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STATE OF CALIFORNIA

ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

In the matter of: Application for Certification of the **PUENTE POWER PROJECT**	DOCKET NO. 15-AFC-01 **CITY OF OXNARD'S PETITION TO COMPEL APPLICANT'S PRODUCTION OF DATA**

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I. INTRODUCTION

Since August, the City of Oxnard has been seeking from the Applicant, NRG Oxnard Energy Center LLC, data that is necessary to determine the accuracy of the air emissions calculations for the proposed Puente project. Accurate calculations of the project's air emissions are critical to determining whether, under the California Environmental Quality Act, the project will create significant air quality and greenhouse gas impacts that require mitigation. Moreover, information from NRG's initial emissions modeling and calculations indicate the Puente project could likely increase net emissions of PM2.5 and NOx to levels that trigger Prevention of Significant Deterioration ("PSD") review. The potential need for PSD review for the project further underscores the need to determine the accuracy of NRG's emission estimates.

While NRG has provided some data in response to the City's air quality data requests, in other instances described below, NRG has improperly withheld important information, either through nonresponses or unmeritorious objections to the City's requests. In light of NRG's failure to disclose this information, the City petitions the Committee for an order directing NRG to produce this improperly withheld material.

II. DISCUSSION

Commission regulation section 1716 permits any party to request that an applicant produce information that is (1) "reasonably available to the applicant," and (2) "relevant to the notice or application proceedings or reasonably necessary to make any decision on the notice or application." Cal. Code Regs., tit. 20, § 1716(b).

Here, the City requested that NRG provide emissions calculations, vendor data, and additional supporting evidence that are all directly relevant to determining both the project's air quality impacts and whether the project will trigger PSD review. As discussed more fully below, this information is either in NRG's possession or reasonably available to NRG. In contrast, the City does not have access to the requested data without the discovery tools available in this proceeding. Consequently, the Committee should order NRG to provide the requested information to the City.

A. The Commission Should Require Production of NRG's Original, Unlocked Spreadsheet Files with Emissions Calculations.

In its first set of data requests, Commission staff asked NRG to provide the original, unlocked spreadsheets that contain supporting air emission calculations for the proposed project. *See* Commission Data Request Set 1, Request 2 (TN # 205389). Staff sought this information because NRG's application only contains emission estimates in pdf files that hide the underlying spreadsheet calculations. Thus, the unlocked spreadsheets are necessary for the Commission and the parties to evaluate the calculations that NRG and its consultant, Sierra Research, have used to determine the air emissions that the project will generate. Declaration of Dr. Phyllis Fox in Support of the City of Oxnard's Petition to Compel ("Fox Decl.") ¶ 5.

On August 4, 2015, the City echoed staff's request and asked that NRG provide the unlocked emissions spreadsheets that supported its application. *See* Appendix, City Data Request 1 (requesting unlocked spreadsheets associated with AFC Appendices C-2, C-6, and C-8 (TN # 205631). The City has repeated its request for emissions calculations

in subsequent data requests. *See, e.g.,* Appendix, City Data Set 3, Request 78-3 (TN # 206248). On August 17, NRG submitted emission spreadsheets to the Commission in response to staff's data request, and simultaneously sought confidential treatment of the Appendices C-2 and C-8 spreadsheets, claiming that they contained confidential information. *See* Applicant's Responses to CEC Data Requests Set 1 (1-47) (TN # 205765); NRG Oxnard Energy Center, LLC Application for Confidential Designation (TN # 205762). One week later, NRG objected to City Data Request 1, again alleging confidentiality. *See* Folk Dec. ¶ 3; Objections to City of Oxnard's Data Requests, Set 1 (TN # 205810).

To the extent that the requested spreadsheets actually contain confidential information, the City has stated its willingness to enter a nondisclosure agreement for that material. Declaration of Ellison Folk in Support of the City of Oxnard's Petition to Compel ("Folk Decl.") ¶ 5, Ex. 1. The City and NRG have since agreed in principle to a nondisclosure agreement, but NRG has not provided the requested data. *Id*. ¶¶ 5-6.

On October 30, NRG stated that it is generating new air emissions calculations for the project, which NRG asserts will replace the original calculations that the City requested in August. *Id*. ¶ 6, Ex. 2; *see also* NRG Nov. 3, 2015 Letter Regarding Withdrawal of Prior Responses to CEC Staff Data Request No. 2 (TN # 206503). To justify its continued failure to produce the original emissions calculations, NRG has since argued that maintaining two sets of emissions calculations and modeling could create confusion. Folk Decl. Ex. 2; NRG Nov. 3, 2015 Letter (TN #206503).

