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**In a Proceeding Before the
STATE OF CALIFORNIA
State Energy Resources
Conservation and Development Commission**

In the Matter of:

Huntington Beach Energy Project

DOCKET NO. 12-AFC-02

**OPENING TESTIMONY OF MONICA RUDMAN ON THE HUNTINGTON
BEACH ENERGY PROJECT**

In accordance with the Siting Committee's direction, I respectfully submit the following opening testimony.

Introduction

Thank you for providing an opportunity to participate in the siting process for the proposed Huntington Beach Energy Project (HBEP). While I'm employed at the California Energy Commission as an energy specialist, I also grew up in Huntington Beach and my mother still lives there. The views expressed here are my own and do not represent the views of the Energy Commission. I started following this siting process because I wanted to learn about the impacts of HBEP and because I didn't want the concerns of Huntington Beach residents to be overlooked. Now that I have spent some time reviewing the facts, I'm very concerned about the effects that building and operating a new gas fired power plant in Huntington Beach will have on health, safety, the environment, and the electricity system.

Huntington Beach has a long history of being an important location for the production of energy supplies. Since the early twentieth century, the city was known for its oil reserves and active oil wells. In the late 1950's, the Huntington Beach Generation Station (HBGS) was built using the ocean as an abundant source of cooling water. Starting in the late 1960's, when many of the oil wells became uneconomical, the oil companies capped the wells and sold the land to real estate developers. New, affordably-priced homes sprouted up almost overnight. In the 1970's, during this housing boom, my parents bought a home. This home, that happens to be located about a mile downwind from the HBGS, is where my mother still lives. As does almost every Huntington Beach resident that I know, my family and I felt incredibly fortunate to have the opportunity to live a mile from the beach in such a lovely location.

Experts now know about the effects of the emissions from power plants¹, but my parents didn't know about potential problems when they purchased their house. My Dad supported business interests and believed in minimal government involvement in the affairs of citizens. He didn't like the smog he encountered during his daily commute to work but would have been skeptical that pollutants that he couldn't see would have a major impact on health. While they couldn't afford a house in a more established beach area such as Newport Beach or Redondo Beach, my parents felt lucky that they had an opportunity to buy a comfortable house located near the beach in an area with good schools. My sister and I, like most children, lived where our parents choose to live.

Even though oil wells were everywhere and I frequently saw the plumes emitting from the HBGS, Huntington Beach has always seemed like a very healthy place. I attended Wardlow elementary school, Gisler and Sowers junior high schools and Edison High School. I participated in Huntington Beach's wonderful, world-renowned junior lifeguard program, and later as an older teenager, I went to the beach almost daily in the summer.

Now years later, while I certainly feel like a healthy and athletic person, I've found that my lungs have a low capacity. This is frustrating to me since as an avid bike rider, it limits my ability to keep up with fast riders. I'm concerned that if the proposed HBEP gets built and operated as designed that a new generation of children will suffer adverse consequences.

Environmental justice is defined in California law (Government Code section 65040.12) as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies". Since environmental justice law in California protects all people no matter their political beliefs, age, race or economic status, I am sure that the Committee will consider the impacts of the HBEP on all people living in its vicinity.

I know that it is vital to ensure that the lights stay on, but energy needs can be reliably and affordably met by reducing energy demand through energy efficiency and demand response and by increasing the use of cleaner resources such as solar photovoltaics. California is now at a crossroads and rather than over building fossil-fueled power plants; it is time to develop facilities, programs and procedures that support policy goals and which have fewer adverse impacts. In addition, these preferred resources will create even more jobs than the fossil-fueled power plants and many have the added benefits of lowering energy bills. Reducing businesses and people's energy costs leaves more money to spend on other goods and services.

1. Gauderman, W. James Ph.D., et al. *The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age*. N Engl J Med 2004; 351:1057-1067 [September 9, 2004](#)

Air Quality Impacts

Children, pregnant women, the elderly and those with existing health problems are especially vulnerable to the non-cancer effects of air pollution. Examples of non-cancer effects are asthma attacks, heart attacks and increases in daily mortality and hospitalization for heart and respiratory disease. PM10 is among the most harmful of all air pollutants. When inhaled these particles evade the respiratory system's natural defenses and lodge deep in the lungs. PM10 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections.

