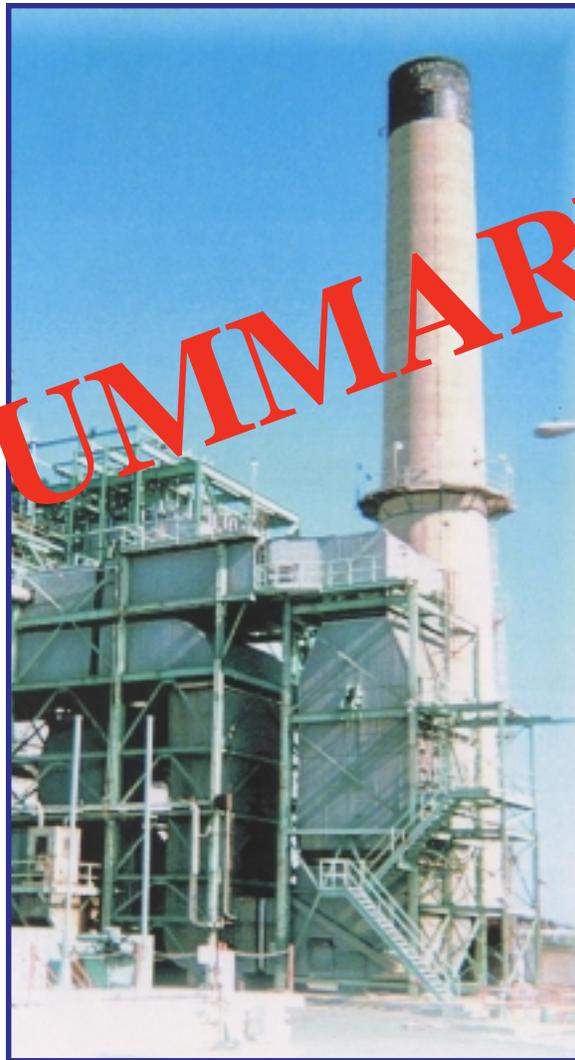


# HUNTINGTON BEACH GENERATING STATION RETOOL PROJECT

Application For Certification 00-AFC-13  
Orange County



CALIFORNIA  
ENERGY  
COMMISSION

AMENDED PRESIDING MEMBER'S  
PROPOSED DECISION

APRIL 2001  
(00-AFC-13)  
P800-01-013



Gray Davis, Governor

# TABLE OF CONTENTS – HOME PAGE

	<u>Page</u>
EXECUTIVE SUMMARY - RECOMMENDATION .....	2
CHANGES TO PRESIDING MEMBER'S PROPOSED DECISION .....	4
CALIFORNIA'S ELECTRICITY EMERGENCY.....	5
PROJECT DESCRIPTION .....	11
<b>ENVIRONMENTAL QUALITY</b>	
Air Quality.....	16
Biology.....	38
Cultural Resources .....	48
Geology .....	57
Hazardous Materials .....	61
Land Use.....	67
Noise .....	73
Public Health .....	83
Socioeconomics .....	88
Traffic & Transportation .....	98
Visual Resources .....	106
Waste Management .....	122
Water Quality & Soils.....	128
Water Resources.....	137
Alternatives .....	141
<b>TRANSMISSION &amp; ENGINEERING</b>	
Efficiency.....	146
Facility Design.....	150
Reliability.....	166
Transmission Line Safety & Nuisance.....	168
Transmission System Engineering .....	175
Worker Safety.....	180
GENERAL ORDER NO. 1 – COMPLIANCE MONITORING.....	190
ADOPTION ORDER.....	206

## EXECUTIVE SUMMARY - RECOMMENDATION

# EMERGENCY CERTIFICATION APPROVED WITH CONDITIONS

The Energy Commission Committee, Commissioner Arthur Rosenfeld, Presiding, and Commissioner Robert Pernell, recommends approval of AES's proposed 450 megawatt Huntington Beach Units 3 & 4 Retool Project in Huntington Beach, California, together with the following highlighted measures to mitigate potential environmental and community impacts:

### **ELECTRICITY SALES IN CALIFORNIA:**

- ✓ In consideration of this expedited certification pursuant to the Governor's Executive Order, AES shall enter into a contract with the Department of Water Resources to sell the generation from the Huntington Beach Units 3 & 4 Retool Project to address California's electricity supply emergency. The Project will be on line approximately 90 days after certification.