NRG's latest refusal to produce the requested data lacks merit. While the City has been proceeding in good faith regarding a non-disclosure agreement, it requested this spreadsheet data over three months ago and there is no justification for continuing to withhold it. First, the unlocked emissions spreadsheets are clearly relevant to NRG's application. The application's emission's calculations are difficult, and in places impossible, to follow without access to the unlocked spreadsheets. Fox Decl. ¶ 5. Without these calculations, the City cannot determine the veracity of NRG's emission calculations. *Id.* Commission staff recognized this fact when it requested this information in its first data request. In fact, in 08-AFC-08A, the Commission ordered production of an applicant's unlocked emissions spreadsheets under almost identical circumstances. *See* Committee Ruling on Intervenor Sierra Club's Motion to Compel Data Response (08-AFC-08A). The City is entitled to review this information.

Second, even though NRG now argues that the requested data is unnecessary because Sierra Research is revising the emission calculations, the application's original calculations remain highly relevant to understanding the proposed project's air quality impacts. Without these calculations, parties are precluded from confirming the full scope of NRG's revisions to the emissions data, much less how those revisions alter the emission estimates for the project. Fox Decl. ¶ 6.

Finally, NRG's new concern that releasing this data will create confusion is unfounded. Commission staff already has access to the original emission calculations. Indeed, Commission staff, the Committee, and the City's consultants are fully capable of distinguishing between the original and revised emission calculations. At this point, the

City does not intend to submit multiple sets of data to the Commission; it simply seeks the information relied upon by NRG when it conducted its initial emission calculations so that the City can understand the assumptions underlying NRG's calculations and how they may have changed. If these changes raise concerns about how NRG is calculating its emissions, the City may then present this information in its arguments to the Commission regarding the project's air quality impacts. In any event, NRG's latest justification for withholding the requested data does not excuse its months of delay in producing the information. For all of these reasons, the Committee should order NRG to produce the unlocked spreadsheets as requested in City Data Requests 1 and 78-3.

B. The Commission Should Require Production of the Vendor Guarantees for the Project Emissions.

In City Data Requests 68 and 71, the City asked for the official vendor guarantees provided for the project's proposed turbine. Appendix, City Data Requests 68 and 71. It is standard industry practice to obtain vendor guarantees for all equipment that emit or control pollutants. Fox Decl. ¶ 7. The guarantees typically contain conditions or other limitations on the guaranteed emissions performance for a turbine. *Id*. ¶ 7-8. Thus, review of the vendor guarantee is necessary to understand whether the project's "proposed emission limits can be met under all operating conditions over the life of the facility." *Id*. ¶ 10. This particularly important here because continuous emissions monitoring is only proposed for NOx, and, over the life of the project, tests for other pollutants will be infrequent or may not occur at all. *Id*.

The City had previously requested the vendor guarantees from NRG in its Set 1 data requests. *See* Appendix, City Data Request 68. NRG did not provide the guarantee, but instead pointed to vendor information attached to NRG's application. *See id*.; Responses to City of Oxnard Data Requests Set 1 (1-46) (TN # 206009). That information is not the requested guarantee nor does it state the conditions under which the emission calculations are valid. *See* AFC Appendix C-2, Table C-2.3 (TN # 204220-3); Fox Decl. ¶ 9. This letter also contains an escape clause suggesting that the emission rates only apply during the turbine's "emission compliance mode." *See* AFC Appendix C-2, Table C-2.3 (TN # 204220-3). Consequently, the City again requested the vendor guarantees in Data Request 68 and 71, along with additional testing data or other evidence that supports the asserted emissions standards for the GE 7HA.01 turbine (discussed in section II.C, *infra*).

NRG objected to this request, claiming that it does not possess "supporting information from the gas turbine vendor and . . . test data for GE Frame 7 turbines," and that it would be unduly burdensome to acquire this information. Objections to City of Oxnard's Data Requests, Set 3 (TN # 206410). It is unclear from this objection whether NRG possesses any vendor guarantees for the proposed facility. But even if NRG has not yet obtained the guarantees, it would place minimal burden on NRG to request this information from its vendors. Indeed, such emission guarantees are commonplace in the industry. Fox Decl. ¶ 7.