According to the South Coast Air Quality Management District's (SQAQMD) Revised Preliminary Determination of Compliance (PDOC), PM10 emissions from operating 6 turbines at the new HBEP, as permitted, will be 198,654 pounds a year. In fact, both SQAQMD and California Energy Commission (Energy Commission) staff agree that all project emissions of nonattainment criteria pollutants and their precursors (NOx, VOC, PM10, PM2.5, and SOx) are considered significant and must be mitigated.

I believe that the modeling of impacts underestimates the effects because the weather data used does not accurately represent the weather found in Huntington Beach's coastal subclimate. Because of lack of alternative data, the air quality modeling uses weather data from the station near John Wayne Airport. However, the weather there is not similar enough to weather conditions in Huntington Beach to be accurate. The weather in Huntington Beach has a stronger coastal influence and is characterized by frequent foggy days and nights due to inversions. The airport on the other hand is located inland and has more clear and windy days. In Huntington Beach, when the air is still, the emissions will tend to remain in the area. This means that the harmful emissions will be more concentrated in Huntington Beach and have a greater negative impact locally than as modeled so the impacts are even more significant to local children and the elderly than the analysis shows.

For relatively short-term construction activities that essentially cease before operation of the power plant, Energy Commission staff proposes mitigation that consists of controlling construction equipment tailpipe emissions and fugitive dust emissions to the maximum extent feasible. For operating emissions, mitigation includes both the Best Available Control Technology and emission reduction credits or other valid emission reductions to mitigate emissions of nonattainment criteria pollutants and their precursors.

The project developers are proposing to use Rule 1304 (a) (2) to transfer capacity from existing power plants to HBEP to get an exemption from the requirement that they offset the emissions by purchasing emission reduction credits on the open market. Existing power plants that would shut down are the

HBGS's boiler units 1 and 2 and Redondo Beach's boiler units 6 and 8. So Huntington's Beach's loss would be Redondo Beach's gain.

However, the actual average PM10 emissions from operating HBGS's boilers 1 and 2 between 2006 and 2012 were 14,521 pounds per year². Redondo Beach units were operated very infrequently so they would have emitted even less. The principle is that shutting down the old inefficient power plants and replacing them with new ones would result in air quality improvements. However, this doesn't hold when the old power plants are rarely operated. So even though it uses newer technologies, HBEP would result in a massive increase in emissions.

Emission reductions generated by acquiring SCAQMD credits will result in offsetting reductions of emissions somewhere in the South Coast air basin. SCAQMD has stated that they will give funds to the city of Huntington Beach for projects to offset the emissions. Solar PV and street lighting projects are being considered. However, the former project will not reduce local emissions and while the street lighting project will reduce maintenance requirements and thus a small amount of tailpipe emissions, it will not come close to compensating for the increased emissions from HBEP. It is very likely that some credits will be used to fund projects located away from Huntington Beach. While I'm happy that some people will breath cleaner air due to the improvements funded with emission reduction credits, I believe that Huntington Beach's residents and other people impacted by the project may still inhale harmful particulate pollution generated from the project, particularly on days when the air is still. There are several schools located very near the proposed HBEP. Edison High and Eader Elementary schools are the closest. In fact, the location of HBEP units 1 and 2 on the site will move power-generating facilities much closer to Eader Elementary School (which is located at 9291 Banning Avenue) than the existing HBGS, a fact that has not been addressed to date. Residential neighborhoods also are located quite close.

Further, as a very popular beach destination, people from all over Orange County and the LA basin visit Huntington Beach. It seems ironic that a family living in an area with bad air quality that might view spending a day at the beach as a low cost, healthy family outing might, in fact, be further exposing their kids to harmful pollution.

So with the significant levels of emissions from the project, I'm very concerned about the health risks posed to Huntington Beach residents and to all people whom would breath the air affected by the proposed project.

It doesn't seem fair that people in Huntington Beach will continue to be disproportionately impacted by electricity generation even though the benefits from power generated in Huntington Beach accrue to people living throughout

² SCAQMD PDOC Table B.6.

the entire Southern California area. Huntington Beach's residents have already lived near a generating plant for more than 50 years, it is time for better alternatives.

