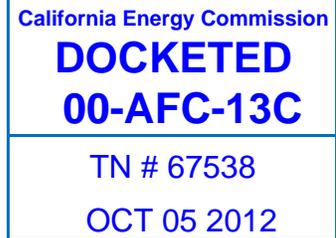


October 4, 2012



VIA E-MAIL CHRISTINE.STORA@ENERGY.CA.GOV

Christine Stora  
Compliance Project Manager  
Siting, Transmission and Environmental Protection (STEP) Division  
California Energy Commission  
1516 Ninth Street, MS-2000  
Sacramento, CA 95814

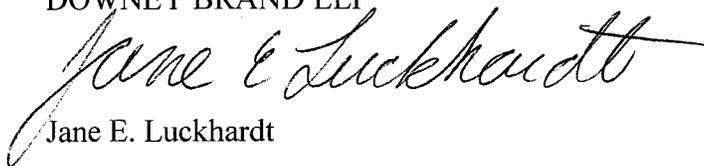
Re: **Huntington Beach Generation Station Retool Project, Unit 3 and 4**  
**Docket No. 00-AFC-13C**

Dear Ms. Stora:

Attached hereto is Edison Mission Huntington Beach, LLC's **Petition to Amend Final Decision to Convert Generating Units to Synchronous Condensers** in the above-entitled matter. Thank you in advance for your assistance in this matter.

Very truly yours,

DOWNEY BRAND LLP

  
Jane E. Luckhardt

JEL:ln

Enclosure

cc: Chris Marxen, CEC  
Docket Office

**STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION**

**In the Matter of:**

**HUNTINGTON BEACH GENERATING  
STATION RETOOL PROJECT, UNITS 3  
AND 4**

**EDISON MISSION HUNTINGTON  
BEACH, LLC**

**Docket No. 00-AFC-13C**

**PETITION TO AMEND  
FINAL DECISION**

**PETITION TO AMEND FINAL DECISION TO CONVERT GENERATING UNITS TO  
SYNCHRONOUS CONDENSERS**

October 5, 2012

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Attorneys for **EDISON MISSION HUNTINGTON BEACH, LLC**

**STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION**

**In the Matter of:**

**HUNTINGTON BEACH GENERATING  
STATION RETOOL PROJECT, UNITS 3  
AND 4**

**EDISON MISSION HUNTINGTON  
BEACH, LLC**

**Docket No. 00-AFC-13C**

**PETITION TO AMEND  
FINAL DECISION**

**I. INTRODUCTION**

This Petition to Amend (“Petition”) seeks to amend the Final Decision issued by the California Energy Commission (“Commission”) for the Huntington Beach Generating Station Retool Project, Units 3 and 4, Docket No. 00-AFC-13C; (“HBGS Project”).<sup>1</sup> Pursuant to Title 20, California Code of Regulations §1769(a)(1)<sup>2</sup> petitioner Edison Mission Huntington Beach, LLC (“EMHB”) submits this Petition to request modifications to the CEC’s Final Decision for the HBGS Project. EMHB also provides analysis of the proposed modifications in the enclosed environmental analysis (“Supplemental Analysis”).

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<sup>1</sup> The Commission issued its Final Decision on the HBGS Project application for certification on May 10, 2001 and approved AES-SD’s petition to transfer ownership from AES Huntington Beach to Edison Mission Huntington Beach, LLC on May 5, 2011. Collectively, the 2001 Commission Final Decision and the Order on the transfer of ownership will be referred to as the “Final Decision.”

<sup>2</sup> “After the final decision is effective under section 1720.4, the applicant shall file with the commission a petition for any modification it proposes to the project design, operation, or performance requirements.” 20 CCR §1769(a)(1). All references to the California Code of Regulations herein refer to Title 20 unless otherwise specified.

## II. SUMMARY OF PROPOSED CHANGES

The California Independent System Operator (CAISO) has determined a need for Units 3 and 4 of the Huntington Beach Generating Station to operate as synchronous condensers. (CAISO 2013 Local Capacity Technical Analysis, Addendum to the Final Report and Study Results, at 4-5, August 20, 2012.) In response to the need identified by CAISO, EMHB requests changes to the Final Decision to convert Units 3 and 4 of the HBGS Project to synchronous condensers. Units 3 and 4 will provide needed dynamic voltage support for the Los Angeles Basin. (*Id.* at 5.) EMHB’s request is based on factors that were not known at the time of the Final Decision. Because the operation of the facility will change from an electrical generating facility to a synchronous condenser facility, many of the Conditions of Certification are no longer required. For example, HBGS, as reconfigured, will no longer have air emissions. To that end, EMHB requests that certain Conditions of Certification be deleted or voided. The proposed list of affected Conditions of Certification are set forth below and are discussed in further detail in the accompanying Supplemental Analysis.

<b>Condition Number</b>	<b>Summary</b>	<b>Reason for Change</b>
AQ-1	Operation of Post Combustion Controls	Surrender of Air Permit
AQ-2	Use of Pipeline Quality Natural Gas with less than 0.25 grains/100 cf.	No Fuel Combustion.
AQ-3	Source Test Unit 5	Unit 5 was Decommissioned in 2002
AQ-4	Limits on Contemporaneous Operation of Unit 5 and Units 3 & 4.	Surrender of Title V Permit and Permit to Operate
AQ-5	Feasibility of Installing Ammonia Monitor on Units 1-4.	Surrender of Title V Permit and Permit to Operate

