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SACRAMENTO, CA 95814-5512
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DATE: September 8, 2010

TO: Interested Parties

FROM: Christina Snow, Compliance Office

SUBJECT: Huntington Beach Generating Station Retool Project (00-AFC-13C) Staff Analysis of Proposed License Extension

On March 2, 2010, AES Huntington Beach, LLC filed a petition with the California Energy Commission (Energy Commission) to extend the license for the Huntington Beach Generating Station Retool Project (HBGS) Units 3 and 4, for an additional 10-year period (September 30, 2011 to December 31, 2020). Staff has reviewed the amendment and prepared an analysis of the proposed extension.

The 450 megawatt project was originally certified on May 10, 2001, through an expedited process due to the energy emergency that was occurring that year. This expedited process was directed by Governor Gray Davis in Executive Order D-22-01. As a result of the Executive Order, the Commission required post-licensing studies to analyze biological and water quality impacts.

The proposed amendment could extend the operation of the facility for approximately 10 years, until December 31, 2020. This request would allow the project owner to repower the facility and eliminate the use of once-through cooling while still providing energy during peak periods. The extension would also be consistent with the recent draft policy issued by the State Water Resources Control Board that identifies a deadline of December 31, 2020, for the HBGS to cease use of once-through cooling.

Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes additions as noted in the attached analysis. It is staff's opinion that, with the implementation of the newly proposed Biological Resources Condition of Certification **BIO-7** and a provision to the original Commission Decision's **General Order No. 1-General Conditions including Compliance Monitoring and Closure Plan**, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition and staff's analysis have been posted on the Energy Commission's webpage at:

http://www.energy.ca.gov/sitingcases/huntingtonbeach/compliance/index.html

The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the October 20, 2010, Business Meeting of the Energy Commission. If you have comments on this proposed modification, please submit them to me at the address below prior to October 8, 2010.

Christina Snow, Compliance Unit
California Energy Commission
1516 9th Street, MS-2000
Sacramento, CA 95814

Comments and questions may be submitted by fax to (916) 654-3882, or by e-mail to csnow@energy.state.ca.us.

For further information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at publicadviser@energy.state.ca.us. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.state.ca.us.

HUNTINGTON BEACH GENERATING STATION RETOOL PROJECT (00-AFC-13C)
License Extension Staff Analysis
Christina Snow

INTRODUCTION

On May 10, 2001, the California Energy Commission Decision for the Huntington Beach Generation Station Retool Project (HBGS) was granted to AES Huntington Beach Limited Liability Company (AES), using the expedited emergency certification pursuant to Executive Order D-22-01 issued by Governor Davis on February 8, 2001. The HBGS, a 450 MW natural gas-fired power plant, would retool and restart Units 3 and 4, retired in 1995. The HBGS uses ocean water for once-through cooling (OTC) of Units 3 and 4 as well as Units 1 and 2 (under the jurisdiction of the City of Huntington Beach). Due to the emergency approval, the HBGS was licensed without following the normal licensing procedure timelines of the Energy Commission.

The Energy Commission required post-licensing studies for water quality and biology to determine potential impacts and appropriate mitigation measures. In light of the unstudied environmental impacts and other aspects of the emergency certification, the Energy Commission required that the emergency license expire on September 30, 2006, unless the Energy Commission found that: 1) the project was in substantial compliance with the conditions of certification; 2) the project was mitigating its contribution to environmental impacts (i.e., entrainment and impingement of marine organisms) as determined by studies agreed upon by AES, Energy Commission staff, and other interested parties; and 3) all required permits were in force and the project was in substantial compliance.

AES funded a study to determine whether or not the power plant contributed to the occurrence of bacteria in the Huntington Beach surf zone from the heated cooling water discharge. The study was conducted (July 2004) and submitted to the Energy Commission for review, to ensure adequate mitigation measures were implemented. The study indicated that additional mitigation measures were needed. These mitigation measures were implemented through the project owner's wastewater discharge permit and the City of Huntington Beach's stormwater waste discharge requirements.