The Committee should find that the air quality impacts of the project are significant.

Greenhouse Gases

The thermal efficiency of gas-fired generation is typically described by measuring its heat rate. The heat rate of a power plant expresses how much fuel is necessary (measured in Btu (British Thermal Units)) to produce one unit of energy (measured in kWh (kilowatt hour)). Therefore the heat rate of California's natural gas fired generation is obtained by dividing the total fuel used by the total energy produced. A lower heat rate indicates a more efficient system.

From 2001 to 2011 in California the average heat rate of all non-cogeneration forms of gas-fired generation has declined from 9,997 Btu/kWh to 7,855 Btu/kWh³.

The HBEP is designed to operate at various outputs and have the ability to quickly ramp up and down. This ability, however, means that, overall as operated, HBEP will have a high heat rate. The project when operated with fully permitted normal hours and fully permitted start up and shut downs will have a heat rate of 9,013 Btu/kWh and assuming 8% equipment degradation rate will have a heat rate of 9,734 Btu/kWh. This is higher than the current electricity system average heat rate.

The heat rate is directly correlated to fuel use and greenhouse gas output. Operating a plant with such a high heat rate will be setting back the progress that California has been making to reduce greenhouse gases from the electricity system and is contrary to the California Global Warming Solutions Act of 2006 (Assembly Bill 32, Nunez, Chapter 488, Statutes of 2006), California's greenhouse gas reduction law (AB 32).

California has established a greenhouse gas emission performance standard of 1,100 pounds of CO₂ per net Megawatt hour. SQAQMD PDOC says that initially HBEP meets the standard, but with equipment degradation it will not meet the standard⁴. The FSA also says that the standard will be revised downward and HBEP does not meet the lower revised standard.

The FSA says that the greenhouse gas impacts of HBEP will not be significant because the project is designed to be fast ramping to integrate renewable power

³ Nyberg, Michael. 2013. *Thermal efficiency of Gas Fired Generation in California: 2012 Update*. California Energy Commission. CEC-200-2013-002

⁴ SQAQMD PDOC Appendix F Page 119

generation, a power source that emits almost no greenhouse gases. However, the south LA basin is a load pocket, meaning that renewables must be located with the area for this fast ramping capability to be needed. Most large-scale renewable projects are located outside of the LA basin, so fast ramping capability is less critical locally. Also, the El Segundo power plant has been in operation since August. El Segundo already provides fast ramping capability.

While the CAISO is an important stakeholder who believes that power plants with fast ramping capabilities are crucial, other stakeholders draw different conclusions⁵. It is the California Public Utilities Commission (CPUC) who is the ultimate decision maker on what quantity and type of new resources are needed by the electricity system. The Proposed Decision by ALJ Gamson of the CPUC finds that in 2015 the LA Basin does not need additional flexible capacity⁶; the CPUC has not yet ruled on whether new flexible capacity is needed beyond 2015.

The FSA states that the Energy Commission's decision on the Avenal Project (that fast ramping resources allows for renewable integration and thus reduces greenhouse gases) is precedent setting. This statement implies that this decision should supersede AB 32. However, this is not proper since the Energy Commission cannot replace an existing regulation without performing a rulemaking process to develop a new regulation.

Also, the FSA says that the project will reduce greenhouse gas emissions because it will displace less efficient power plants. However, we know exactly what power plants are being displaced by the HBEP. By the terms of the agreement with SCAQMD under Rule 1304, HBEP is displacing HBGS units 1, 2, 3, 4 and Redondo Beach units 6 and 8. We also know what level of greenhouse gases these plants have emitted. As stated earlier, they have emitted far less than would the new HBEP. So the HBEP is actually increasing system wide greenhouse gas emissions.