<b>Condition Number</b>	<b>Summary</b>	<b>Reason for Change</b>
AQ-6	Limits on Contemporaneous Commissioning of Units 3 & 4.	Surrender of Title V Permit and Permit to Operate
AQ-7	Limits on Contemporaneous Start Up of Units 3 & 4.	Surrender of Title V Permit and Permit to Operate
AQ-8	Maintain Compliance with District FDOC and PTC/PTO.	Surrender of Title V Permit and Permit to Operate
AQ-9	Maintain Compliance with District Source Test Requirements.	Surrender of Title V Permit and Permit to Operate
AQ-10	Maintain Compliance with District CEMS Requirements.	Surrender of Title V Permit and Permit to Operate
AQ-11	Project Owner Demonstrates Sufficient RTC are Held.	Surrender of Title V Permit and Permit to Operate

**III. INFORMATION REQUIRED PURSUANT TO CALIFORNIA CODE OF REGULATIONS SECTION 1769**

**A. Complete description of the proposed modifications, including new language for any conditions that will be affected. (Section 1769[a][1][A].)**

The proposed modifications to the HBGS Project necessitate changes to the Final Decision: that is, this Petition requests the deletion of numerous Conditions of Certification and modifications to the operation of the existing Units 3 and 4. Below is a more thorough overview of these changes. A comprehensive analysis of the proposed changes is presented in the accompanying Supplemental Analysis.

**1. Deletion of or Modification to Current Conditions of Certification.**

Since operation of Units 3 and 4 as synchronous condensers will eliminate the emission sources covered by AQ-1 to AQ-11, EMHB requests these conditions of certification be deleted. Conditions of Certification AQ-1 to AQ-11 are conditions included in the South Coast Air

Quality Management District's (AQMD) Final Determination of Compliance (FDOC) and federal/local operating air permits. As Units 3 and 4 will no longer have air emissions when operated as synchronous condensers, Conditions AQ-1 to AQ-11 are no longer applicable.

**2. Modifications to the Operational Aspect of Units 3 and 4.**

The operation of Units 3 and 4 remain unchanged with two exceptions. No fuel combustion will occur in Units 3 and 4. And, the steam turbines will be decoupled from the electric generators to allow the generators to function as electric motors and generate or absorb reactive power as required by the electrical transmission grid.

The expected start of work associated with the proposed modifications is December 1, 2012, with a completion date of May 30, 2013. This will allow the HBGS to begin operating in its new capacity on June 1, 2013, in time for critical summer demand.

**B. The Necessity for the Proposed Modification. (Section 1769[a][1][B].)**

Section 1769(a)(1)(B) requires a discussion of the necessity of the proposed modifications. The proposed modifications to HBGS and the related Conditions of Certification are necessary to respond to a CAISO identified need for dynamic voltage support.

Consistent with the requirements of the Final Decision that any changes in operation or Conditions of Certification must be presented to the Commission, EMHB requests the herein referenced modifications to the Final Decision.

**C. The Proposed Modifications Are Based Upon Information Previously Unknown to EMHB. (Section 1769[a][1][C].)**

Section 1769(a)(1)(C) requires a discussion of whether the proposed changes are based on information previously known by EMHB. In this case, EMHB was not aware of the need for the proposed modifications at the time of the original AFC proceeding nor at any time during subsequent proceedings. Specifically, the CAISO only recently approved the 2013 Local

Capacity Technical Analysis, Addendum to the Final Report and Study Results indentifying and approving the need for HBGS Project Units 3 and 4 to operate as synchronous condensers.

**D. The Proposed Modifications Do Not Change or Undermine the Assumptions, Rationale, or Other Bases of the Final Decision. (Section 1769[a][1][D].)**

The Proposed modifications to the Conditions of Certification and those modifications proposed for the operational aspect of HBGS do not change or undermine the assumptions, rationale, or other bases of the Final Decision approving the HBGS Project or the Commission’s subsequent amendment of the Final Decision. A thorough analysis of the effects of the proposed modifications is set forth in the accompanying Supplemental Analysis.

**E. An Analysis of the Impacts the Proposed Modifications May Have on the Environment and Proposed Measures to Mitigate Any Significant Adverse Impacts (Section 1769[a][1][E].)**

The proposed modifications will not have a significant adverse impact on the environment. A thorough analysis of the effects of the proposed modifications is set forth in the accompanying Supplemental Analysis.

**F. The Impacts of the Modification of the Facility’s Ability to Comply with Applicable LORS (Section 1769[a][1][F].)**

EMHB believes the proposed modifications will not impact the HBGS Project’s ability to comply with all applicable laws, ordinances, regulations or standards (“LORS”); an explanation of the Project’s continued compliance with LORS is provided in the accompanying Supplemental Analysis.

**G. How the Proposed Modifications May Affect the Public (Section 1769[a][1][G].)**

The proposed modifications have a very low potential for an effect on the public. EMHB has conducted a thorough analysis of the proposed modifications, including potential impacts to the public, which is provided in the accompanying Supplemental Analysis. This analysis shows

that proper mitigation measures are in place such that the potential for adverse impacts to the public from the proposed changes is insignificant.

**H. Potential Effect on Property Owners, the Public, and the Parties to the Application Proceeding (Section 1769[a][1][H] and Section 1769[a][1][I].)**

Nearby property owners are not expected to be affected by the proposed modifications.

A complete analysis of the proposed modifications and potential impact to property owners, the public, and other parties is set forth in the accompanying Supplemental Analysis. As required by Section 1769, a list of potentially affected property owners has been provided in conjunction with this Petition and is included with the Supplemental Analysis in Appendix A.

**IV. UPDATES TO THE SERVICE LIST**

EMHB requests the Commission update its service list for this proceeding by making the following changes:

Please add

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**Please replace the existing contacts for AES Huntington Beach, LLC and AES Huntington Beach Pacific, Inc. with the following:**

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Stephen O'Kane  
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## V. CONCLUSION

For all the reasons above, and as set forth in the accompanying Supplemental Analysis, EMHB requests the Commission approve the proposed modifications to the HBGS Project.

