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Comments of Robert Sarvey and Helping Hand Tools (2HT) on the Puente Power Project
PDOC

Dear Mr. Zozula,

Thank you for the opportunity to comment on the Preliminary Determination of Compliance (PDOC) for the Puente Power Project which was issued on May 19, 2016. The PDOC is fundamentally flawed as it treats the Puente power Project as a replacement unit for the Mandalay 2 unit but the Puente project is actually a new emissions unit. The PDOC also fails to meet some of the requirements of the rules and regulations of the VCAPCD and the California SIP. The permit fails to require BACT for VOC emissions as required by the districts rules and regulations. The mitigation for the projects NOx emissions are inappropriate for an environmental justice community as all of the ERC's for the mitigation of the projects NOx emissions were created 25 years ago. The permit fails to even identify the environmental justice community. The applicant has not provided an alternative analysis that complies with the requirements of Rule 26.2 which requires that the applicant provide an analysis demonstrating that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

The Puente Power Project is a new emission unit not a replacement emissions unit.

The PDOC proposes to analyze the Puente Power Project as a replacement emission unit. Rule 26.1.1-29. "Replacement Emissions Unit" defines a replacement emission unit as "An emissions unit which supplants another emissions unit where the replacement emissions unit serves the **identical** function as the emission unit being replaced." The PDOC claims that the new Puente unit is identical to the Mandalay Unit 2 based on the fact that, "The new 262 MW gas turbine will be connected to the same Southern California Edison 220-KV switchyard that the two (2) existing 215 MW Babcock and Wilcox Steam Generator boilers (MGS Units 1 and 2) are connected to and once operating, the new 262 MW gas turbine will provide dispatchable power to provide voltage support to the local reliability area in the same manner as the current

two 215 MW Babcock and Wilcox Steam Generators. For NSR purposes to qualify as a replacement unit the replacement unit must be identical or functionally equivalent to the replaced unit and the replacement unit cannot change the basic design parameters of the replaced unit. Puente Power project is definitely not identical to the Mandalay Unit 2 and is a complete redesign of the Mandalay Unit 2.

The Mandalay Unit 2 which the Puente Project allegedly replaces is a 1,990 MMBTU/Hr, 215 MW net, Babcock and Wilcox Steam Generator natural gas fired electric utility boiler with a permit limit of 8,760 hours per year. The Puente Power Plant is a peaking unit which is defined as a fossil-fueled combustion turbine power generation unit or other power generation unit with an actual annual capacity factor of 25% or less, which is used during peak electricity demand periods, and may operate for short periods, with frequent start-ups and shutdowns. Clearly the Puente Power Plant is not identical or functionally equivalent to the Mandalay unit.

Secondly the Puente Project changes the basic design parameters of the Mandalay 2 unit. The Puente Project consists only of a 262 MW combustion turbine but the Mandalay Unit 2 consists of a steam-electric generating unit rated at 215 megawatts. Steam is supplied to the Mandalay steam-electric units by two oil- or gas-fired boilers, each rated at 707,600 kg of steam per hr. The Mandalay Unit 2 utilizes ocean water for cooling while the Puente project proposes utilizing potable water from the city of Oxnard. The Mandalay unit 2 is permitted for 8,760 hour per year and is not designed for frequent start up and shut down as the Puente turbine is. Mandalay 2 is a baseload unit compared to the Puente projects combustion turbine configuration. The Puente Project is designed to be utilized in periods of high demand and electrical emergencies with its 10 minute start as opposed to Mandalay 2 which is designed for baseload operation and takes hours to warm up. The Mandalay unit is designed to burn natural gas or fuel oil but the Puente Project is designed to burn only natural gas.

While the proposed conditions for the Puente Project include a requirement that the Mandalay Unit 2 surrender its air permit there is no language that ensures that the Mandalay 2 unit will be permanently shut down as a new air permit could be acquired for the unit. The Puente Project meets none of the requirements of a replacement unit but is a new unit and is subject to the NSR and PSD rules applied to new emission units.

