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DOCKET 00-AFC-13C
DATE AUG 2 2006
RECD AUG 7 2006



August 2, 2006

Joanna Reinhardt
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Comments on AES Huntington Beach (#00-AFC-13C) Impingement / Entrainment Study and Proposed Mitigation Plan

Dear Ms. Reinhardt:

Thank you for the opportunity to comment on the above-referenced proceeding. This AFC involved the retooling of Units 3 & 4 at the AES power plant in Huntington Beach. We are providing these comments for consideration by the Energy Commission's Siting Committee in addition to those we provided at your July 25th workshop. We have several brief comments on the Energy Commission staff's overall mitigation proposal as well as on some specific aspects of the proposal and on the counter-proposal by AES.

Because the AFC review occurred in 2001 during the state's electricity shortages and was done as an emergency proceeding, it did not include adequate time for the normal review process generally carried out by the Energy Commission and Coastal Commission. As a result, the Coastal Commission was not able to provide the report required pursuant to the Warren-Alquist Act and Section 30413(d) of the Coastal Act. That report is meant to identify the measures necessary for a proposed project to conform to the Coastal Act. Additionally, the schedule for this current consideration of the impingement / entrainment study and mitigation proposal does not provide sufficient time to take this matter to the Coastal Commission; therefore, these comments represent the views of Coastal Commission staff. We request that if the Siting Committee or Energy Commission consider substantial modifications to the current proposal, or if their proposed decision does not adequately incorporate these comments, that the Committee or Commission provide additional time prior to their anticipated decision date to allow the Coastal Commission to provide the necessary report.

General Comments on Overall Mitigation Proposal: The Energy Commission staff proposal represents an appropriate and necessary mitigation approach to address the adverse entrainment / impingement impacts associated with this project. Coastal Commission staff generally supports the conclusions of the entrainment / impingement study and the mitigation proposal, although we believe several additional mitigation elements are necessary to ensure that the proposal results in adequate mitigation.

The current proposal consists primarily of a mitigation objective and associated funding. The proposal would have AES provide about \$8 million to restore approximately 100 acres of wetlands near the power plant. While this is an adequate objective for a mitigation plan, it is not sufficiently detailed to ensure that the proposal will be properly implemented. We request that the AFC's mitigation condition include more specific requirements about the mitigation intended to result from this proposal. It should require submittal of a detailed wetland mitigation plan that

includes a description of the amounts and types of wetlands to be restored, the expected performance standards for those wetland areas, monitoring measures necessary to determine whether the wetlands are functioning as anticipated, a contingency plan to be implemented if the wetland does not function adequately to provide the necessary level of mitigation, and other standard elements of an acceptable and enforceable wetland mitigation plan. AES should be required to submit an acceptable mitigation plan that includes these elements within ninety days of Energy Commission adoption of this mitigation proposal. Coastal Commission staff would be happy to assist in the review of such a plan to ensure it is adequate for purposes of Coastal Act conformity.

Regarding comments about the “significance” of the impacts: As shown by the results of the entrainment / impingement study, the power plant’s recent and ongoing use of seawater is clearly causing significant adverse impacts to coastal fish and other marine organisms. Although the applicant contends otherwise, we concur with the conclusions of the Energy Commission staff that the project is causing significant impacts.

We believe that the Energy Commission staff analysis of the study results provides sufficient basis for the Siting Committee’s decision to require mitigation; however, we suggest the Committee also cite another basis for its decision; that of non-conformity to LORS. CEQA lead agencies in some instances have adopted the position that a “significant impact” is defined in part as an impact that results in non-conformity to an applicable law or regulation. The power plant is subject to a number of LORS, including Section 30231 of the Coastal Act, which requires that the adverse effects of entrainment be minimized. That Coastal Act provision does not require those adverse entrainment effects be “significant”, only that those effects be reduced to the smallest possible amount. Since it is clear that the AES facility could do more to minimize entrainment effects (e.g., as evidenced by AES’s offer at the workshop of a flow cap and of as-of-yet unidentified technological measures), it is also clear that the current project is not conforming to this Coastal Act provision. Therefore, if the Committee were to adopt this definition of “significant impact”, it would provide further support for the proposed mitigation.

Regarding the proposed 1:1 mitigation ratio: On balance, we see the proposed 1:1 mitigation ratio as the minimum acceptable level of mitigation for this proposed project. As noted in the Energy Commission staff report and as described at the workshop, mitigation ratios are almost always higher than 1:1, especially for impacts that result in off-site and out-of-kind mitigation, where ratios can range from 2:1 to up to 10:1.

This project’s impacts include several characteristics often used to establish a ratio of higher than 1:1 – for instance, the delay between the onset of the impacts and the start of the mitigation meant to address those impacts. To date, the project has resulted in at least two years of entrainment / impingement impacts but has provided no mitigation. It will likely take several more years before the proposed restoration site provides the anticipated wetland functions meant to mitigate for the impacts, thus increasing the need for mitigation at greater than a 1:1 ratio.

Even those characteristics of the project and the mitigation proposal that might suggest a lower ratio than the standard range of 2:1 to 10:1 should not be interpreted to allow less than 1:1. For example, AES has pointed out that a larger number of species would benefit from wetland restoration than were identified in the entrainment / impingement study as being adversely affected. However, we note that the study looked at only a small number of target species meant

to represent the full range of organisms subject to entrainment and impingement. The benefits to additional wetland species are therefore at least offset by the entrainment impacts to numerous unidentified species. Further, recent research has shown that the ocean's plankton community consists of a much larger number of species than was previously known, so it is likely that a larger number of species are being entrained than will benefit from the restoration site.