Dated: Oct. 4<sup>th</sup>, 2012

By:   
Jenifer Morris Lee  
Edison Mission Huntington Beach, LLC

# HBGS Units 3 and 4 Synchronous Condenser Supplemental Analysis

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## Introduction

Consistent with the CEC Siting Regulations Section 1769(a)(1)(A), this section includes a description of the requested project modifications.

The HBGS Project will convert the existing HBGS Units 3 and 4 from electric utility steam generators to synchronous condensers. HBGS is located in the City of Huntington Beach, Orange County, California. The site is located at 21730 Newland Street, southeast of the intersection of Newland Street and the Pacific Coast Highway. The proposed project will be built entirely within the boundaries of the existing HBGS. No additional transmission lines, related transmission facilities or offsite changes or modifications to any related project infrastructure will be required.

The remainder of this document presents a description of the synchronous condenser project, expected environmental and cumulative impacts, and an assessment of impacts to the public and adjacent land owners.

## Project Description

The HBGS Units 3 and 4 includes a total of four electrical generators. Unit 3 has a high and a low pressure steam turbine generator which share a common rotor shaft. Likewise, Unit 4 has a high/low pressure and an intermediate/low pressure steam turbine generator which also share a common shaft. The synchronous condenser project will entail the decoupling of the HBGS Units 3 and 4 steam turbines from the electrical generators and the installation of a variable frequency drive (VFD), a 4.16 kilovolt (kV) pony motor, and ancillary equipment to convert the generators into electrical motors. The pony motors (one for Unit 3 and one for Unit 4) are used to turn the converted motors up to speed and synchronized to the transmission grid with the VFD controlling the converted motors as required by the electrical grid operator's requirements for transmission grid voltage support. The ancillary equipment will include the necessary electrical, control, and lubricating systems to safely and efficiently operate the synchronous condensers.

The HBGS Units 3 and 4 generators are located on the steam turbine deck as shown on Figure 1. The pony motors will be located on the turbine deck adjacent to the generators. The pony motor will connect to the steam turbine generator shafts via a new stub shaft, bearing and coupling. The steam turbines will be decoupled from the generators. Figures 2 and 3 present the plan and elevation schematics of the connection of the pony motors to the generator shafts. Units 3 and 4 will be retired and rendered inoperable to satisfy, in part; the emission offset requirements contained in condition of certification AQ-19 of the Final Commission Decision for the Walnut Creek Energy Park (CEC Docket No. 05-AFC-2). The existing steam turbine generator lubricating oil systems will be modified to provide lubricating oil to the pony motors thrust bearings and lubricating pumps will be included as needed. The pony motors will be contained in weather tight enclosures.

The VFDs will also be located on the turbine deck. The VFDs will connect to the pony motors via new cabling. The VFDs will be integrated into the HBGS distributed control system to allow operation of the synchronous condensers from the existing control room.

The proposed project does not require any modification to the generator interconnection to the switchyard. The Applicant has consulted with the California Independent System Operator (CAISO) regarding potential impacts to the transmission system and CAISO concluded "that the project will not cause a transmission system impact nor will it require modifications or upgrades to the system beyond the point of interconnection at the Southern California Edison Huntington Beach switchyard." See Attachment 1 presents a copy of the CAISO correspondence.

The capital cost for the project equipment is approximately \$4.7 million with approximately \$2.25 million in equipment costs and the balance in construction labor (\$2.5 million). Estimates of local purchases are expected to be approximately \$15,000 for the project.

## Synchronous Condenser Equipment Installation and Commissioning

The installation of the pony motors, VFDs, and ancillary equipment will occur on the steam turbine deck and no excavation or new underground infrastructure is required. The installation and commission of the synchronous condenser is expected to take approximately 30 days (20 days for construction and 10 for commissioning and start up) with up to 30 workers (including supervisors), 7 tractor trailer truck deliveries, and 14 miscellaneous deliveries (postal, portable sanitary units, construction trailer mobilization/demobilization).

Work is expected to occur during daylight hours and will involve the use of the existing gantry cranes located on the turbine deck. Two construction trailers (36 feet by 10 feet) for project management support and equipment storage will be located in a designated contractor parking area which is already paved. The trailers will interconnected to the HBGS utility system (electric and communication) but will use portable sanitary facilities. Additional construction equipment expected to be used during the installation process is presented in Table 1 below.

TABLE 1

**Expected Construction Equipment**

Equipment Description	Number
5 Ton All Terrain Forklift	1
30 Foot All Terrain Scissor Lift	2
1-Ton On-Road Work Truck	5
Electric Portable Welding Units	2
Total	10

Relatively small quantities of hazardous materials will be onsite during construction and will be limited to gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. Best management practices will be implemented by contractor personnel. No acutely hazardous substances, as defined in California’s Health and Safety Code, Section 25531, will be used during construction of the project.

Operating HBGS Units 3 and 4 as synchronous condensers will use the same hazardous materials already in use at the site, including lubricating oils, grease, hydraulic fluid, solvents, cleaners, sealants, welding flux, paint, and paint thinner.

Construction water will be provided by the existing onsite potable water supply and construction water use will be minimal. The major construction water use is expected to be for sanitary purposes for the construction workforce only, however, some construction water could be used for equipment washing. Disposal of construction sanitary wastewater will be discharged to the existing onsite sanitary sewer system and any wastewater generated from equipment washing would be disposed of consistent with existing disposal procedures.

The synchronous condenser operation will require 42,000 gallons per minute of cooling water from the once-through-cooling water system. Cooling water will be used to reject heat from the bearing lubricating oil system and generator’s hydrogen sealing system. This water use represents a decrease in cooling water use for Units 3

and 4 based on the figures reported in the revised implementation plan submitted to the State Water Resources Control Board.<sup>1</sup>

The expected noise levels for the pony motors and VFD are expected to be 95 dBA at 4 feet and 85 dBA at 4 feet, respectively. Noise generated from Units 3 and 4 will be substantially decreased compared with operations as electric utility steam generators. Noise emitting equipment associated with the combustion of fuel, production of steam and use of the steam turbines will all be eliminated from Units 3 and 4 including noise from high pressure gas flow, burners, induced/forced draft fans, high pressure steam lines and the low and high pressure steam turbines.