### **EXTENDABLE 5- YEAR EMERGENCY CERTIFICATION:**

- ✓ The retooling of a vintage, coastal boiler power plant is warranted since it can immediately respond to California's electricity emergency; thus certification will be effective until September 30, 2006. At such time, if AES has fully complied with all Conditions of Certification, the Energy Commission may extend this certification for not more than an additional five years to September 30, 2011.

### **AIR QUALITY:**

- ✓ The power plant will use state-of-the-art Best Available Control Technology to minimize emissions.
- ✓ Complete offsets will be used to compensate for any pollutant for which the South Coast Air Quality Management District (SCAQMD) requires offsets.
- ✓ To prevent a significant cumulative air quality impact, through December 31, 2002, Units 3 and 4 shall not operate contemporaneously with Unit 5 unless the ISO has declared a Stage 3 Electrical Emergency and the ISO has specifically called-up Unit 5 to avoid an imminent blackout. After December 31, 2002, operation of Huntington Beach Unit 5 shall cease. These requirements may be superseded by SCAQMD's adoption of emission controls by Best Available Retrofit Control Technology or other means applicable to Unit 5.

**WATER QUALITY:** ✓ AES will fund a study of the possible contribution of the power plant project to the occurrence of bacteria in the Huntington Beach surf zone through heated cooling water discharge in the Pacific Ocean. If the power plant project contributes to the impact, AES will provide its proportional share of mitigation.

**VISUAL RESOURCES:** ✓ Structures and fences will be painted in muted colors compatible with the setting.

✓ Shields and motion detectors on plant lighting will minimize nighttime glare.

✓ Tree planting will screen views of the plant, particularly from the Pacific Coast Highway and nearby residences.

**BIOLOGY:** ✓ For cooling water, AES will continue to use the existing ocean water intake and outfall system that entraps and kills a modest amount of fish and other organisms. By restarting operation of Units 3 & 4, flow rates will be doubled compared to recent years. Rather than rely on an extrapolation of 1970s data from other coastal power plants, AES will conduct a one-year entrainment and impingement study at Huntington Beach to assess current project and potential cumulative impacts. AES will also review best available technology for the intake system that might lessen entrainment and impingement.

**NOISE:** ✓ In order to complete the retooling project in July 2001, AES will implement a 20-hour per day construction schedule. To prevent disturbance to nearby residences, AES proposes to limit "noisy" construction from 7:00 a.m. to 8:00 p.m. daily. Between 8:00 p.m. and 2:00 a.m., activities will be limited to "quiet" construction that will not exceed present nighttime noise levels by a perceptible amount, which is 5 dBA.

Dated: April 13, 2001

ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

**ARTHUR H. ROSENFELD**  
Commissioner and Presiding Member  
Huntington Beach AFC Committee

**ROBERT PERNELL**  
Commissioner and Associate Member  
Huntington Beach AFC Committee

## **SIGNIFICANT CHANGES** **TO THE PRESIDING MEMBER'S PROPOSED DECISION**

**Pages 9-12:** New discussion in **ELECTRICITY SALES IN CALIFORNIA** supports a Condition that requires AES enter into an electricity sales contract with the Department of Water Resources dedicating the generation supplied by Huntington Beach Units 3 and 4 to California's electricity supply emergency. PMPD Condition **EMERGENCY-1** incorporates this new provision, with an exception for orders from the President, the federal Secretary of Energy or the Governor of California re-directing the electricity output of the project to other states or entities as needed.

Discussion in **DURATION OF CERTIFICATION** section specifies that if AES complies with all Conditions of Certification, particularly those regarding surf zone bacteria and impingement and entrainment, the Energy Commission may extend this certification and allow the operation of Units 3 and 4 for up to an additional 5 years.

**Page 42:** Staff's proposed condition **BIO-4**, requiring up front funding of the impingement and entrainment study is adopted to assure earliest possible completion of the study and implementation of appropriate mitigation, which is made more important by the potential extension of this certification by an additional 5 years.

**Page 77:** Condition of Certification **NOISE-1** is amended to better assure compliance with the "quiet" nighttime construction standards and provide public safeguards in the event of persistent, excessive nighttime construction noise.