The Energy Commission also required AES to fund a study to determine environmental impacts on aquatic life from the OTC system. The study was completed in 2005 (MBC 2005) and a determination was made with regard to the actual environmental effect, and appropriate mitigation to lessen impacts to a less than significant level. On September 27, 2006, Energy Commission staff and AES concluded that restoration and maintenance of 66.8 acres of wetlands would be adequate to mitigate impacts from the OTC system for Units 3 and 4. The Energy Commission also made findings that the project was in substantial compliance with all the conditions of certification and that all the required permits were in force. The HBGS license was then approved for a period of 10 years from the initial AFC, with an expiration date of September 30, 2011.

On March 2, 2010, AES filed a petition with the Energy Commission to extend the license for the HBGS Units 3 and 4 for an additional 10-year period (September 30, 2011 to December 31, 2020). AES requested this extension to plan, permit, finance, and construct replacement units for the entire power plant. Their current license extension request includes a proposed schedule to submit an AFC by the end of December 2013, to phase the replacement of Units 1 through 4, and also indicates that if, for some reason, an AFC could not be submitted by the December 2013, deadline, AES would submit a closure plan.

In order to implement Section 316(b) of the federal Clean Water Act, and in coordination with the California Public Utilities Commission (CPUC), California Independent System Operator Corporation (ISO) and the Energy Commission, the State Water Resources Control Board (SWRCB) issued a policy to significantly decrease or eliminate the environmental impacts of OTC by 2020. In light of this policy, Energy Commission staff reviewed AES's request and requested a more pro-active approach to the repowering of the HBGS in which AES has agreed to submit an AFC for this site by June 30, 2012, (18 months earlier than originally proposed), and if such AFC is deemed data adequate pursuant to Title 20, California Code of Regulations Section 1704(c), then the license shall be extended until December 31, 2020. The December 31, 2020, termination date is consistent with the SWRCB policy on scheduled phase out of OTC facilities throughout the state. If the AFC is not submitted by this deadline, AES will submit a closure plan and cease operation of Units 3 and 4 by September 30, 2016. Staff has recommended a condition of certification that will reflect adherence to these timelines.

If approved by the Energy Commission, the extension of the license will allow HBGS to initially operate for five additional years (from September 30, 2011 to September 30, 2016), with the potential extension of four additional years (until December 31, 2020), if an AFC to repower the power plant is submitted by June 30, 2012, and deemed data adequate pursuant to Title 20, California Code of Regulations Section 1704(c).

SETTING

The project is located along the Pacific Coast Highway in the City of Huntington Beach, California. The project site is located on relatively flat terrain with little vegetation except for patches of non-native and native landscaping at the property perimeter. Areas of protected salt marsh occur to the northwest and southwest that are also known as the Huntington Beach Wetlands. The requested extension of HBGS Units 3 and 4 does not change the setting applicable to the project.

LAWS, ORDINANCES, REGULATION, AND STANDARDS (LORS) - COMPLIANCE

Energy Commission Staff has reviewed the petition for potential environmental effects and consistency with applicable LORS. Based on this review, staff determined that there are no new or changed LORS that would be applicable to the proposed project.

ANALYSIS

AES is requesting an extension to continue operation of Units 3 and 4 at the HBGS. As the HBGS project was an emergency project, the licensing process was not conducted

in a normal manner and conditions of certification were very minimal. As mitigation was implemented after the project was approved, it is necessary to add conditions of certification to this amendment to ensure that impacts remain less than significant.

Energy Commission staff reviewed the original AFC and current request to extend the license and has determined that the extension would not result in impacts different than those previously analyzed for the HBGS project with the exception of the following areas.

BIOLOGICAL RESOURCES

The proposed extension to December 31, 2020 will allow the continued operation of the OTC process. The initial AFC required a detailed study on the entrainment and impingement impacts on aquatic resources due to OTC. Entrainment refers to organisms being drawn into and through the cooling water system and impingement refers to trapping of organisms on the intake screens.

The previous study was overseen by a Biological Resources Research Team (BRRT) that consisted of representatives from: the Energy Commission and its consultants; the project owner and its consultants; the U.S. Fish and Wildlife Service; the National Marine Fisheries Service (NMFS); the California Department of Fish and Game (CDFG); the California Coastal Commission; and the Santa Ana Regional Water Quality Control Board (RWQCB). The study determined that the continued operation of the HBGS would have entrainment and impingement impacts and incorporated suggestions made by the members of the BRRT as well as potential methods to reduce impingement.