Recently, the United States Environmental Protection Agency, released a proposed rule to regulate carbon emissions from existing power plants under Clean Air Act § 111(d). The goal of the proposed rule is that carbon dioxide emissions from the power sector should be 30 percent below 2005 levels by 2030. Each state would have its own rate-based carbon dioxide emission standard (lbs of CO₂/MWh), but may demonstrate compliance by meeting either the target rate or by converting the rate into a mass-based emission standard (e.g., tons of CO₂/state/year). Named the Clean Power Plan, states are required to draft plans to meet their emission targets but have significant flexibility in

⁵ See, for example: Office of Ratepayer Advocates, Analysis Prepared for Track 2 of the LTPP Proceeding

⁶ Proposed Decision of ALJ Gamson Adopting Local Procurement and Flexible Capacity Obligations for 2015, and further Refining the Resource Adequacy Program. R.11-10-023. (mailed 5/27/14) Posted 6/26/14

developing an approach. The rules lay out a set of four "building blocks" that states can use to reduce carbon pollution: make fossil-fuel power plants more efficient; step up the use of lower-emitting power plants, such as those that run on natural gas; use more nuclear and renewable energy; and increase efficiency measures (such as utility programs that help consumers save energy), reducing demand from the power system.

The Energy Commission and other state agencies will have to develop a plan to address greenhouse gas emission from power plants. The agencies that are involved in energy issues are making great pains to coordinate policy and to speak with one voice. It is premature for the Energy Commission to act alone and most likely wrong to say that the HBEP will have a less than significant impact on greenhouse gas emissions.

Adaptation Policy

Climate change is fundamentally altering the environment and context in which state actions occur. New development and communities must be planned and designed for long-term sustainability in the face of climate change. If a thorough assessment of the climate change impacts on HBEP does not happen during the Energy Commission's CEQA equivalent siting process, the assessment will not happen. It is California State policy that if climate risks are to be addressed effectively, climate risk considerations need to be integrated into the design and implementation of all state operations and programs⁷. The Energy Commission has a responsibility to be diligent in its assessment regarding the impacts of climate change. Consequently, the Energy Commission should revise its siting project review procedures by adding a new, separate section on climate change and adaptation effects to the staff assessments.

According to the Natural Resources Agency's public review draft, as discussed in the Ocean and Coastal Ecosystems and Resources section, sea level rise threatens several existing coastal power plants, including Huntington Beach⁸. This low-lying power plant faces the risk of flooding or partial flooding due to sea level rise and increased storm surges. Flood damage could remove these facilities from service and require electricity from other, often more expensive, sources.

Staff has said that the project is located on land somewhat higher than the potential sea level rise so the impact would not be significant. However, the impact of storm surges and flooding are not adequately assessed. Further,

⁷ Natural Resources Agency, *Safeguarding California: Reducing Climate Risk. An Update to the 2009 Climate Adaptation Strategy*. Public Review Draft. December 2013. Page 8.

⁸ Natural Resources Agency. Page 100. Also see: Sathaye et al. Power Plants Potentially at Risk to a 100-year Flood with a 1.4 m Sea Level Rise. 2012.

neither the applicant nor staff considered the impact of sea level rise on the infrastructure serving HBEP. Aside from the power plant itself, infrastructure, such as natural gas storage facilities and gas pipelines could be affected.

Similarly, transmission and distribution infrastructure needed to serve HBEP is vulnerable both to increased temperatures and to increasing risk of flooding and wildfire. Higher temperatures would result in a reduction in transformer and substation capability, an increase in transmission and distribution line losses, and a decrease in the capacity of a fully loaded transmission line. For example, higher nighttime temperatures impede cooling of transformers, which renders them less efficient the next day. In the worst cases they may even fail. Thus, with high temperatures, less electricity is available for customers than if climate change had not occurred. Researchers expect the likelihood of wildfires occurring near large transmission lines to increase dramatically in parts of California by the end of the century. A power line disabled by a fire can take days or weeks to repair and alternate power may need to be procured from other sources.

It is unwise to site a critical facility that uses natural gas as a fuel source in a location vulnerable to climate change impacts. Preferred resources such as energy efficiency and demand response will contribute to resilience against the impacts of climate change and should be used instead of the fossil fueled generating technologies.

Finally, the applicant should prove that they have adequate insurance coverage and they should not rely on the government (such the Federal Emergency Management Agency) to insure the project.