Ultimately, it is NRG's burden, as the applicant, to support the validity of the emission information in its application, including the asserted emission performance for

the GE turbine and its emission control equipment. Cal. Code Regs., tit. 20, § 1723.5(a). If NRG has received formal vendor guarantees for the Puente project's emissions, the Commission should order NRG to disclose them in response to the City's requests. NRG has offered no justification for withholding this information. If NRG has not yet received the requested vendor guarantees, NRG should obtain this information and make it available to the parties.

C. The Commission Should Require Production of Emission Evidence that Is Readily Available to NRG.

The City has requested test data from NRG that is necessary to verify the application's asserted hazardous air pollutants ("HAP") and criteria pollutant emissions from the proposed GE Frame 7 turbine. *See* Appendix, City Data Requests 68, 71, and 77. Such test data is necessary to verify the emissions from this turbine, which is a new model with no commercial operating experience. Fox Decl. ¶¶ 11-13. This data is especially important for startup and shutdown periods, when "emissions are uncontrolled" and "many hazardous air pollutants increase by large amounts." *Id*. ¶ 11.

Instead of providing data for the proposed GE turbine, NRG has relied on decades old HAP emission factors from AP-42 and CATEF. *Id*. ¶ 13. NRG alleges that actual emissions from the proposed turbine would be lower due to the new turbine model and its proposed emission controls. *Id*. ¶ 13; Applicant's Responses to City of Oxnard Data Requests Set 3 (68-79) (TN # 206458).

In spite of this assertion, NRG has claimed it does not possess test data supporting the purported lower emission levels, and it would be unduly burdensome for NRG to

obtain such data. Objections to City of Oxnard's Data Requests, Set 3 (TN # 206410). But NRG has offered no evidence that acquiring the requested data would be unduly burdensome. In fact, it is highly likely that GE has test data for the proposed turbine or similar models. *See* Fox Decl. ¶ 15. This information is not readily available to the City, but NRG, as the purchaser of the equipment, can easily request it. Consequently, the Committee should order NRG to acquire the requested test data and make it available to the parties.

DATED: November 20, 2015 SHUTE, MIHALY & WEINBERGER LLP

By: /s/ Edward T. Schexnayder
ELLISON FOLK
EDWARD T. SCHEXNAYDER

Attorneys for the CITY OF OXNARD

APPENDIX

EXCERPTS OF CITY OF OXNARD'S DATA REQUESTS AND APPLICANT OBJECTIONS AND RESPONSES

Excerpted City Data Request 1[1]

CEC staff in Data Request Set 1, Data Request 2, requested "original spreadsheet files" for Appendix C-2 and C-8. We request all information provided in response to CEC Data Request 2. In addition, to the extent not covered by CEC Data Request 2, please provide all Excel spreadsheets used to support the emission estimates in the AFC, Appendices C-2, C-6, and C-8, in their native electronic format and unprotected (i.e., showing formulas), if necessary under confidential cover and/or pass-word protected. It is neither unusual nor unreasonable for interveners to request and for the Applicant to make available Excel spreadsheets containing emission estimates and calculations. See, for example, the following CEC proceedings: Victorville 2 Solar Gas-Hybrid Power Project; Blythe Solar Power Project; Palen Solar Power Project; Bullard Energy Center; and Riverside Energy Resource Center. Further, the Commission ruled on Intervener Sierra Club's motion to compel data responses in the Hydrogen Energy California case that "[i]t makes sense to us that the underlying data and formulae would be useful to Sierra Club in undertaking such verification" and granted Sierra Club's motion to compel the data request requesting "all Excel spreadsheets used to support the emission estimates in the AFC…in the native electronic format and unprotected (i.e. showing formulas)…".

Excerpted Applicant Objection

For the sake of clarity, note that City Data Request 1 incorrectly states that CEC Data Request 2 requested spreadsheet files for Appendix C-2 and C-8. In fact, CEC Data Request 2 requested spreadsheet files for Appendix C-2 and *C-6*. In any event, Applicant understands City Data Request 1, taken in its entirety, to be seeking all Excel spreadsheets used to support the emission estimates in AFC Appendices C-2, C-6, and C-8, in their native electronic format and unprotected.

As it pertains to the spreadsheet files used to support the emission estimates in AFC Appendices C-2 and C-8, Applicant objects to City Data Request 1 on the basis that the requested information constitutes confidential trade secrets and proprietary information (See Application for Confidential Designation of Applicant's Response to CEC Data Request 2, August 17, 2015, TN# 205762).