Samples were collected at the entrainment station and at six other stations extending 2.5 miles (4 km) upcoast, downcoast, and offshore from the intake structure, and were used to estimate the source water populations at risk of entrainment. The samples were conducted between September 2003, and August 2004. The sampling results were then used in the empirical transport model (ETM) to estimate the equivalent amount of ocean habitat it would take to produce those lost resources. This area is referred to as the area of habitat production foregone (APF). This loss of habitat productivity represented a loss of functional value of native fish, wildlife, and plant habitat, as well as a degradation of the foraging habitat of the endangered California least tern, endangered California brown pelican, and threatened western snowy plover. Additionally, an impingement study was completed, where 52 normal operation surveys and 6 heat treatment surveys were conducted between July 2003, and July 2004. The impacts from entrainment and impingement were considered to be significant and mitigation was proposed to reduce these impacts to a less than significant level.

Tidal wetland restoration was considered appropriate because tidal wetlands have been found to be productive and provide other benefits to coastal waters, in addition to compensating directly for lost productivity. AES was required to restore and maintain 66.8 acres of wetlands for a period of 10 years (Energy Commission Order in September 2006). This wetland restoration and maintenance was to be within the Huntington Beach Wetlands area, which is located immediately down coast and to the northwest of HBGS. The Huntington Beach Wetlands collectively total 191 acres and have a finalized plan for restoration. The original AFC mitigation enhanced this wetland

area and provided direct and indirect benefits to impacted species. This mitigation reduced impacts from impingement and entrainment to a less than significant level.

As indicated, the extension of the license to 2016, with the potential extension until 2020, would continue to create impingement and entrainment impacts for as long as OTC is in use. The impacts from the continued use during the extension period were analyzed by Energy Commission staff.

Standards of Significance: Impacts on biological resources are considered significant if one or more of the following conditions could result from implementation of the proposed project:

- Substantial effect, reduction in numbers, restricted range, or loss of habitat for a population of a state or federally listed threatened or endangered species.
- Substantial effect, reduction in numbers, restricted range, or loss of habitat for a population of a California special-status species, including fully protected, candidate proposed for listing, California Species of Concern, and some California Native Plant Society (CNPS) list designations.
- Substantial interference with the movement of resident or migratory fish or wildlife species.
- Substantial reduction of habitat for native fish, wildlife, or plants.
- Substantial disturbance of wetlands, marshes, riparian woodlands, and other wildlife habitat.
- Removal of trees designated as heritage or significant under County or local ordinances.

Energy Commission staff concluded that the proposed license extension could have the potential for significant impacts and has proposed a new condition, requiring AES to continue funding restoration, maintenance and monitoring activities of the 66.8 acres of wetlands, required to be restored as mitigation from the original AFC. The restoration activities are almost completed and it is anticipated that there will still be small restoration projects, maintenance and monitoring activities. Staff has concluded that the continued viability of the restored wetlands will mitigate the continued OTC impacts from the extension of the license.

CONCLUSION AND RECOMMENDATION

There would be no unmitigated impacts to biological resources due to the proposed project extension. The project would conform to all applicable laws, ordinances, regulations, and standards (LORS) for biological resources. The license extension, as proposed, would not have a significant effect on sensitive species or their habitat near the project, providing that the proposed Biological Resources Condition of Certification **BIO-7** (below), is adopted. The conditions of certification from the original Energy Commission Decision as well as the September 27, 2006, Energy Commission Order remain relevant to the proposed amendment.

Energy Commission staff recommends the addition of the Biological Resources Condition of Certification **BIO-7** and the addition of a general condition provision that would provide assurance that AES is making efforts to modernize the HBGS power plant and phase out the use of OTC, while still providing a reliable supply of electricity. AES has indicated that the units are located in the critical Los Angeles basin local capacity reliability area (LCR) and provides important benefits to the sub-area that cannot be satisfied by other generating units in the Los Angeles basin LCR. AES will continue operating Units 3 and 4 while it plans for, permits, finances, and constructs replacement infrastructure.

PROPOSED CONDITIONS OF CERTIFICATION

Energy Commission staff proposes the addition of Biological Resources Condition of Certification **BIO-7** (below), and, that the following provision be added to the original Commission Decision's **General Order No. 1-General Conditions including Compliance Monitoring and Closure Plan.** (New language is shown underlined.)