BACT for VOC emissions is 1PPM averaged over 1 hour

District Rule 26 A requires the Air Pollution Control Officer (APCO) to deny an applicant an Authority to Construct for any new, replacement, modified, or relocated emissions unit which would have a potential to emit any of the pollutants specified in Table A-1, unless the emissions unit is equipped with the current Best Available Control Technology for such pollutants. Best available control technology is described in District rule 26.1 (3):

"Best Available Control Technology (BACT)": The most stringent emission limitation or control technology for an emissions unit which:

- a. Has been achieved in practice for such emissions unit category, or
- b. Is contained in any implementation plan approved by the Environmental Protection Agency for such emissions unit category. A specific limitation or control shall not apply if the owner or operator of such emissions unit demonstrates to the satisfaction of the Air Pollution Control Officer (APCO) that such limitation or control technology is not presently achievable, or
- c. Is contained in any applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants set forth in 40 CFR Parts 60 and 61, or
- d. Any other emission limitation or control technology, including, but not limited to, replacement of such emissions unit with a lower emitting emissions unit, application of control equipment or process modifications, determined by the APCO to be technologically feasible for such emissions unit and cost effective as compared to the BACT cost effectiveness threshold adopted by the Ventura County Air Pollution Control Board

The PDOC proposes BACT for ROC's of 2ppm averaged over 1 hour. As the PDOC acknowledges an ROC emission rate as low as .6 PPMVD over 3 hours is technologically feasible. The BAAQMD has issued a permit to the simple-cycle Marsh Landing Project in the

BAAQMD which utilizes the Siemens 5000 F turbines which are approximately 190 MW. These turbines are very similar in size to the turbines proposed for this project. The ATC for the Marsh Landing Project limited ROC emissions to 2.9 lb/hour or 0.00132 lb/MMBtu in their permit conditions which corresponds to a ROC limit of 1 ppmvd @ 15% O₂.¹ The Marsh Landing Project is owned by NRG the applicant for the Puente Power Project so it would be easy for the District to obtain information on its emission compliance and test methods

Also the BAAQMD in The Mariposa FDOC, “determined that BACT for the simple-cycle gas turbines for ROC is the use of good combustion practice and abatement with an oxidation catalyst to achieve a permit limit for each gas turbine of 0.616 lb per hour or 0.00127 lb/MMbtu, which is equivalent to 1 ppm POC, 1-hr average.”² BACT for ROC’s for the Puente Power project is 1 ppm averaged over 1 hour and should be required in the subsequent FDOC to comply with Rule 26.1 (3).

Alternatively the P.L. Bartow Power Plant was issued a PSD permit by the Florida Department of Environmental Protection with a VOC limit of 1.2 ppmvd (excluding startups, shutdowns, and fuel switching) for four combined-cycle turbines (permitted to operate in simple-cycle mode in rare situations) and one simple-cycle turbine using Siemens turbines similar to those proposed for the Puente Power Project. The initial compliance with the 1.2 ppmvd limit has been verified by one-time source tests at 100% load for four of the combined-cycle turbines and 55% load for three of those units in 2009.³ The District could impose a ROC BACT limit of 1.2 ppmvd based on that determination to comply with rule 26.1 (3).

BACT Analysis

The BACT analysis in the PDOC is inadequate. The BACT analysis in the PDOC simply lists BACT determinations derived from other districts in California and chooses the determination that the district thinks is appropriate with no further analysis of the economic and

¹ Marsh Landing FDOC Page 39

www.baaqmd.gov/~media/Files/Engineering/Public%20Notices/2010/18404/FDOC%20062510/Marsh%20Landin g%20FDOC%20June%2025%202010.ashx?la=en

² Mariposa FDOC Page 51

www.baaqmd.gov/~media/Files/Engineering/Public%20Notices/2010/20737/FDOC%20Materials/Mariposa%20F DOC%2011-24-10.ashx?la=en

³ 2009 FDOC Carlsbad energy Center Combined cycle Page 37 of 63

www.energy.ca.gov/sitingcases/carlsbad/documents/others/2009-08-04_SDAPCD_FDOC.pdf

collateral impacts of the chosen technology. A BACT analysis should involve a top-down process, as described in the 1990 New Source Review Workshop Manual, in order to evaluate all control options and select the most effective option. The BACT analysis in the PDOC fails to discuss alternative technologies and fails to discuss the impacts of the technologies chosen. For example the PDOC does not discuss other technologies outside of SCR for NOx controls. The PDOC merely concludes that SCR is the preferred control without ever identifying other technologies or discussing the collateral impacts from the use of ammonia in the SCR system. Collateral impacts from the use of ammonia in the SCR include nitrogen deposition, secondary particulate formation, and the impacts from the storage and transportation of ammonia. Clearly the PDOC must contain a proper BACT analysis.