[1] Data requests 1 through 46 are contained in the City of Oxnard's Data Requests, Set 1, submitted on August 4, 2015 and attached hereto.

City Data Request 68[2]

In its Data Requests 5, 6, and 8, the City requested a copy of the formal vendor guarantee and any evidence that supports the emissions calculations used for the gas turbine. In response, NRG referenced the vendor letter included in Appendix C-2 to the AFC. This is not a formal vendor guarantee. Please provide a copy of the formal vendor guarantee, including all of the operating conditions under which the vendor guarantee is valid. In addition, please explain the experience upon which the Applicant is confident that the turbines will meet the emission limits throughout the life of the project. Please include in such response all evidence (such as stack tests) that demonstrates that the emission rate of 10.6 lb/hour used in emissions calculations has been achieved by the gas turbine in comparable operating modes. The applicant's assertion that it "does not possess the requested information," is not responsive. The applicant or the applicant's consultants can request this information from the vendor and collect it from air districts that have required stack tests on similar GE Frame 7 turbines. Further, the applicant's consultant. Sierra Research, who prepared this response, certainly has a large collection of responsive stack tests conducted on similar GE Frame 7 turbines. If such evidence is in the possession of GE or Sierra Research, please request this information from them.

Applicant Objection

Applicant objects to the request for supporting information from the gas turbine vendor and the request for test data for GE Frame 7 turbines on the basis that it seeks documents and/or information which are not currently within the possession, custody or control of Applicant. It would be unduly burdensome for Applicant to obtain such information to the extent that it exists, and the value of such information to the City is not commensurate with the burden on Applicant since the turbine vendor has provided the necessary emissions data.

Applicant Response

Please refer to Applicant's objection to City Data Request 68 filed on October 21, 2015. Without waiving its prior objection, Applicant responds as follows. In Appendix C-2 to the AFC, Applicant has provided written confirmation of the emission performance for the exact make/model gas turbine proposed for this project from the turbine vendor, GE. GE is one of the top gas turbine vendors in the world with vast experience and expertise in the manufacture of such equipment. Based on GE's experience and expertise, Applicant has a high degree of confidence in the emission performance information it has provided.

City Data Request 71

In Data Request 18, the City requested vendor guaranteed startup/shutdown emission "curves", e.g., NOx in ppm versus load/time since the beginning of startup and shutdown

[2] Data requests 68 through 79 are contained in the City of Oxnard's Data Requests, Set 3, submitted on October 1, 2015 and attached hereto.

to support the startup and shut down emissions. Instead, the applicant simply repeated the unsupported information in the AFC, referring to DR-8 and DR-17. Please provide the support for these assumed startup and shutdown emissions, in the form of startup/shutdown emission curves and any supporting measurement, e.g., stack test or CEMS data.

Applicant Objection
Applicant objects to the request for additional supporting data including measurements, stack test data, or CEMS data to justify the startup/shutdown emissions provided by GE on the basis that it seeks documents and/or information which are not currently within the possession, custody or control of Applicant. It would be unduly burdensome for Applicant to obtain such information to the extent that it exists, and the value of such information to the City is not commensurate with the burden on Applicant since the turbine vendor has provided the necessary startup/shutdown emissions data.

Applicant Response
Please refer to Applicant's objection to City Data Request 71 filed on October 21, 2015. Without waiving its prior objection, Applicant responds as follows. The startup/shutdown emission levels are not "unsupported" - they are based on startup/shutdown emission levels provided by the gas turbine vendor for the new GE 7HA.01 gas turbine proposed for the P3. It is customary to use vendor-supplied emission rates to determine project impacts, and the Applicant has no reason to question the startup/shutdown emission levels provided by the gas turbine vendor.

