will cause significant visual impacts that will disrupt the environment and it is detrimental to the health, peace, comfort and general welfare in the neighborhood of the Project.	X	X	X	X	
20.144.160. C.1.k	All new heavy industry must be coastal-dependent. (Ref. Policy 5.5.2.10 Moss Landing Community Plan)	Freshwater mechanical draft and dry cooling will make the project non-coastal dependent.		X			X
20.144.160. D.1.a	Visibility will be considered in terms of normal unaided vision in any direction for any amount of time at any season. The standard for review is the objective determination of whether any portion of the proposed development is visible from or impedes the visual access to the Moss Landing community, harbor and dunes from Highway 1 or any other public viewing area.	The addition of cooling towers to MLPP will cause significant visual impacts and therefore is not consistent with the County's planning objectives. The near constant plume of several of the alternatives will be visible from or impede the visual access to the Moss Landing community, harbor and dunes from Highway 1 or any other public viewing area.	X	X	X	X	

MONTEREY COUNTY GENERAL PLAN

Chapter IV: Area Development

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
29.1.1	Industrial development which is compatible with Monterey County's environment shall be encouraged.	Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will not meet the visual resources and other development standards of this ordinance. Lastly, freshwater mechanical draft cooling will use an unreasonable amount of the County's water resources.	*	*	*	*	*
29.1.2	The County shall require that industrial areas be as compact as possible and, where feasible, designate planned industrial park areas.	The addition of cooling towers to MLPP will add additional bulk to the existing facility and cause significant visual impacts and therefore is not consistent with the County's planning objectives.	*	*	*	*	*
29.1.3	In order to maintain a healthy environment, the County shall allow only those industries which do not violate the County's environmental quality standards.	Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will not meet the visual resource and other development standards of this ordinance. Lastly, freshwater mechanical draft cooling will use an unreasonable amount of the County's water resources.	*	*	*	*	*

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
2.2.2.1	Views to and along the ocean shoreline from Highway One, Molera Road, Struve road and public beaches, and to and along the shoreline of Elktona Slough from public vantage points shall be protected.	The addition of cooling towers to MLPP will cause significant visual impacts and therefore is not consistent with the County's planning objectives.	*	*	*	*	
Chapter 4, Land Use and Development							
4.3.4	All future development within the North County Coastal Zone must be clearly consistent with the protection of the area's significant human and cultural resources, agriculture, natural resources, and water quality.	Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will not meet the visual resource and other development standards of this ordinance. Lastly, freshwater mechanical draft cooling will use an unreasonable amount of the County's water resources.	*	*	*	*	*
4.3.5.6	The only industrial facilities appropriate for the area are coastal-dependent industries that do not demand large quantities of fresh water and contribute low levels of air and water pollution. Industries not compatible with the high air quality needed for the protection of agriculture shall be restricted.	Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will increase air quality impacts. Lastly, freshwater mechanical draft cooling will use an unreasonable amount of the County's water resources.	*	*	*	*	*

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
4.3.6.F.1	Lands designated for Heavy and Light industrial use in the North County Coastal Zone, shall be reserved for coastal-dependent industry as defined in Sections 4.3.1 L and M, and in the glossary of this plan. New Heavy or Light Industrial manufacturing or energy related facilities shall be located only in areas designated for these uses in this plan.	Adding freshwater mechanical draft or dry cooling towers to the MLPP will make it a non coastal dependent facility.		*			*
4.3.6.F.4	A basic standard for all new or expanded industrial uses is the protection of North County's natural resources. Only those industries determined to be compatible with the limited availability of fresh water and the high air quality required by agriculture shall be allowed. New or expanded industrial facilities shall be sited to avoid impacts to agriculture or environmentally sensitive habitats.	Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will increase air quality impacts. Lastly, freshwater mechanical draft cooling will use an unreasonable amount of the County's water resources.	*	*	*	*	*
Chapter 5, Moss Landing Community Plan							
5.5.1	Existing coast-dependent industries in Moss Landing have local, regional, statewide, and in some cases, national significance. Accordingly, the County shall encourage maximum use and efficiency of these facilities, and to allow for their reasonable long-term growth consistent with maintaining the environmental quality and character of the Moss Landing Community and its natural resources.	Freshwater mechanical draft and dry cooling will make the project non-coastal dependent. Additionally, all of the alternatives (except dry cooling) will increase air quality and visual impacts. Lastly, freshwater mechanical draft cooling will use an unreasonable amount of the County's water resources.	*	*	*	*	*

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
5.5.2.2	<p>Future expansion, improvement, or other development including fuels conversion at PG&E or Kaiser Refractories, and any other heavy industry in the area shall be considered in accordance with master plans for these facilities. This master plan requirement shall not apply to emergency or administratively approved developments under section 30624 of the Coastal Act. This master plan shall be developed by the respective industries and submitted to Monterey County for review and approval prior to approval by the County of any required permits for these industries. The master plan shall address long range development and operation of the facilities including physical expansion and new construction, major operational changes, changes in fuels or fuel delivery systems, circulation or transmission improvements, electrical power transmission, alternative development opportunities, environmental considerations, potential mitigation of adverse environmental impacts and conformance to all other policies of the North County LCP and other State and Federal regulations.</p> <p>Subsequent to approval of these master plans, permit requests not in conformity with the master plan shall be considered only upon completion and approval of necessary amendments to the master plan.</p>	<p>This policy applies only if the development is "coastal-dependent." Freshwater mechanical draft and dry cooling will not be coastal dependent and thereby would fail to satisfy this policy.</p>		*			*

POLICY #	POLICY TEXT	CONFLICT	Mechanical Draft (seawater)	Mechanical Draft (fresh water)	Natural Draft System	Hybrid Cooling System	Dry Cooling System
5.5.2.3	The least environmentally damaging alternative should be selected for on-site modernization and upgrading of existing facilities. When selection of the least environmentally damaging alternative is not possible for technical reasons, adverse environmental effects of the preferred alternative shall be mitigated to the maximum extent.	On balance, the visual impacts from all of the alternative cooling options are significant (with the exception of dry cooling). Additionally, freshwater mechanical draft and dry cooling create land use conflicts by creating a non-coastal dependent use. None of the alternatives meet the CWA wholly disproportionate test. The current once-through cooling technology meets all of these criteria while mitigating any marine impacts through the habitat enhancement program.	*	*	*	*	*
5.5.2.4	Modernization and expansion of industrial facilities shall be compatible with existing community land use patterns and circulation system capacities, planning objectives, and local air quality regulations in effect at the time of the granting of such approval for said expansion by the appropriate agencies.	The objective the County planning documents is to encourage only coastal dependent industrial uses in the coastal zone. This objective is not met by the freshwater mechanical draft and dry cooling options.		*			*
5.5.2.10	All new heavy industry shall be coastal dependent.	Freshwater mechanical draft and dry cooling create land use conflicts by creating a non-coastal dependent use.		*			*
5.6.3.6	Views through the Moss Landing community, harbor and dunes from Highway 1 should be protected through regulation of landscaping and siting of new development adjacent to the highway to minimize the loss of visual access.	The addition of cooling towers to MLPP will cause significant visual impacts (with the exception of dry cooling) and therefore is not consistent with the County's planning objectives.	*	*	*	*	