AES has also argued for a lower ratio because the power plant certification is valid for just ten years and the Energy Commission staff proposal may result in "over-mitigation". For at least two reasons, we believe this concern has only limited merit – first, due to the delay noted above, and second, due to the nature of this type of mitigation. Regarding the delay, if it takes another five years for the restoration site to function as anticipated (which is highly optimistic), the wetlands would have to make up for no less than eight years of after-the-fact impacts. The delay also creates uncertainty about how the restoration site will eventually function, and it could function at lower levels than currently anticipated. Additionally, this type of mitigation – wetland restoration – requires a very "front-loaded" approach, in that most of the work and costs must occur up front to produce the necessary level of mitigation credit. Restoring a smaller site than identified in the study or requiring a smaller mitigation payment would provide less-than-adequate mitigation not only during the life of the project but for some time thereafter. Even if mitigation credits accrue after the end of the certification period, a smaller site could take an inordinate amount of time to provide the functions necessary to "catch up" to the impacts caused during the 10-year certification period.

Regarding mitigation costs and the "shortcut" in mitigation sequencing: The proposed mitigation plan is expected to cost about \$8 million, which represents about 6% of the overall Unit 3 & 4 project costs of \$130 million. This appears to be well within the range of feasibility and easily in the range of similar Energy Commission projects. We note, too, that because this AFC review was done as an emergency process, AES was allowed to skip the first and most important step of the mitigation sequence – that of determining ways to avoid the impacts in the first place. This project was approved using a 90-day emergency certification process, which was appropriate at the time, given that the state was experiencing extreme electricity shortages and that AES committed to having the two retrofitted units up and running within 90 days of certification. However, using that process meant that review of the project did not include the alternatives analysis typically required of other projects, and AES did not accrue the costs associated with such an analysis.

This was part of the trade-off during our energy crisis five years ago – in exchange for being able to provide additional generation capacity fairly quickly, the project was never subject to an alternatives analysis, and so AES was essentially allowed to skip the first step of the mitigation sequence normally required to determine whether cooling methods other than once-through cooling were available. As it turns out, the additional capacity was not provided until three years later rather than the expected 90 days later, so the state did not gain the full set of benefits expected from its condensed review. Additionally, this facility is one of the coastal power plants most likely to be able to feasibly switch to dry cooling, as shown in the report accompanying this letter, which is included as part of our comments.¹

¹ "Assessment of Impact of Desalination Plant and Feasibility of Closed-Cycle Wet Cooling at Huntington Beach Generating Station", by Powers Engineering, July 29, 2006.

Regarding AES's proposed flow cap: At the July 25th workshop, AES proposed to reduce its impacts (and associated mitigation obligations) by capping its cooling water flows to half of its NPDES-permitted levels. The Committee, however, expressed quite clearly its reluctance to impose or accept a cap that would reduce AES's capacity to produce electricity for the state.

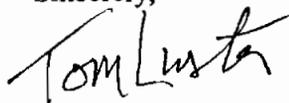
While we recognize the Committee's concerns, we also believe in general that a flow cap is an acceptable way to reduce the power plant's impacts. If the Committee is still considering a cap, we request that any cap include the following:

- Prior to accepting or imposing a cap, the Energy Commission staff should determine whether a cap is feasible, and if so, how a cap would affect operations of the other generating units at AES Huntington Beach. We also recommend that AES change its final entrainment report from last year, which states that the operating status of the power plant does not allow for a flow reduction. The Energy Commission staff should also identify what changes have been made at the power plant that would allow the reduced flows that were apparently not possible last year.
- Second, a cap should apply to operations of all four generating units at the facility. It does not appear to be in the best interests of the state to cap the operations of the recently retooled Units 3 and 4 without considering whether it would mean the less efficient 1950s-era Units 1 & 2 would operate more often. Further, all four generating units at this facility share the same intake, so a facility-wide intake would seem to be a sensible approach to reducing the facility's entrainment impacts. Additionally, a facility-wide approach would allow the necessary consideration of existing or proposed Reliability-Must-Run contracts.
- Finally, any flow cap should be based not on a reduction from the maximum NPDES permitted flows, but on the average flows at the facility since the AFC was issued in 2001.

Regarding AES's proposed mitigation: At the July 25th workshop, AES proposed an alternative mitigation approach consisting primarily of a flow cap, potential technological measures, and additional delays in determining the mitigation requirements. However, other than the flow cap, the proposal did not include sufficient detail to allow adequate review and comment, so we therefore recommend the Committee not consider the proposal further. We also note that while AES mentioned that some potential technological measures may be available to reduce entrainment, we are not aware that AES has provided any such proposals as part of their ongoing 316(b) review. That review is at the stage during which power plant operators should be determining the specific measures that they will implement to reduce their entrainment impacts by 60 to 90%. If AES provides additional details, we would request an additional review opportunity for both the Coastal Commission and other interested parties.

Closing: Thank you again for the opportunity to comment. In sum, we are largely supportive of the Energy Commission staff's mitigation proposal, if the above comments are incorporated into the Siting Committee or Energy Commission's mitigation decision.

Sincerely,



Tom Luster
Energy and Ocean Resources Unit