City Data Request 77
In Data Request 44, the City noted that the AFC estimated HAP emissions using outdated emission factors from AP-42 and the CARB CATEF database for all operational conditions. AFC Table C-8.1. We requested that the applicant verify these emission factors by providing stack tests to support normal operation and startup/shutdown HAP emissions. The applicant responded that it "does not possess the requested information for the GE 7HA.01 turbine." This is not responsive. The applicant or the applicant's consultants can request this information from the vendor and collect it from air districts that have required stack tests on similar GE Frame 7 turbines. Further, the applicant's consultant, Sierra Research, who prepared this response, certainly has a large collection of responsive stack tests conducted on similar GE Frame 7 turbines. The use of outdated HAP emission factors, conducted on turbines that are not representative of the Frame 7 turbines proposed here, especially during startups and shutdowns, is not a valid basis to estimate health +risks because since these emission factors were measured, changes have occurred in turbine design that affect emissions. Further, studies have demonstrated significant increases in many HAPS during startup and shutdown from similar Frame 7 turbines. The formaldehyde emission factor (formaldehyde is a carcinogen), for example, increased from 15 lb/10^{12} Btu to 7,539 lb/10^{12} Btu, or by a factor of 503, and the formaldehyde emissions increased from 0.11 to 16.08 tons/yr or by factor of 146, when

the load was reduced from 100% to 30%.[3] Thus, we request that the applicant obtain and docket more recent and relevant HAP stack test information for similar GE Frame 7 turbines that includes normal operation as well as startup and shutdown conditions and use it to revise its HAP emission estimates.

Applicant Objection
Applicant objects to the request for TAC/HAP stack test data to in order to develop TAC/HAP emission factors for the new P3 gas turbine on the basis that it seeks documents and/or information which are not currently within the possession, custody or control of Applicant. It would be unduly burdensome for Applicant to obtain such information, and the value of such information to the City is not commensurate with the burden on Applicant since it is customary to use CATEF/AP-42 TAC/HAP emission factors to estimate emissions for power plant projects.

Applicant Response
Please refer to Applicant's objection to City Data Request 77 filed on October 21, 2015. Without waiving its prior objection, Applicant responds as follows.

The Gas Research Institute (GRI) report cited in City Data Request 77 was published in August 1996 and relies on stack tests performed in the 1993 to 1994 time period. Both the CATEF emission factors (most recent background report published in 2000) and the AP-42 gas turbine Section 3.1 published in 2000 also rely on gas turbine toxic air contaminant (TAC)/hazardous air pollutant (HAP) stack test data performed in the 1990s. With regards to the formaldehyde emissions factors from the GRI report cited in City Data Request 77, based on the more recent December 1996 version of the GRI report these emission factors are based on a single set of test results performed on a single water-injected first generation GE Frame 7 gas turbine.[4] Therefore, the GRI report results do not include the multiple test/multiple unit statistical analysis of test data as is done in both the CATEF and AP-42 publications. The GRI report full load formaldehyde emission factor of 1.5×10^{-5} lbs/MMBtu is significantly lower than the normal operation/uncontrolled CATEF/AP-42 formaldehyde emission factor of 9.0×10^{-4} lbs/MMBtu used for the analysis of the P3 gas turbine (see Table C-8.1 of AFC). The GRI report low load formaldehyde emission factor of 7.5×10^{-3} lbs/MMBtu is very close to the uncontrolled startup/shutdown formaldehyde factors of 7.2×10^{-3} lbs/MMBtu[5] used for the analysis of the P3 gas turbine (see Table C-8.1 of AFC). None of these documents

[3] Gas Research Institute (GRI), Gas-Fired Boiler and Turbine Air Toxics Summary Report. Final Report, August 1996, Table S-5.
[4] Carnot Technical Services, Gas-Fired Boiler and Turbine Air Toxics Summary Report, Prepared for the Gas Research Institute and the Electric Power Research Institute, December 1996, Tables 2-1 and 2-3.
[5] Based on the controlled gas turbine startup/shutdown formaldehyde emission factor of 3.6 x 10-3 lbs/MMBtu without the 50% oxidation catalyst control level.

(GRI report, CATEF, AP-42) account for the lower TAC/HAP emissions associated with a new fast start GE 7HA.01 gas turbine equipped with dry low-NOx combustion combined with an oxidation catalyst system. Therefore, the use of the CATEF/AP-42 TAC/HAP emission factors is conservative and likely overestimates the TAC/HAP emissions for the P3 gas turbine. Even with the conservative nature of these TAC/HAP emission factors/emission calculations, as shown on Table 4.9-4 of the AFC the maximum modeled public health impacts are below significance levels. Finally, it is customary to use CATEF/AP-42 TAC/HAP emission factors to estimate emissions for power plant projects.