Geology and Public Safety

As pointed by in a letter from the California Coastal Commission, the HBEP sits close to the south branch of the Newport-Inglewood fault zone, which presents a hazard. The site is prone to lateral movement and liquefaction of soils. The site is not really a good choice for building a critical facility as a power plant especially since it uses a flammable fuel source. Thankfully, to date, earthquakes have not damaged structures to the point that explosions or fires have followed.

Many earthquake faults traverse Huntington Beach and the city is located over oil fields. Relevant parties associated with wells offshore of Huntington Beach have permits to frack those wells⁹. Given the geology in Huntington Beach, other local wells may be fracked to extract oil. Well fracking operations have been linked to increased seismic activity¹⁰. The potential for this problem and the potential impacts has not been adequately investigated as part of this environmental assessment. This issue needs more exploration.

⁹ http://www.coastal.ca.gov/pdf/W7a-2-2014_Fracking%20Briefing.pdf

¹⁰ http://www.usgs.gov/hydraulic_fracturing/

It is preferable to not site a critical facility in a location where it can present a risk to public safety.

However, if the project is approved, AES should conduct an in-depth, site-specific analysis of the potential for lateral spread and determine what measures will be needed to avoid or reduce this potential. AES will not be able to conduct a full investigation until it removes facilities from the site. As a special condition, AES should have its structural and geotechnical engineers devise a structural foundation capable of accommodating up to 38 inches of lateral soil spread and provide confirmation from licensed structural engineer at key points in the project. To ensure the project remains structurally stable in the face of potential liquefaction, thereby minimizing risks from hazards and ensuring that appropriate engineering and building practices are used, I propose requiring that AES, prior to permit issuance, obtain confirmation from licensed structural engineers that all facility structures are designed to resist liquefaction-induced settlement and other hazards from earth quakes.

While building standards require that the structure be built so as to be safe, the verification and enforcement procedures should be specified as part of the licensing process. While the burden of enforcing building standards it is often left to local government officials, local governments are already resource constrained and may not be able to address this additional work. Plus the specialized nature of the project means that will be more appropriate for engineers with power plant construction and geology expertise to certify compliance with the building standards along with safety requirements.

Visual Resources

The project site is in the state's Coastal Zone. Section 30251 of the California Coastal Act requires that the scenic and visual qualities of coastal areas be considered and protected as resources of public importance. Permitted development must be sited and designed to restore and enhance visual quality in visually degraded areas where feasible.

In 2001, when it considered whether to retool HBGS because of California's electricity emergency, the Energy Commission acknowledged that repowering units 3 and 4 meant that the facility would not be as efficient, clean or visually unobtrusive as a state of the art power plant¹¹. The Energy Commission decision thanks the people of Huntington Beach because "absent responding to the current 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." The Energy Commission has already made the finding that the coastline near the proposed

¹¹ Commission Decision: Huntington Beach Generation Station Retool Project. May 2001. (00-AFC-13) P800-01-016

project has a high significance and should be considered a scenic vista. The quality of the coast has not degraded since this decision was issued and the matter should not be litigated again.

The HBEP would have a significant impact on a scenic vista. While the proposed project will have a lower height than the existing HBGS and the applicant is proposing to screen it with a 100-foot faux-surfboard structure, it will still be located primarily among one and two story buildings and be visible from a great distance. The new project will still dominate the views on the coast. Please note that a key observation point has been omitted from staff and the applicant's consideration: the Newport coast. Please refer to Figure 1. to see a picture of the view from the Newport Pier on a winter morning. Even with a lower height, it is clear that the project will still dominate the views north of the Newport Pier.

In the summer, many more people will be on the beach. Huntington City Beach, Huntington State Beach (a class II location) and Newport Beach are major destinations and, annually, these beaches host millions of local, state, U.S. and international visitors¹². A survey estimated that these beaches have 21 million annual visitors¹³. Five times as many visitors go to Huntington and Newport beaches as go to Yosemite and about as many people go there as to Disneyland¹⁴. Viewers' exposure and visual sensitivity are high and the HBEP impacts are significant.