## **CALIFORNIA'S ELECTRICITY EMERGENCY**

The AES Huntington Beach Retool Project as recommended for certification is a creature of California's electricity supply emergency, both in its design and regulatory processing. AES proposes to rebuild and upgrade the internal components of two 1950's vintage boilers that were retired from use by SCE in 1995.

AES testified that it purchased the Huntington Beach Generating Station with the intention of replacing the old boilers with state-of-the-art combustion turbine combined cycle units. At some unspecified time and based upon factors to which we are not privy, AES began the process of preparing an Application for Certification to resurrect the idle units. AES's design included the use of air pollution control technology that will allow Units 3 and 4 to burn nearly as cleanly as modern combined cycle units. As a result, AES filed its Application for Certification in December 2000, contemplating a routine, nominal 12-month regulatory review.

In the intervening time, instead of remaining routine and nominal, California's electricity supply situation has become an emergency. By various Executive Orders, Governor Davis has declared an energy supply emergency and directed the Energy Commission to marshal state resources to expedite its regulatory reviews to bring new generation resources on line, with a particular emphasis on generation which could be available for the summer of 2001.

For its part, AES has responded to the electricity supply emergency by offering to retool Huntington Beach Units 3 and 4 in 90 days from the date of licensing. Therefore, to enable AES to fulfill such a pledge and bring Unit 3 and 4 generation on line by mid-July 2001, the Energy Commission has instituted a highly expedited process that could lead to certification by mid-April 2001.

Other energy developers are currently proposing to replace their vintage coastal boiler-type power plants, whether purchased from SCE or PG&E, with new combustion turbine combined cycle units, as AES had originally intended. Duke Energy's Morro Bay Project and Dynergy's El Segundo Redevelopment Project use state-of-the-art emission controls, consume about one-third less natural gas than a boiler unit to produce an equivalent amount of electricity, and return less-heated cooling water to the ocean environment. All of this comes in a low profile, less visually intrusive package than the Huntington Beach proposal by AES.

Such facilities model California's future coastal power plants. Absent responding to the current electricity emergency, the AES project does not present sufficient justification to perpetuate the vintage Huntington Beach power plant on a coastline of world-renowned scenic, recreational, and environmental value.

Consequently, the Energy Commission will certify the retooled facility for 5 years to be available to fully address the electricity supply emergency, since this period will likely coincide with the term of the electricity sales contract which AES testified it is negotiating

with the Department of Water Resources (DWR) which is California's agent in securing generation to meet the emergency. At the end of the 5-year period, if all Conditions of Certification have been complied with, the Commission may extend this certification allowing operation of Units 3 and 4 for an additional 5 years. Of particular interest to the Commission is the successful completion of the surf zone bacteria study and the impingement and entrainment study, together with the implementation of appropriate mitigation identified in those studies.

The trade-off for the needed electricity during this emergency is that California, and to some extent Huntington Beach, will have to defer the societal and environmental benefits of AES's expressed intention to modernize the Huntington Beach Generating Station.

The Energy Commission believes that through a DWR contract and Independent System Operator (Cal-ISO) incentives AES will be sufficiently rewarded for its short-term investment in the retooling to respond to the electricity emergency and well-positioned to invest for the long-term in its intended modernization. This is the win-win scenario for California, for AES, and for our fellow citizens in Huntington Beach.

## **ELECTRICITY SALES IN CALIFORNIA**

AES's Application for Certification states, "...this project offers an environmentally friendly means of providing much needed generation in Southern California." (AFC § 1.1) At all times during the proceeding, AES has consistently expressed that the retool project is to aid California during its electricity emergency.

The City of Huntington Beach and California Unions of Reliable Energy (CURE) seek a condition limiting the sale of electricity generated by this project only to California or within California. Further, the City and CURE seek a condition that would require the Energy Commission to monitor electricity sales from other AES's facilities. The reasons for desiring this condition are to assure that the retool project's generation adds to the net energy supply in California and AES does not use this project's output as a means to sell its other facilities' generation out-of-state.

The Committee requested briefs from the parties after the City of Huntington Beach presented a written legal analysis supporting a California sales condition during comments on the Presiding Member's Proposed Decision. A supporting brief was filed by CURE. An opposing brief was submitted by AES. The Commission legal staff did not submit a brief in time to be considered in the preparation of these amendments to the PMPD.