## Construction Schedule

Table 2 below presents the construction schedule for the project.

TABLE 2  
**Synchronous Condenser Schedule**

Task	Schedule
Engineering and Procurement	October 2012 to April 2013
Installation	Late April 2013 to Mid May 2013
Commissioning and Start Up	Mid May 2013 to End of May 2013

## Environmental Analysis of the Project Change

The Applicant has reviewed the modification proposed herein to determine if the proposed change will result in any environmental impacts that were not originally analyzed by the CEC when it approved the project. As the project does not involve any excavation, resource areas specific to ground disturbing activities have no potential for increased impacts and are therefore not addressed. These resource areas include cultural resources, geological hazards and resources, paleontological resources, and soils and agriculture.

The remaining resource areas, air quality, biological resources, hazardous materials handling, public health, socioeconomics, traffic and transportation, visual resources, waste management, water resources and worker health and safety are addressed below.

### Air Quality

#### Construction Impacts

The proposed project's construction air quality impacts will result from the use of fossil fuel use by construction equipment onsite and from on-road vehicle use for workers and deliveries. No asbestos or lead is expected to be disturbed during construction. Construction equipment to be used onsite include one forklift, two scissor lifts, and five, one-ton on-road trucks. The synchronous condenser construction is expected to require a workforce of up to 30 for approximately 20 days with commissioning and start up lasting another 10 days. Construction equipment/materials are expected to require a total of 7 tractor trailer deliveries and 14 miscellaneous deliveries over the construction (or approximately 1 delivery over the 30 day construction period).

The HBGS Units 3 and 4 were originally assessed for operational impacts including annual boiler maintenance that can last up to 28 days. This maintenance work can require between 30 and 75 workers. Construction equipment used during annual maintenance events include up to four forklifts (2, 2.5, 5 and 10-tons) and 2 mobile cranes (10

<sup>1</sup> [http://www.swrcb.ca.gov/water\\_issues/programs/ocean/cwa316/powerplants/huntington\\_beach/](http://www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/powerplants/huntington_beach/)

and 30-tons). Material deliveries during these annual maintenance events can require between 2 and 10 truck delivers per day.

Compared to the ongoing maintenance activities at the site, the proposed project's construction air emissions are expected to be less than insignificant and will comply with all applicable laws, ordinances, regulations, and standards (LORS). Also, since no excavation is planned, the volume of fugitive dust generated is also expected to be insignificant. Therefore, the proposed project's construction activities are expected to have a less than significant air quality impact. Furthermore, the construction impacts associated with the proposed project are significantly lower than those analyzed in the Commission Decision for HBGS Units 3 and 4.

Construction would also result in the generation of greenhouse gas (GHG) emissions due to diesel and gasoline combustion. However, due to the very short duration (30 days) and limited numbers of construction equipment expected to be used, GHG emissions and impacts are expected to be less than significant.

The Applicant proposes to implement construction mitigation measures in Conditions of Certification AQ-C1 to AQ-C4 to further minimize construction emissions.

### **Operational Impacts**

The proposed project will not emit air pollutants during operation as no fuel combustion is required. Before the proposed project can proceed, the Applicant will render HBGS Units 3 and 4 inoperable as electric utility steam generators (disconnect fuel line, remove burners, decouple the steam turbines from the generators) and will surrender the AQMD Title V and Permit to Operate. Air emissions resulting from fuel combustion in Units 3 and 4 will be eliminated with the implementation of the synchronous condenser project.

The synchronous condenser operation requires rendering the combustion system of Units 3 and 4 inoperable, eliminating the GHG emission associated with this fuel combustion. This GHG reduction will result in a positive impact to the environment.

### **Cumulative Impacts**

The minimal construction workforce/equipment proposed and the elimination of combustion emissions from Units 3 and 4 are not expected to be cumulatively significant.

## **Biological Resources**

### **Construction Impacts**

The proposed project will not disturb any biological resources as all construction activities will occur on either paved or graveled surfaces. Therefore, surface runoff impacts to the adjacent wetlands are not expected. Additionally, impacts to birds nesting in the wetlands are not expected as construction will occur on the eastern side of the HBGS (far from the wetland) and construction noise is expected to be lower than construction noise levels analyzed in the Commission Decision.

### **Operational Impacts**

Only aquatic resources have the potential to be affected by the operation of the proposed project through the use of once-through cooling (OTC) water due to entrainment, impingement, or thermal affects of biological resources. As noted in the Commission Decision, aquatic impacts are significantly associated with OTC flow rate.<sup>2</sup> The OTC flow rate for the synchronous condenser operation will be significantly lower than Units 3 and 4 operations as analyzed in the Commission Decision. This is due to the fact that the only water required for the synchronous condenser operation is for lubricating oil and generator cooling (one ocean water circulation pump with a capacity 42,000 gallons per minute is required while operating) and not for condensing of steam (four ocean water circulation pumps with a capacity 42,000 gallons per minute are required for steam condensing while operating). Therefore, aquatic biological resource impacts are expected to be significantly lower than those analyzed in the Commission Decision, resulting in a benefit to biological resources.

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<sup>2</sup> Huntington Beach Generating Station Retool Project, May 2001, (00-AFC-13), P800-01-016, page 43.

## **Cumulative Impacts**

The construction of the synchronous condenser will not result in any biological resource impacts and therefore, combined with other cumulative projects are not expected to be cumulatively significant.

The operational biological impacts are expected to be lower than the existing baseline conditions, resulting in a benefit to biological resources. Therefore, no cumulative biological resource impacts are expected.