Further, SCAQMD in response to my comments on the revised PDOC looked at how the project would affect visibility at Class II locations, such as state parks. Initially, SCAQMD assessed the following locations: Crystal Cove State Park, Water Canyon State Park, Chino Hills State Park and San Mateo Canyon Wilderness Area. The impact of the HBEP combined with the impact of the existing emissions was just barely below the allowable threshold at Crystal Cove and Water Canyon state parks. So SCAQMD said that there would not be significant deterioration of visibility. I requested that SCAQMD evaluate the visibility impacts on Huntington Beach State Park, which is located across the street from the proposed project and which, as a state park, is also a Class II location. When analyzing the impacts at this location, SCAQMD found that visibility would be adversely impacted by HBEP and that mitigation would be required.

¹² <http://www.huntingtonbeachca.gov/visitors/>

¹³ Dwight, RH., et al. *Beach Attendance and Bathing Rates for Southern California Beaches*, Ocean and Coastal Management. 2007 50:847-858

¹⁴ Yosemite averages 4 million visitors per year. See <http://www.yosemitgold.com/yosemite/profile.html> . The two Disneyland theme parks, three Disneyland hotels and the downtown Disney shopping and entertainment district are averaging 24 million visitors per year. See: <http://www.ocbj.com/news/2014/may/07/disneyland-resort-q2-attendance/>

Figure 1. Picture of Huntington Beach Generating Station taken from Newport Pier



Source: Monica Rudman

Water Supply

The proposed HBEP will use about 115 AFY of potable water provided by the city of Huntington Beach for process water. In addition during the construction phase the applicant proposes to potable water for dust suppression. Average water use during construction would be about 18,000 gallons per day (gpd) and around 24,000 gpd during hydrostatic testing and commissioning. Commissioning is expected to take about 60 days. The expected water use for domestic purposes would be about 1 gpm, or about 1.2 AFY (HBEP 2012a).

The Metropolitan Water District provides Huntington Beach with surface water supplies sourced from the Colorado River and from northern California via the State Water Project¹⁵.

¹⁵ Municipal Water District of Orange County website.

Any use of potable water for power plant cooling when recycled water is available is clearly contrary to state water policy calling for the use of recycled water for industrial use. The state's policies discourage the use of freshwater (surface water) and groundwater for industrial purposes. The Energy Commission, under legislative mandate specified in the 2003 Integrated Energy Policy Report, would approve the use of fresh water for power plant cooling purposes only where alternative water supply sources and alternative cooling technologies are shown to be environmentally undesirable or economically unsound. State Water Resources Control Board (SWRCB) Resolution 75-58 states that fresh inland waters should only be used for power plant cooling if other sources or other methods of cooling would be environmentally undesirable or economically unsound. The Warren-Alquist Act promotes all feasible means of water conservation (Pub. Resources Code, Div. 15, § 25000 et seq.). SWRCB Resolution 77-1 promotes the use of reclaimed water for non-potable uses and to supplement existing surface and groundwater supplies. SWRCB Resolution 2009-0011 promotes the use of reclaimed water as a means to achieve sustainable local water supplies and to reduce greenhouse gases. Orange County is required under the Water Conservation Act of 2009 (Senate Bill x7-7, Steinberg, Chapter 7, Statutes 2009), to achieve a 20% or more reduction in per capita water use by 2020 and has chosen to build upon existing programs, while leveraging regional and local agency programs, partnerships, and resources.

The applicant and staff have not provided sufficient evidence that using recycled water is infeasible. A potential source of recycled water could be from the wastewater treatment plant operated by the Orange County Sanitation District and located at 22212 Brookhurst Street. The FSA incorrectly assume that pipes between the Brookhurst Street and Ellis Street plants would need to be constructed for HBEP, however, pipes between the plants already exist. The recycled water pipes would most likely only need to start from the Brookhurst location. It doesn't seem as if opportunities for cost saving and cost sharing partnerships have been explored. Hotels further north on Pacific Coast highway potentially could use recycled water for irrigation purposes and public agencies can provide financial and technical resources to assist in developing the required infrastructure. In the light of the severe drought facing California, the Committee should be very sure that it is using an appropriate standard to assess feasibility.