In consideration of the record on the proceeding and a review of cases and statutes, the Committee believes the following:

- California is in the grip of an electricity supply emergency demanding an immediate and effective response to protect the health and welfare of its citizens;
- California's electricity supply emergency is a unique circumstance, largely unanticipated in the new deregulated electricity world so that all matters are of first impression;
- There is no case directly on point nor any statute or regulation directly addressing this unique circumstance;
- This is a gray area of the law, where there has been a traditional tension between state powers reserved under the Tenth Amendment and the Interstate Commerce Clause, both found in the federal Constitution; and
- California has undertaken a coordinated effort to address the electricity supply emergency by the Energy Commission's expedited permitting of new power plants pursuant to Executive Orders and the Department of Water Resources' (DWR) contracting to secure those new resources (as well as existing resources) to address our electricity supply shortage.

The U. S. Supreme Court cases cited by the parties support the concept that state action as "a trustee or guardian of its citizens" may "affect" interstate commerce, but shall not interfere with federal preemption of the field nor constitute economic protectionism or hoarding of a state's natural resources.

The permitting of thermal power plants has long been a traditional state power, which Congress has left unchanged over many decades. In the face of a declared electricity supply emergency, California has tasked the Energy Commission through various Executive Orders to permit new power plants using extraordinary and expedited processes. DWR has been charged with securing these and other electricity supplies to reduce or eliminate blackouts with all their adverse health and safety impacts upon California's population.

Under such emergency circumstances, applicable law appears to permit California to establish a Condition of Certification requiring new power plants permitted pursuant to extraordinary Executive Order processes to dedicate their generation to addressing our electricity supply emergency, subject to two important limitations. First, required sales to California can last only for the duration of the emergency, which can appropriately be reflected in the term of a contract with DWR. After expiration of the DWR contract, AES may sell to anyone. Second, the Commission acknowledges the authority of the President of the United States, the federal Secretary of Energy, or the Governor of California to re-direct this project's output to respond to electricity shortages in other states. Moreover, to the extent permitted in the DWR contract, Units 3 and 4's output can be sold to or exchanged with other states.

The purpose of this Condition is not impermissible economic protectionism. First and foremost, this Condition is to secure reliable and sufficient electricity supplies to address a critical electricity supply shortage, expected to have very serious public health, safety, and welfare consequences if not addressed.

This action does not hoard any natural resources used to produce electricity. The common ingredients to electricity production – natural gas, air, and water – will continue to be available for interstate commerce. Any limitation on the availability of a small fraction of these total resources due to this Condition will be temporary, lasting only for the duration of the electricity supply emergency.

An interpretation that this Condition is impermissible per se because it "affects" interstate commerce would deprive the State of ability to effectively respond to this emergency. Taken to its logical conclusion such a position would allow all new power plant licensed under the Executive Orders to sell their entire output to out-of-state consumers, thereby perpetuating California's electricity crisis, not solving it.

Such a result is as legally untenable as it is socially unacceptable. The Federal Energy Regulatory Commission has repeatedly told California that it must solve its own electricity crisis. Other than aggressive conservation that California is also pursuing, securing new "emergency" electricity supplies to actually reduce California's supply shortage is the least disruptive means of addressing this emergency. However, conservation will cover the supply deficit. There is no plausible supply alternative to solve the shortage, particularly given supply constraints in neighboring states.

Given competing interpretations of the application of the Interstate Commerce Clause, the Commission adopts the supportable conclusion that helps solve California's electricity supply emergency, rather than a conclusion that might exacerbate it.

Any electron put on the grid benefits California, even if it is contractually committed out of state. This fact does not, however, translate into electricity resources contractually available to California users. The Governor's charge to DWR to secure reliable and sufficient electricity supplies under contract to California confirms that random electrons on the grid, while beneficial to the grid, are not sufficient to solve this crisis.

Some have suggested that a California sales condition is a snub to our neighboring states in the West who provided electricity to us this winter. We are grateful for the contributions of our neighboring states, who themselves are faced with electricity supply issues. By moving to solve its own electricity supply emergency, California is helping other states.

With regard to the request of the City of Huntington Beach and CURE for monitoring of other AES electricity sales, the Energy Commission believes that under current circumstances significant and sufficient federal and State resources are being brought to bear on investigating abuses of market power and manipulation so that an added condition is not necessary.