## **Hazardous Materials Handling**

### **Construction Impacts**

The construction of the synchronous condenser will require the use of hazardous materials (paints, thinners, fuels, lubricating, oils, and grease) in lower volumes (estimated at 8 gallons or 50 pounds) as are currently use by HBGS Units 3 and 4 for annual maintenance activities. Therefore, construction impacts are expected to less than significant hazardous materials handling impacts and less than those analyzed in the Commission Decision.

### **Operational Impacts**

The operation of the synchronous condenser will require the use of primarily lubricating oil, which is currently licensed for use at HBGS Units 3 and 4. Overall, operational impacts of the synchronous condenser will result in a reduction in the hazardous materials used at the site. Specifically, the use of urea (and any generated ammonia) for the control of air pollutant emissions from the combustion sources will be eliminated and operational impacts are expected to be lower than those analyzed in the Commission Decision.

### **Cumulative Impacts**

During construction, materials used onsite are equivalent (or lower) to existing ongoing maintenance activities. Furthermore, operational hazardous materials use is expected to be reduced after the implementation of the proposed project. Therefore, no cumulative hazardous materials impacts are expected from the construction and operation of the synchronous condenser.

## **Land Use**

### **Construction Impacts**

The proposed project will be constructed wholly within the existing HBGS site. The HBGS site is appropriately zoned (industrial) and the synchronous condenser project is consistent with the existing land use. The construction of the synchronous condenser will comply with applicable City of Huntington Beach LORS and construction land use impact are expected to be less than those analyzed in the Commission Decision.

### **Operational Impacts**

No land use impacts are expected from the synchronous condenser operation due to ongoing operation of the HBGS site as an electrical generating facility.

### **Cumulative Impacts**

No cumulative land use impacts are expected due as construction and operational impacts are less than significant.

## **Noise**

### **Construction Impacts**

Construction of the synchronous condenser project is expected to generate noise through the use of construction equipment. The Commission Decision noted that daytime construction should not create a significant impact at neighboring residential receptors.<sup>3</sup> As noted above, the 30 day construction period will require approximately 5 pieces of construction equipment, including two electric welding units, a forklift and two scissor lifts. The HBGS

<sup>3</sup> Huntington Beach Generating Station Retool Project, May 2001, (00-AFC-13), P800-01-016, page 76.

Units 3 and 4 currently undergoes an annual boiler maintenance that requires the use of up to four forklifts (2, 2.5, 5 and 10-tons) and 2 mobile cranes (10 and 30-tons). Therefore, construction noise from the synchronous condenser project will be comparable or less than existing noise impacts associated with ongoing plant maintenance. Furthermore, construction noise levels are expected to be lower than those analyzed in the Commission Decision due to the lower level of construction activity proposed for the synchronous condenser.

Construction noise levels are expected to comply with applicable City of Huntington Beach LORS and not impact nearby residential receptors.

However, the Applicant proposes to implement Conditions NOISE-1 and NOISE-6 to further reduce the already low noise levels further.

## **Operational Impacts**

The elimination of the Units 3 and 4 combustion sources and high pressure steam production (induced/forced draft fans, steam ducting, steam turbine and condenser) will result in an overall reduction in noise sources from Units 3 and 4. The synchronous condenser pony motor and VFD expected to have noise levels of 95 dBA and 85 dBA at 4 feet, respectively, and will be housed in a weatherproof enclosure. Noise from these sources are expected to be less than significant and lower than those analyzed in the Commission Decision.

## **Cumulative Impacts**

Construction is not expected to result in offsite noise impacts. In addition, operational noise impacts are expected to be significantly reduced over baseline conditions. Therefore, cumulative noise impacts are expected to be less than significant.

## **Public Health**

### **Construction Impacts**

Due to the low number of construction equipment needed for the project, public health impacts associated with construction of the synchronous condenser will be less than those analyzed in the Commission Decision. Mitigation measures proposed in air quality will reduce the already less than significant public health impacts further.

### **Operational Impacts**

The synchronous condenser operation requires rendering the combustion system of Units 3 and 4 inoperable as steam and electrical generators (disconnect fuel line, remove burners, decouple steam turbines from generators), eliminating the public health impacts identified in the Commission Decision. Therefore, operational public health impacts are expected to result in a beneficial impact to public health.

### **Cumulative Impacts**

The public impacts from the project will result in a beneficial impact to public health (reduction of fuel combustion), therefore, the cumulative public health impacts are expected to be less than significant.

## **Socioeconomics**

### **Construction Impacts**

Capital equipment costs of \$2.25 million for the proposed project may result in a slight increase in the properties assessed value. This potential increase in assessed value would be evaluated against the changes made to Units 3 and 4 rendering them inoperable as electrical generating units. It is not expected that the synchronous condenser project would result in any change in property tax payment to the County. Some of the \$2.5 million labor costs of the project would be expected to be spent within Orange County, contributing to a small, but positive socioeconomic impact.

Due to the short duration of construction (30 days), impacts to utilities, police and fire service, schools, and housing are not expected and are significantly less than those analyzed in the Commission Decision.

Therefore, the socioeconomic impacts of construction are expected to be less than significant and lower than those analyzed in the Commission Decision.

### **Operational Impacts**

The operation of the synchronous condenser project is expected to have no impact on socioeconomics on either the City or Orange County.

### **Cumulative Impacts**

Construction is expected to result in a minimal amount of local expenditures and is expected to have no socioeconomic impact. Therefore, cumulative impacts are expected to be less than significant.

## **Waste Management**

### **Construction Impacts**

The project is expected to generate low volumes of construction waste, primarily associated with packaging materials. No liquid or hazardous wastes are expected to be generated. Additionally, since no excavations are planned, no potentially contaminated soils will be excavated. Lastly, no asbestos or other toxic materials are expected to be encountered during construction. Therefore, waste management impacts are expected to be less than significant and lower than those analyzed in the Commission Decision.