The Existing Mandalay Units are required to be shut down by the States OTC policies.

According to the PDOC MGS Unit 2 will be permanently shut down at the end of the commissioning period for the proposed gas turbine engine. MGS Unit 1 will operate after the new CTG is operational, but will be permanently shut down prior to December 31, 2020 Even though MGS Unit 1 will eventually be shut down, this evaluation assumes MGS Unit 1 remains operational and the emissions associated with MGS Unit 1 are still accounted for in the stationary source emissions for this project.⁴ The MGS units are required to shut down regardless of whether the Puente Power Project is constructed in compliance with the states OTC policies. It possible both these units may be retired before Puente is ever constructed. The PDOC needs to provide a discussion of the implications of the MGS Units 1 and 2 required shutdown and how that affects the analysis in the PDOC should both units be required to be shut down before Puente ever commences commercial operation.

Analysis of Alternatives

The APCO shall deny an application for an Authority to Construct for any new major source or major modification unless the applicant provides an analysis as required by Section 173(a)(5) of the federal Clean Air Act, of alternative sites, sizes, production processes, and environmental control techniques for the proposed source demonstrating

⁴ PDOC Page 8 of 168

that the benefits of the proposed source significantly outweigh the environmental and societal costs imposed as a result of its location, construction, or modification.⁵ For this application the applicant has not provided an analysis that that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification. .⁶ The only document submitted by the applicant (Appendix J) contains no analysis of the environmental and social cost of this project. The APCO can approve a permit if, in the Control Officer's judgment, the analysis demonstrates that the benefits of the proposed source significantly outweigh the environmental and social costs. In making this determination, the APCO may rely on information provided in documents prepared under the California Environmental Quality Act. Since there is no analysis of the environmental and social costs in the applicants alternatives analysis or the PDOC or any supporting appendix the APCO must either develop his own analysis determining whether the benefits of the proposed source significantly outweigh the environmental and social costs or rely on an analysis provided by the CEC which has not yet been issued. It is therefore premature for the PDOC to declare that the applicant has complied with Rule 26.2 E.

The alternative analysis provided by the applicant in Appendix J ignores energy storage as a viable alternative to the Puente Power Project. AES is currently developing a 100 MW battery for use in Los Angeles that is expected to be deployed in 2021.⁷ Battery storage could replace or reduce the need for natural gas fired generation in Oxnard and at the same time eliminate or lower criteria pollutant emissions in the minority neighborhood surrounding the Puente power plant. . While at one time storage was not a feasible alternative it is certainly a feasible alternative for the Puente Power Project and must be included in the Districts alternative analysis.

Rule 15

Rule 15 Standards for Permit Issuance requires that The Air Pollution Control Officer shall deny an Authority to Construct or a Permit to Operate unless the applicant shows that the

⁵ Rule 26.2 E

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⁷ http://www.scientificamerican.com/article/world-s-largest-storage-battery-will-power-los-angeles/?wt.mc=SA_Twitter-Share

emissions units will comply with all applicable federal, state or District orders, rules or regulations including any requirement promulgated pursuant to a federal implementation plan for Ventura County. The applicant has not provided a determination from USEPA that PSD is not applicable to the Puente Project. According to a record of conversation filed by the CEC Staff the district engineer “*Mr. Zozula believes the applicability of federal Prevention of Significant Deterioration (PSD) requirements to the Puente Power Project will be an issue.*”⁸ *Mr. Zozula stated that he previously requested, and continues to recommend that the applicant submit a PSD applicability determination to the U.S. Environmental Protection Agency (U.S. EPA), which has jurisdiction for PSD.*⁹ *Energy Commission staff agrees with Mr. Zozula’s recommendation to the applicant to have them submit a PSD applicability determination to the U.S. EPA.*”¹⁰ Without a PSD determination from USEPA the applicant has not shown that the emissions units will comply with all applicable federal rules or regulations. The plain language of Rule 15 prevents the APCO from issuing the ATC unless the applicant shows that the emissions units will comply with all applicable federal rules and regulations which includes the PSD permit or determination that the project does not need a PSD permit. The FDOC should identify the PSD determination as required to show that the Puente Project does meet all Federal requirements.