Also if HBEP would be permitted to use potable water, the Energy Commission might be accused of economic discrimination since the Energy Commission has required other power plants to use recycled water. Two plants, approved and under construction, the Oakley Generation Station and the Pio Pico Project are supposed to use water recycled from wastewater facilities. In addition, the Preliminary Staff Assessment for El Segundo Power Redevelopment (Dry Cooling Amendment) says that the plant would use recycled water for industrial operations and construction purposes. Presumably the recycled water requirement imposes additional costs on those facilities. If the Energy Commission unevenly applies the law regarding recycled water, then power plant

projects, such as HBEP, that are not required to follow the law, will have lower costs and could potentially undercut other power plants when submitting bids into the energy market. The Committee should be careful to apply the same feasibility standards to all proposed projects so as not to grant an unfair competitive advantage to a few.

Agreement to Construct and Demolishment Plans

On March 2, 2010, AES Huntington Beach, 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). The purpose was to convert the units to synchronous condensers to provide voltage support needed with the closure of San Onofre Nuclear Generation station. Energy Commission staff reviewed the amendment and prepared an analysis approving the proposed extension. The CAISO also took the unusual action of approving this project in an expedited manner. The project has now been installed and is operating.

AES' application for the HBEP is predicated on demolishing the existing HBGS' units to make way for the new HBEP Blocks 1,2, 3 and 4. Accordingly, the analyses of the impacts of the project assume that the HBGS units 1-4 will be demolished. The applicant states that another party will demolish units 3 and 4.

The applicant has not provided a legally binding agreement that the other party will demolish HBGS units 3 and 4 and allow new units to be built. Also, there is no documentation regarding the demolition plans for HBGS units 1 and 2.

Further, AES is not allowed to build new units on the site without the consent of JP Morgan.¹⁶

Clearly specified and enforceable demolition plans for HBGS units 1, 2, 3 and 4 and an agreement allowing the construction of HBEP must be required from the applicant and all relevant parties prior to issuing a license.

Land Use

The proposed HBEP site was chosen because the existing HBGS has been there since the 1950's and supporting infrastructure is in place. While reusing this infrastructure currently connected to HBGS would be expedient, this is not compatible with the Huntington Beach General Plan.

Public Resources Code Section 30101 defines "coastal development or use as any development or use which requires a site on or adjacent to the sea to be able to function at all." The existing HBGS is defined as a coastal-dependent energy facility within the city of Huntington Beach. However, as pointed out by

¹⁶ See Federal Energy Regulatory Commission, Petition for Declaratory Order, Docket No. EL13-21-000 Page 7, Paragraph 15.

city staff, the proposed HBEP is not a coastal dependent energy facility. It will not use ocean water for cooling, as this technology is no longer allowed due to its impact on oceans and wildlife resources. Therefore it is not allowed under the Huntington Beach General Plan that allows for coastal dependent facilities on the site. The HBEP could be located away from the coast and still operate. It does not comply with local land use law.

Reliability of Energy Supplies

HBEP is not needed to ensure reliable energy supplies. The California Public Utilities Commission's 2012 Long Term Procurement Planning Proceeding (LTPP) determines the need for new resources. The LTPP was divided into four tracks. Track 1 and Track 4 decisions determined what Southern California Edison (SCE) will be authorized to procure by the year 2022. SCE must procure a minimum of 1,000 Megawatts (MWs) of gas-fired generation and no more than 1,500 MWs of gas-fired generation.

While HBEP is located in SCE's service territory, other proposed gas fired power plants projects in SCE's service territory under review at the Energy Commission include Alamitos Energy Center (1,936 MWs), El Segundo Power Redevelopment (435 MWs), and Redondo Beach Repower (496 MWs). In addition, power plants approved or under pre-construction in SCE service territory are City of Palmdale Hybrid Gas and Solar Plant (520 MWs of gas) and Watson Cogeneration and Steam reliability Project (85 MW). A combination of these resources could serve the identified need.

In the past, because of Huntington Beach's location, the power purchased from HBGS was designated as "reliability must run" or "reliability must take" and the price was subject to a negotiated contract with the CAISO (other power plants bid into the CAISOs markets and thus competed to provide service). Common sense tells us that when a private business' product is designated as essential that that business holds a great deal of market power and can usually extract very high prices for their product. This high price is then passed on to energy consumers. This situation should not be allowed with HBEP.