### **Operational Impacts**

The only expected waste material associated with the synchronous condenser operation is lubrication oil for the generator bearings and this waste is currently being generated by the operating Units 3 and 4. Therefore, no operational waste management impacts are expected.

### **Cumulative Impacts**

Construction and operation of the project are expected to have less than significant cumulative impacts.

## **Water Resources**

### **Construction Impacts**

Construction of the synchronous condenser project will use potable water, currently used onsite, for any construction uses. Construction water uses will include primarily sanitary uses with some limited equipment wash water use. Construction water use is not expected to increase above current water use during routine and annual maintenance events.

The construction of the synchronous condenser will not increase stormwater runoff as no excavations or foundation construction is required. Furthermore, construction will not use significant quantities of hazardous materials which could pose a threat to surface waters due to runoff or releases. Finally, all construction work will be performed on paved or graveled areas, covered by existing stormwater engineering controls and operating procedures.

Therefore, construction will not result in significant water resource impacts.

### **Operational Impacts**

During operation, the synchronous condenser operation will require approximately 42,000 gallons per minute of ocean cooling water. This cooling water is used for lubricating oil system and generator cooling. The Commission Decision for HBGS Units 3 and 4 analyzed the effects of using between 176,000 and 352,000 gallons per minute of cooling water. As such, the synchronous condenser project represents a significant reduction of between 76 and 88 percent in total cooling water use over the current HBGS Units 3 and 4 ocean water use.

The only potable water required for the operation of the synchronous condenser will be for primarily sanitary purposes and for occasional equipment washing. However, the synchronous condenser project will eliminate

potable water use by Units 3 and 4 for boiler make up water of between 0.37 and 0.64 million gallons per day.<sup>4</sup> Overall, the operation of the synchronous condenser project will result in beneficial impacts to water resources.

Finally, the synchronous condenser operation will not increase stormwater runoff as all equipment will be located on the HBGS Units 3 and 4 steam turbine deck and will not require the use of any hazardous materials not currently at the site. The synchronous condenser project will eliminate the use and storage of urea and aqueous ammonia by the HBGS Units 3 and 4.

Therefore, no significant water resource impacts are expected from the construction or operation of the synchronous condenser project.

### **Cumulative Impacts**

The water resource impacts associated with the synchronous condenser project are either neutral or result in an improvement in water resources (reduced OTC and potable water use). Therefore, no cumulative water resource impacts are expected.

## **Worker Health and Safety**

### **Construction Impacts**

The construction of the synchronous condenser project will require approximately 30 construction workers to be onsite for approximately 30 days. Potential worker health and safety impacts will be mitigated by implementation of existing worker health and safety conditions of certification Work Safety-1 and Work Safety-3 to reduce worker health and safety impacts to less than significant levels.

### **Operational Impacts**

The worker health and safety impacts due to operation of the synchronous condenser will be lower than those analyzed in the HBGS Units 3 and 4 Commission Decision, which determined that with the implementation of Worker Safety conditions of certification would be less than significant. The Applicant proposes to implement the applicable Worker Safety conditions of certification during the synchronous condenser operation. Therefore, no significant worker health and safety impacts are expected.

### **Cumulative Impacts**

No significant cumulative worker health and safety impacts are expected due to the very low number and duration of workers required for construction and the fact that the HBGS Units 3 and 4 maintain a well-trained and experienced operating staff to operate the synchronous condenser project.

## **Compliance with LORS**

The synchronous condenser project is expected to comply with all applicable LORS.

## **Impacts of Adjacent Property Owners**

The synchronous condenser project will not result in either construction or operational impacts occurring offsite. Therefore, impacts to adjacent property owners will not occur. Attachment 2 presents a list of the assessor's parcel numbers and owners' names and addresses for all parcels within 1000 feet of the HBGS.

## **Impacts to the Public**

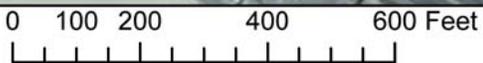
The synchronous condenser project will not result in either construction or operational impacts occurring offsite. Construction activity and traffic will be less than those analyzed in the HBGS Units 3 and 4 Commission Decision. Therefore, impacts to the public will not occur.

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<sup>4</sup> Huntington Beach Generating Station Retool Project, May 2001, (00-AFC-13), P800-01-016, page 263.

# Figures

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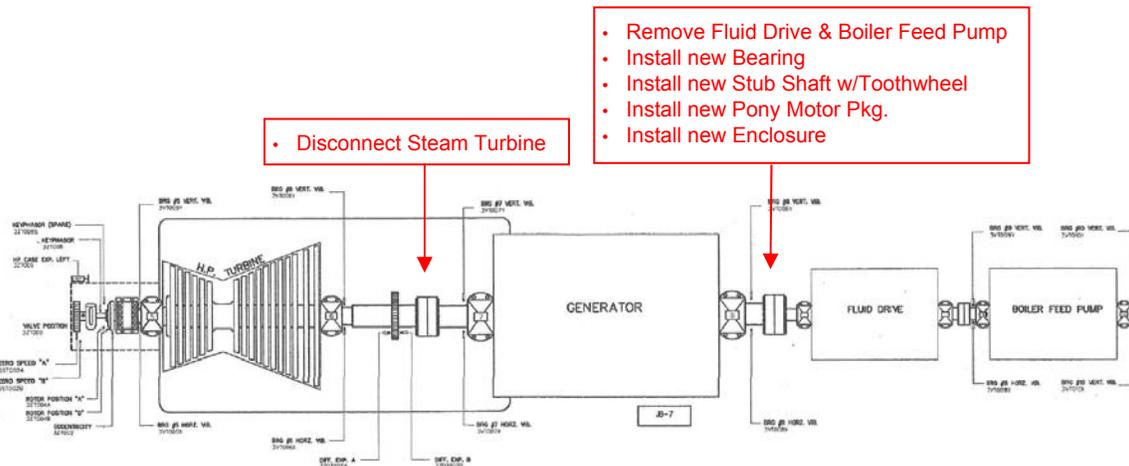