Excerpted City Data Request 78

In Data Request 23, the City requested raw NOx CEMS data for existing Units 1 and 2 that was relied on to estimate NOx emissions for the lookback period 2009 to 2014, including firing rate in MMBtu/hr and MW generated. The response is incomplete. Please provide the following information: . . . (3) The unlocked Excel spreadsheet that shows the calculations used to generate NOx emissions for the lookback period 2009 to 2014.

Applicant Objection

Applicant objects to the request for hour-by-hour MMBtu and MW data for MGS Units 1 and 2 for the period from 2009 to 2014 on the basis that providing such information is unduly burdensome, and the value of such information to the City is not commensurate with the burden on Applicant since Applicant has already provided hour-by-hour fuel use and NOx lbs/hr data for the period from 2009 to 2014 and that data is sufficient to understand the baseline NOx emissions for MGS Units 1 and 2. Applicant objects to the request for stack test data for MGS Units 1 and 2 for the reasons set forth in the above objection to Data Request 69.

Excerpted Applicant Response

Please refer to Applicant's objection to City Data Request 78 filed on October 21, 2015. Without waiving its prior objection, Applicant responds as follows.

78-3. The annual baseline NOx emissions for MGS Units 1 and 2 shown on Table C-2.13a of the AFC are simply the annual totals of the hour-by-hour CEMS NOx lbs/hr emissions data already provided by the Applicant. This annual baseline NOx emission summary Table C-2.13a is included in the confidential Excel spreadsheet filed by the Applicant on 8/17/15.

Excerpted City Data Request 79

Unit 3 will continue to operate after the new unit starts up. An increase in emissions from this unit may affect the conclusions as to applicability of PSD review and air quality impacts. Thus, please respond to the following questions regarding Unit 3. (2) Please provide all CEMS data and stack tests for Unit 3.

Applicant Objection

Applicant objects to the request for stack test data for MGS Unit 3 on the basis that providing such information is unduly burdensome, and the value of such information to the City is not commensurate with the burden on Applicant since it is appropriate to use the Ventura County Air Pollution Control District emission inventory data to establish the baseline emissions for MGS Unit 3.

Excerpted Applicant Response

Please refer to Applicant's objection to City Data Request 79 filed on October 21, 2015. Without waiving its prior objection, Applicant responds as follows.

79-2. MGS Unit 3 is not equipped with a Continuous Emissions Monitoring System (CEMS). The VCAPCD emission inventory data were used to establish the baseline emissions for MGS Unit 3. As with MGS Units 1 and 2, the VCAPCD emissions inventory for MGS Unit 3 is based on annual fuel use and 1995 AP-42 emission factors for natural gas fired stationary gas turbines. All stack test data for this unit are public documents available from the VCAPCD.

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ATTACHMENT

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August 4, 2015

John Chillerni, President
NRG Oxnard Energy Center, LLC
100 California Street, Suite 650
San Francisco, California 94111

Re: Puente Power Project (15-AFC-01); Data Requests, Set 1 (Nos. 1-46)

Dear Mr. Chillerni:

Pursuant to Title 20, California Code of Regulations, section 1716(a), the City of Oxnard requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

In this Set 1, Data Requests are being made in the technical area of Air Quality. Written responses to the enclosed data requests are due to the City staff on or before September 3, 2015.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to the City and me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 17.16(f)).

If you have any questions regarding the enclosed data requests, please call me at (415) 552-7272.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Ellison Folk

Encl.

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STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the matter of: Application for Certification of the **PUENTE POWER PROJECT**	DOCKET NO. 15-AFC-01 **CITY OF OXNARD'S DATA REQUESTS, SET 1**

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AIR QUALITY

Background: SUPPORTING INFORMATION

The AFC, Appendix C-2, provides emission estimates for operation of the Project; Appendix C-6 provides emission estimates for construction of the Project; and Appendix C-8 provides emission estimates for non-criteria pollutant emissions. These estimates are contained in a large number of Excel spreadsheets presented in pdf format, thus obscuring the underlying calculations. The calculations, which sometimes extend over several linked spreadsheets, are difficult to follow without access to the underlying calculations. While most spreadsheets can be reverse engineered, presuming all assumptions are documented, this is intensely time consuming. Interested parties should not bear this burden when the information is readily available to the applicant. Further, this information has been frequently provided on request by applicants in other CEC proceedings. Finally, some calculations cannot be verified because not all inputs are shown in the printouts.