Also, the HBGS has been used in schemes to manipulate the energy market ¹⁷. During the 2001 energy crisis, this market manipulation was very costly to consumers. Additionally, in July 2013, FERC ruled that JPMorgan and other trading firms used improper trading tactics involving HBGS to generate \$52 million in excess profits in California between 2009 and 2011.

¹⁷ See FERC, Make Whole Payments and Related Bidding Strategies. Order Approving Stipulation and Consent Agreement. Issued July 30, 2013. Docket Nos. IN11-8-000 and IN13-5-000. Also see: <http://www.sacbee.com/2013/07/17/5574303/jp-morgan-reportedly-could-settle.html>

The City of Huntington Beach and its residents have had a history of being cooperative with the owners and operators of HBGS. In 2001, because of the energy crisis, and in order to help with the emergency situation, the City of Huntington Beach agreed to an expedited certification of a retooling of units 3 and 4. One condition of the 2001 emergency certification that was proposed and discussed was that if the applicant was found to be involved in market manipulation that the license would be revoked. This condition did not get adopted.

In order to protect Huntington Beach residents and all ratepayers and to help insure reliable energy supplies, I request that a condition for certification should clearly require that AES or whoever is the appropriate party comply with all market regulating laws and that the party's violation of those laws could result in the revocation of its license.

Socioeconomics

HBEP would employ an average of 192 workers per month during the 7.5-year demolition and construction period. Construction workforce would peak during months 82 and 83 with 236 workers onsite. HBEP would require 33 full-time employees during project operation; one plant manager, one operations leader, one maintenance leader, one environmental engineer, one maintenance planner, twenty power plant operators, five controls specialty workers, two mechanics and one administrative worker (HBEP 2012a, pg. 5.10-13). Once operational, the HBEP would permanently employ 33 workers. Currently, 33 workers are employed at the Huntington Beach Generation Station (HBEP 2013g). Consequently, once the existing units are demolished and new ones built, the net employment impact compared to the current conditions would be zero. It cannot be said that the project produces a socioeconomic benefit, especially when alternative uses of the land could generate more jobs. Nearby hotels employ over 300 workers.

Alternatives Analysis

The alternatives analysis is flawed and incomplete. The CEQA lead agency is required to:

- (1) Evaluate a No-Project Alternative.
- (2) Identify alternatives that were initially considered but then rejected from further evaluation.
- (3) Identify the environmentally superior alternative among the other alternatives¹⁸.

The No-Project Alternative analyzed in the FSA doesn't qualify as a No-Project alternative since it is defined as upgrading HBGS units to use recycled water. This upgrade would require construction of accommodating facilities and

¹⁸ (Cal. Code Regs., tit. 14, §15126.6)

structures that would trigger an additional CEQA review process to assess the impacts. This is not a No-Project but rather an alternative project. It doesn't restore or enhance the coast. See attached exhibits for pictures of what this alternative looks like. The Energy Commission may eliminate this alternative from detailed consideration because it fails to meet the basic project objectives of providing flexible power to accommodate renewables¹⁹.

The Energy Commission should present the public with information regarding an CEQA equivalent No-Project Alternative which informs the public about what would happen on the site if the HBEP does not get approved. Several questions remain unanswered in that case. Would HBGS units 1-4 be closed but remain on the site? Would they be demolished? Would the synchronous condenser project remain?

Also, the Energy Commission should assess an Environmental Superior Alternative that would consist alternatives that meet the objectives of the project. These alternatives include energy efficiency, demand response, and energy storage. Much work has been done to assess the feasibility of these approaches to integrate renewable generation. See recent articles for evidence of the feasibility of these alternatives²⁰.

Conclusion

For the foregoing reasons, the Energy Commission should deny HBEP.

Respectfully submitted,

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¹⁹ Conditions regarding when the lead agency can eliminate an option are found in : (Cal. Code Regs., tit. 14, §15126.6[c])

²⁰ See Lazar, Jim. *Teaching the Duck to Fly*, January 2014 and Clean Coalition. *Unleashing Local Energy* and <http://www.greentechmedia.com/articles/read/retired-cpuc-commissioner-takes-aim-at-caisos-duck-curve>