**Legend**

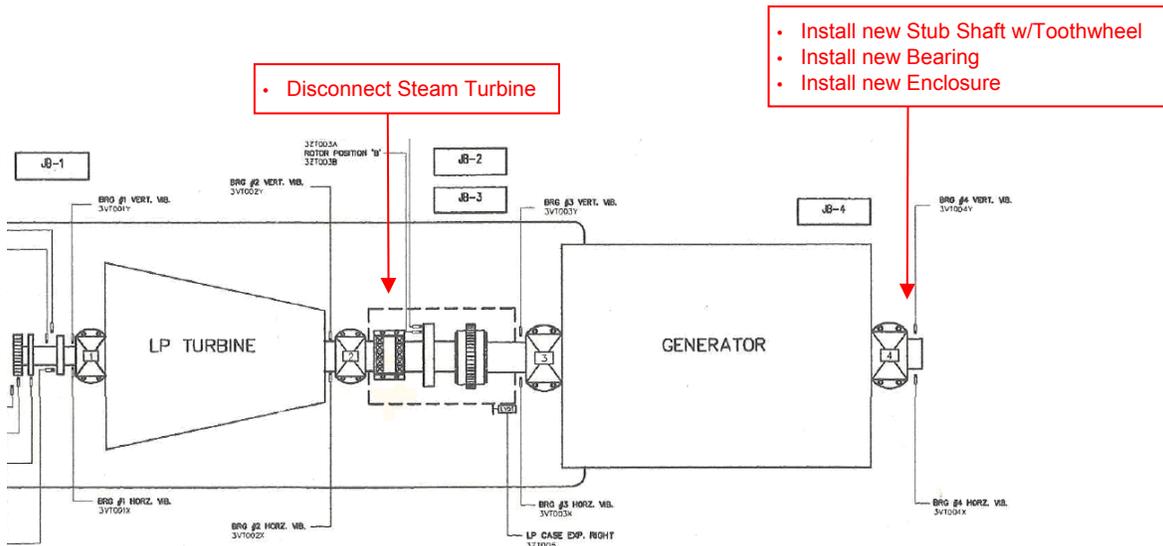
- Synchronous Condenser Pony Motor
- AES Huntington Beach Generating Station
- Huntington Beach Units 3 and 4
- Southern California Edison 230kV Switchyard