Data Request 1: CEC staff in Data Request Set 1, Data Request 2, requested "original spreadsheet files" for Appendix C-2 and C-8. We request all information provided in response to CEC Data Request 2. In addition, to the extent not covered by CEC Data Request 2, please provide all Excel spreadsheets used to support the emission estimates in the AFC, Appendices C-2, C-6, and C-8, in their native electronic format and unprotected (i.e., showing formulas), if necessary under confidential cover and/or pass-word protected. It is neither unusual nor unreasonable for interveners to request and for the Applicant to make available Excel spreadsheets containing emission estimates and calculations. See, for example, the following CEC proceedings: Victorville 2 Solar Gas-Hybrid Power Project:[1] Blythe Solar Power Project;[2] Palen Solar Power Project[3]; Bullard Energy Center[4]; and Riverside Energy Resource Center.[5] Further, the Commission ruled on Intervener Sierra Club's motion to compel data responses in the Hydrogen Energy California case that "[i]t makes sense to us that the underlying data and formulae would

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[1] Construction and operational criteria pollutant and TAC emission estimates were provided on CD as password-protected Excel spreadsheets in response to California Unions for Reliable Energy ("CURE") data requests.

[2] Operational emissions were provided as unprotected Excel spreadsheets in response to CEC staff data requests.

[3] Construction and operational emission estimates were provided as unprotected Excel spreadsheets in response to CEC staff data

[4] Operational emission estimates were provided as unprotected Excel spreadsheets in response to CEC staff data requests.

[5] Estimates for startup, shutdown, maintenance emissions from turbines and emissions estimates for on-road vehicle travel were provide as unprotected Excel spreadsheets in response to CURE data requests.

be useful to Sierra Club in undertaking such verification" and granted Sierra Club's motion to compel the data request requesting "all Excel spreadsheets used to support the emission estimates in the AFC…in the native electronic format and unprotected (i.e. showing formulas)…".[6]

Data Request 2: Please provide all responses and data produced in response to staff and intervener data requests for all issue areas.

Data Request 3: Please provide a copy of the NRG Generation Unit Repowering request submitted to CAISO on December 13, 2013; additional supporting materials submitted on January 9, 2014; new data submitted on January 27, 2015; and all related information and correspondence. RDA at 97.

Data Request 4: Please provide a copy of RAPA bid and all related documents including correspondence with SCE.

Background: PM2.5/PM10 EMISSIONS

The AFC estimates a net increase in PM2.5 emissions of 9.8 ton/yr. AFC, Table 4.1-22. The PSD significance threshold for PM2.5 is 10 ton/yr. AFC, Table 4.1-11 & 40 CFR 52.21 (b)(1)(23). If PM2.5 emissions equal or exceed 10 ton/yr, Prevention of Significant Deterioration (PSD) review is required for this pollutant and thus PSD review for greenhouse gas emissions (GHG) is triggered. The PM2.5 emissions are underestimated and are not adequately supported. When these errors are corrected, PSD review is triggered for PM2.5.

Data Request 5: The PM2.5/PM10 emissions from the new gas turbine during normal operation (10.6 lb/hr) are based on a letter from the turbine vendor. AFC, Appx. C-2, pdf 38. Please provide the following information on this letter: (1) Is this a formal vendor guarantee for the life of the turbine or does it only apply under new and clean conditions? (2) If the subject letter is not the formal vendor guarantee, please provide the formal vendor guarantee for emissions from the new turbine for all criteria pollutants; (3) Do the PM10 and PM2.5 emission rates include both filterable and condensable particulate matter? If not, please justify any exclusion. (4) Please provide stack tests conducted on GE 7HA.01 gas turbines to confirm the accuracy of the PM10 and PM2.5 emission rate of 10.6 lb/hr.

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[6] Committee Ruling on Intervener Sierra Club's Motion to Compel Data Responses, Docket 08-AFC-8A, November 2, 2012, See: http://docketpublic.energy.ca.gov/PublicDocuments/Regulatory/08-AFC-8A/2012/NOV/TN%2068326%2011-02-12%20Committee%20Ruling%20on%20Intervenor%20Sierra%20Club%27s%20Motion%20to%20Compel%20Data%20Responses.pdf.

Data Request 6: The BACT analysis concludes that the lowest PM10 emission rate permitted for simple cycle turbines is 5.0 lb/hr, which scales to this project, based on heat input, to 13.4 lb/hr. AFC, Appx. C-3, p. 14. Please provide all evidence that supports the claim that the GE7HA.01 turbine can meet the lower PM10/PM2.5 emission rate of 10.6 lb/hr used in emission calculations.