Provision to file and Application for Certification (AFC) by June 30, 2012

On or before June 30, 2012, an AFC to replace the Huntington Beach Generating Station Retool Project at its current site, shall be submitted to the California Energy Commission by the project owner, and must be data adequate in order to extend the license until December 31, 2020. If an AFC is not submitted, or, an AFC is submitted but not deemed data adequate, this license extension shall terminate on September 30, 2016.

BIO-7 In addition to the current yearly maintenance funding, the project owner shall contribute an additional $20,000 to fund the annual maintenance and monitoring activities from 2012 to 2018, as deemed necessary by the Huntington Beach Wetlands Conservancy (Conservancy) and the Compliance Project Manager (CPM), to maintain proper functioning of the 66.8 acres of wetlands restored under the original licensing of the Huntington Beach Power Plant. If once-through cooling is still in operation after December 31, 2018, the project owner shall pay $75,000 annually for every year once-through cooling is operational, up until this license terminates (December 31, 2020). This may include maintenance or restoration activities conducted within the original 66.8 acres of restored wetlands or on other acreage within the preserve, including work in adjoining upland habitats that contribute to the overall functioning of the entire wetland preserve. The project owner must submit an Application for Certification (AFC) to the Energy Commission by June 30, 2012, to repower the power plant and to comply with the statewide water resources control board policy on the use of coastal waters for power plant once-through cooling in order to receive a full requested license extension through 2020. If the June 2012 deadline is not met, then the project owner will submit a closure plan to cease operation for Units 3 and 4 by September 30, 2016, for review and approval by the Energy Commission.

The Conservancy shall submit annual reports to the CPM for review and approval by January 15 in accordance with the existing Memorandum of

Understanding (MOU) between the project owner, Huntington Beach Wetlands Conservancy, and the Commission staff. Submitted budgets should include any appropriate bids by contractors acquired by the Conservancy as specified in the existing MOU. Upon approval by the CPM, the CPM shall submit the annual budget to the project owner and the project owner shall fund the annual budget.

Verification: The Conservancy shall submit an annual report to the CPM for approval by January 15 of each year that contains a proposed budget of the maintenance, monitoring or restoration activities for the next year as well as a summary of maintenance and restoration activities conducted in the previous year as indicated in the existing MOU. Once the annual budget and summary report is approved, the CPM will authorize release of funds from the trust account within five working days according to the existing MOU. Upon approval by the CPM, the annual budget shall be submitted to the project owner as necessary. The project owner shall provide additional funds in excess of current available funding, up to $20,000 annually from 2012 to 2018, or up to $75,000 in 2019 and 2020 as specified in the **BIO-8** Condition of Certification. Any required funds shall be paid no more than 30 days after the project owner receives the budget from the CPM. The project owner shall provide written verification that funds were deposited to the CPM.

REFERENCES

AES Huntington Beach, LLC. Petition to amend the license expiration date for AES Huntington Beach Units 3 and 4. March 1, 2010.

California Energy Commission (CEC). Huntington Beach Generating Station Retool Poject Application for Certification 00-AFC-13C Orange County. Approved May 10, 2001.

California Energy Commission (CEC) – Donna Stone, Compliance Project Manager letter to Energy Commissioners and Interested Parties. September 26, 2006.

California Energy Commission Order No. dated September 26, 2006

California Public Utilities Commission, California Energy Commission, California ISO. Implementation of Once-through Cooling Mitigation Through Energy Infrastructure Planning and Procurement. Michael R. Jaske, Dennis C. Peters, Robert L. Strauss. July 2009.

California State Water Resources Control Board. Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling. May 4, 2010.

Davis, Dr. Noel, Raimondi, Dr. Pete, York, Pete, and Reinhardt, Joanna. July 14, 2006. Huntington Beach Units 3 & 4 Entrainment and Impingement Study Results, Mitigation Options, Staff and Working Group Recommendations, and AES's Response and Objections to the Recommendation.

Steinbeck, John. Compilation of California Coastal Power Plant Entrainment and Impingement Estimates for California State Water Resources Control Board Staff Draft Issue Paper on Once-through Cooling.