PM 2.5 emissions

The turbine selected for this project is a new model and has no operating history. Initially the applicant claimed that PM 2.5 emissions would be 10.6 pounds per hour. Subsequently the applicant lowered the estimated PM 2.5 emissions to 10.1 pounds per hour based on information from GE the turbine vendor. Whether the Puente Power Project can meet a 10.1 pounds per hour emission limit is speculative as the turbine has no operating history. There are no CEMS for particulate matter so the entire modeling and health risk assessment are

⁸ doCKETPUBLIC.energy.ca.gov/PublicDocuments/15-AFC-01/TN206067_20150911T115828_Report_of_Conversation__VCAPCD.pdf

⁹ doCKETPUBLIC.energy.ca.gov/PublicDocuments/15-AFC-01/TN206067_20150911T115828_Report_of_Conversation__VCAPCD.pdf

¹⁰ doCKETPUBLIC.energy.ca.gov/PublicDocuments/15-AFC-01/TN206067_20150911T115828_Report_of_Conversation__VCAPCD.pdf

based on a speculative 10.1 pounds per hour PM 2.5 average which may not be achieved and will have negative health effects on the minority population surrounding the community.

ERC's

The PDOC states that relative to the proposed NO_x ERC's for the Puente Project that, "Pursuant to Rule 26.2.B.2.d and Rule 26.11.C.6 these NO_x offsets (for this project) are not required to be surplus at the time of use since the most recent report of the Rule 26.11 Annual Equivalency Demonstration Program shows a positive balance for NO_x."¹¹ It is premature to determine that they are not required to be surplus because VCAPCD Rule 26.11 B (1) (a) Determination of Surplus at the Time of Use requires that, "The District shall conduct the following evaluation of each ROC or NO_x emission reduction credit that is: Provided by an applicant pursuant to the provisions of Rule 26.2.B as of the date the **Authority to Construct is issued.** Since the ATC will not be issued until the CEC has approved this application the appropriate time to evaluate the proposed NO_x ERC's is at that time since the ATC will not be issued until after the CEC has approved the AFC.

The ERC's proposed for this project largely rely on the conversion of oil well pumping equipment to electric engine conversion in the early 1990's. The district now requires that new oil well pumping units be powered with electric motors in lieu of engines. The use of these 1990 ERC's are no longer appropriate as electric motors are now required as BACT for oil well pumping units. .

Health risk assessment

The HRA for the facility concludes that the cancer risk from the facility is less than one and no further action is required to reduce the facilities health risk. The health risk assessment treats the project as a new standalone facility and ignores the fact the facility also includes two steam generators and a peaking turbine. The cancer risk from the current facility was determined to be 1 in a million for the facility in the 2004 Hot spots report issued by the district.¹² That risk was assessed without current more sensitive regulatory models and the most recent toxicity

¹¹ PDOC Page 28 of 41

¹² www.vcapcd.org/pubs/Engineering/AirToxics/AnnualReport2004.pdf Page 9 of 25

values. (OEHHA 2014a; EPA 2014). Mandalay Unit 1 and the peaking unit at the site will continue to operate after the commissioning of the Puente Project therefore the health risks are significantly understated.

Environmental Justice

The PDOC fails to acknowledge that the population around the project is primarily minority. The population around the Puente Power plant of Oxnard has been recognized by the CEC, CalEnviroscreen and EPA's EJSCREEN as an environmental justice community. The VCAPCD seems to have no policies related to environmental justice or at least they have no Environmental Justice policies or information on their website. As a recipient of federal funding they are required to consider environmental justice in their permitting decisions.

Respectfully Submitted,

/s/ _____

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