**FIGURE 1**  
**General Arrangement**  
 Synchronous Condenser Project  
 HBGS 3 and 4  
 Huntington Beach, California

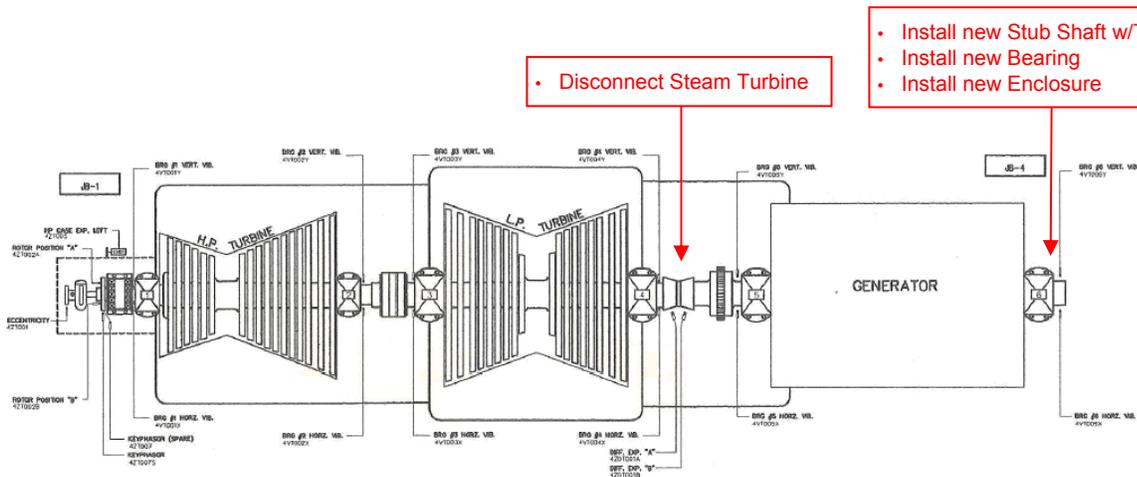


Unit 3 - HP

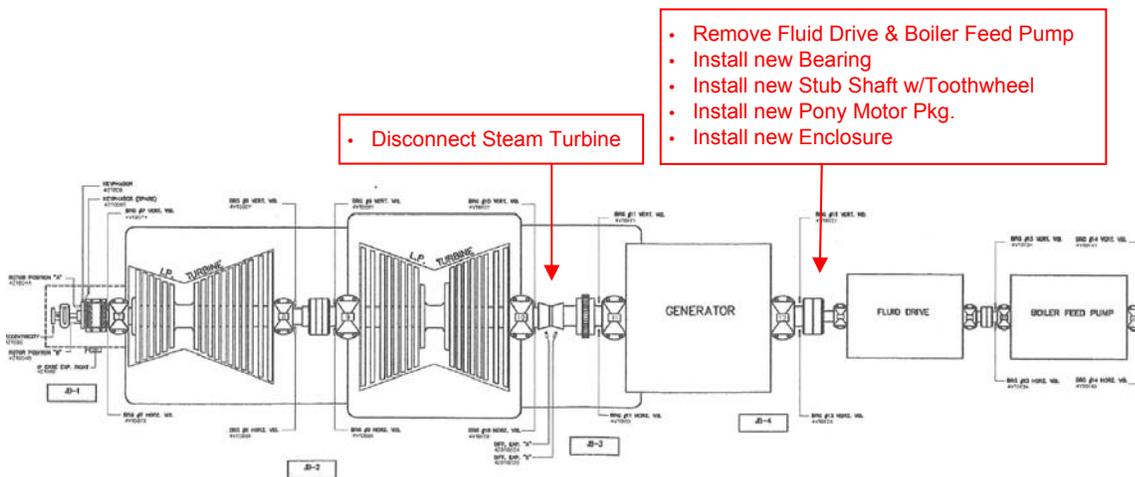


Unit 3 - LP

**FIGURE 2a**  
**Pony Motor Installation Plan View**  
 Synchronous Condenser Project  
 HBGS 3 and 4  
 Huntington Beach, California

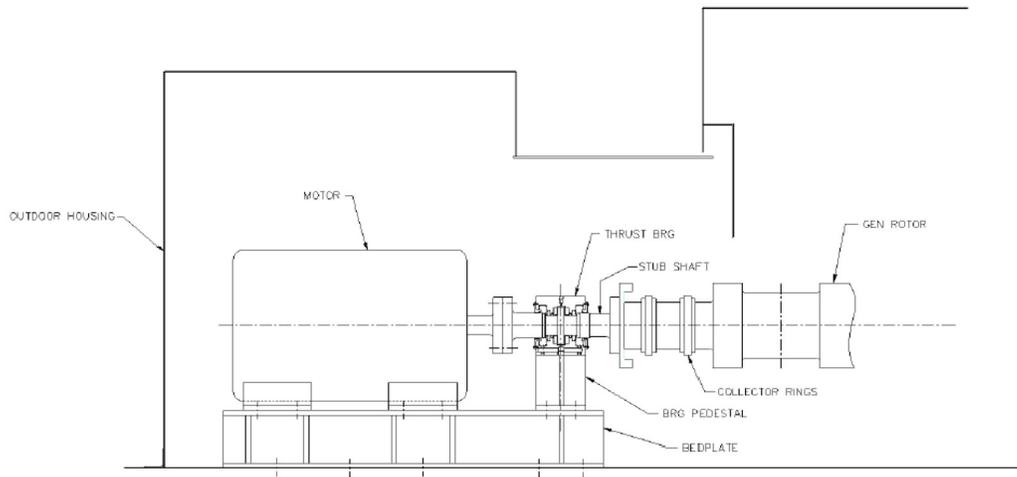


Unit 4 – HP/LP

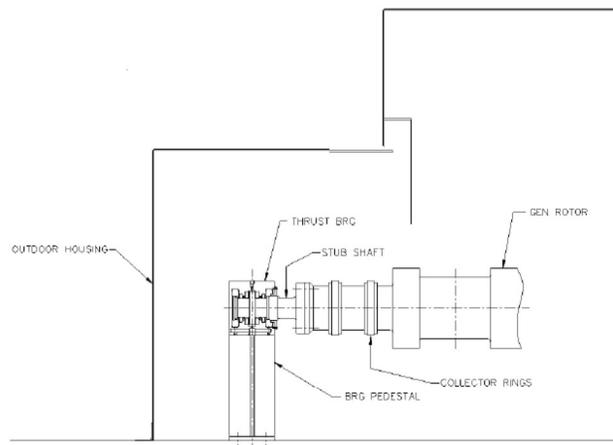


Unit 4 – IP/LP

**FIGURE 2b**  
**Pony Motor Installation Plan View**  
 Synchronous Condenser Project  
 HBGS 3 and 4  
 Huntington Beach, California



**Detail - Pony Motor & Bearing Arrangement**  
 (1 ea. for Unit 3-HP & Unit 4-IP/LP)



**Detail - Bearing Only Arrangement**  
 (1 ea. for Unit 3-LP & Unit 4-HP/LP)

**FIGURE 3**  
**Pony Motor Installation Elevation View**  
 Synchronous Condenser Project  
 HBGS 3 and 4  
 Huntington Beach, California

**Attachment 1**  
**California Independent System Operator,**  
**October 2, 2012 Letter**

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October 2, 2012

Ms. Jenifer Lee  
Vice President  
Edison Mission Huntington Beach, LLC  
3 MacArthur Place, Suite 100  
Santa Ana, CA 92707

Dear Ms. Lee:

This letter is to confirm that the ISO has reviewed and assessed the proposed synchronous condenser conversion project for Edison Mission Huntington Beach (EMHB) Units 3 and 4 and has concluded that the project will not cause a transmission system impact nor will it require modifications or upgrades to the system beyond the point of interconnection at the Southern California Edison Huntington Beach switchyard. The proposed project is a conversion of the EMHB Units 3 and 4 generators into synchronous condensers to provide continued voltage support in the absence of continued generation from these units. Since this project will result in a reduction of the total potential reactive power available from these units, no new physical constraints in the transmission system would be created and no further modifications to the transmission system are necessary to complete the project.

The EMHB Unit 3 and 4 synchronous condenser conversion project is a high priority and important project for the ISO to maintain system reliability and we look forward to assisting you with the completion of this project. Should you require further information or assistance from us please do not hesitate to call.

Sincerely,



Neil Millar  
Executive Director, Infrastructure Development

Cc: K. Edson – ISO  
P. Pettingill – ISO  
J. Anders - ISO  
W. Wirta – AES  
S. O’Kane – AES  
C. Stora – CEC  
C. Marxen - CEC

**Attachment 2**  
**List of Property Owners within 1,000 feet of the**  
**Huntington Beach Generating Station Boundaries**

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**List of Property Owners within 1,000 feet of  
the Huntington Beach Generating Station  
Boundaries Not Posted for Privacy**