## **DURATION OF CERTIFICATION**

Energy Commission Staff recommended in its Staff Assessment (p. 339) that certification of the retool project be limited to 5 years. Specifically, Staff's proposed condition was a limitation to either the duration of an electricity sales contract with DWR or September 30, 2006, whichever came first. Staff contends that the limited duration is necessary to review the license for compliance with Conditions of Certification and assess the results of the studies and monitoring plans which are required to more fully assess potential environmental impacts and consider whether the license should be granted permanent status. (SA p. 4)

The City of Huntington Beach and CURE support such a condition. The California Coastal Commission also supports a limitation on the duration of certification. These parties argue that the Commission is proposing to license the retooling project with too little environmental information now and too much reliance on future studies of environmental effects and mitigation formulated therefrom. Most particularly, this concern relates to potential project effects related to the thermal discharge contribute to surf zone bacteria leading to public beach closures. Additionally, they are concerned about entrainment of aquatic organisms in the cooling water intake. All of these matters are the subject of either ongoing or future studies.

AES opposes a limitation on certification contending that there is no authority to limit power plant certifications and that a limitation amounts to an illegal revocation of certification. AES also asserts that an expiration of certification ignores the Commission's mandate to ensure sufficient and reliable electricity supplies. AES argues that the economic life of a power plant should determine its time in service, not an artificial or imposed limit.

Absent the emergency, the retool project would not approach the model of the preferable combustion turbine combined cycle projects, such as are represented by the Morro Bay and El Segundo projects. So the Energy Commission is between a rock and a hard place. The retooling of Units 3 and 4 are vital to addressing California's short-term electricity. Yet, for the long-term, modernization of California's coastal power plants is clearly in the best public interest. These newer facilities consume less natural gas. Effectively, continuing to use natural gas in a boiler plant wastes a critical natural resource. Combined cycle facilities utilize more of the heat from combusted natural gas and consequently return less wasted heat to the ocean environment than do vintage power plants. Heated cooling water perturbs the ocean habitat; and less heated water perturbs it less. The package of combustion turbine and its exhaust stack are visually much more compact than that of the vintage boiler units.

In addition, the Commission notes that the fast track process which would enable AES to construct the retooling project in time to contribute to the summer 2001 electricity supplies has meant that potential environmental effects had to be comprehended at a

level which assured that no significant, unmitigable adverse effects were apparent. However, the Decision contains Conditions of Certification, which require the further study of those potential effects to fully assess their extent and formulate mitigation in the future. Our preference might be to take more time to do more studies before certification, but doing so eliminates any possibility that the retool project can be used to address a very real emergency. However, the Energy Commission feels confident that in the short span of the emergency there will be no significant adverse environmental effects of sufficient consequence that would justify not allowing this project to address the electricity emergency. Nevertheless, the Energy Commission needs to know more before contemplating an open-ended certification which would last the economic life or longer of the project.

For all these reasons, the Energy Commission will condition the certification to September 30, 2006. At such time, if AES has fully complied with all Conditions of Certification, the Energy Commission may extend this certification for not more than an additional five years to September 30, 2011.

Regarding the future of the Huntington Beach Generating Station, the City of Huntington Beach has requested a condition that AES produce a Master Development Plan during the pendency of this certification. The Commission believes that such a Plan is needed in light of the foregoing discussion.

## **CONDITIONS OF CERTIFICATION**

**EMERGENCY-1:** In consideration of this expedited certification pursuant to the Governor's Executive Order and before commencing commercial operation of the project, AES shall enter into an electricity sales contract with DWR to sell the generation from Huntington Beach Units 3 and 4 to address the electricity supply emergency.

**EMERGENCY-2:** Certification of the retooling project shall be effective to, and operation is authorized until, September 30, 2006. At such time, if AES has fully complied with the Conditions of Certification, the Energy Commission may consider an extension of this certification for 5 years to September 30, 2011.

**EMERGENCY-3:** On or before June 30, 2004, AES shall submit to the Commission and the City of Huntington Beach a Master Development Plan setting forth its plans for the long-term use of the Huntington Beach Generating Station site beyond September 30, 2006, including but not limited to its plans for the operation, repowering, reconfiguration, closure, decommissioning, moth-balling, demolition, or dismantling of any operating unit then in place.