Data Request 7: The AFC should have rounded up the increase in PM2.5 emissions of 9.8 ton/yr to the same number of significant figures as the factor with the least number of significant figures in its calculations and in the significance threshold, which is one. The properly rounded increase in PM2.5 emissions is 10 ton/yr, which equals the PSD significance threshold of 10 ton/yr. Please identify and support all justifications for not rounding up PM2.5 emissions to 10 ton/yr.

Data Request 8: The PM2.5/PM10 emission calculations assume 9.00 lbs/hr during GT startup and 9.98 lb/hr during GT shutdowns. AFC, Appx. C-2, pdf 53, 54, 56. These emission rates are unsupported. Please provide a vendor guarantee, stack test, or other reliable primary data that supports these startup/shutdown emission rates.

Data Request 9: The PM2.5/PM10 emissions from the new diesel generator are based EPA nonroad compression-ignition engine exhaust emission standards for model year 2015 (0.04 g/kW-hr, included in the AFC, Appx. C-2 at pdf 50 and highlighted in yellow. The footnote to this emission factor indicates "[a]t least 50 percent of a manufacturer's engine production must meet these standards during each year of the phase in. Engines not meeting these standards must meet the applicable phase-out standards." The AFC contains no guarantee that the subject diesel generator would be a 2015 model that meets this standard for PM2.5/PM10 or any other pollutant. Please provide a commitment as a mitigation measure to be incorporated in the AFC that the new diesel generator will meet a PM2.5/PM10 emission rate of 0.04 g/kW-hr.

Data Request 10: The PM2.5/PM10 emission factor used to estimate PM2.5/PM10 emissions from the new diesel generator is 0.02 g/bhp-hr. AFC, Appx. C-2, pdf 40. However, the emission factor reported in the attached non-road Diesel EPA Tier 4 certification standard, at Appx. C-2, pdf 50, is 0.04 g/kwh, which converts to 0.03 g/bhp-hr. Please explain the origin of and support the 0.02 g/bhp-hr emission factor used to calculate PM2.5/PM10 emissions from the new diesel generator.

Data Request 11: Appendix C-2, pdf 57 to 64, contains a netting analysis for PM10/PM2.5. The baseline PM10/PM2.5 emissions, occurring in 2012 to 2013, were calculated using VCAPCD inventory emission factors. Appx. C-2, pdf 57. Please provide stack tests or other reliable primary data sources that support these emission factors.

Data Request 12: The netting analysis for all criteria pollutants is based on the average emissions occurring in 2012 and 2013. AFC, pp. 4.1-21Appx. C-2, pdf 63. The AFC

asserts without any support that "[t]his 2-year period was determined to be the most representative because it best reflects the current market conditions of the electricity system in the project area." The average fuel use in 2012 and 2013 was higher than in any other two year period within the six year look-back period of 2009 to 2014 and higher even then the current year. The selection of these two high years inflates the baseline, resulting in a lower net emission increase than if, for example, 2010 to 2011 were used. If any other two year period in the look-back period were used, the net increase in PM2.5 emissions would be significant, assuming all other AFC assumptions. Please justify the choice of 2012 to 2013 as the baseline years for PM2.5/PM10. Your justification should include a discussion of "current market conditions" that support your choice, explained within the framework of PSD.

Data Request 13: If warranted by any of your responses to data requests 5 to 12, please conduct a PSD analysis for PM2.5 emissions.

Data Request 14: The PM2.5/PM10 emission calculations do not include malfunction emissions. Please revise the emission calculations to include an estimate of malfunction emissions.

Data Request 15: The AFC, Table 4.1-23, reports a net emission change for PM2.5/PM10 of -28.7 ton/yr. The supporting emission calculations in Appendix C-2 report a net emission change for PM2.5/PM10 of +9.8 ton/yr. AFC, Appx. C-2, pdf 64. Please resolve this discrepancy and provide corrected emission tables.

Data Request 16: The AFC indicates that the Applicant will review options to mitigate the net emission increase for ROC, PM10, and PM2.5. AFC, p. 4.1-41. Please identify the methods that will be used to mitigate these emissions.

Background: NOx EMISSIONS

The AFC estimates a net increase in NOx emissions of 31.2 ton/yr. AFC, Table 4.1-22. The PSD significance threshold for NOx is 40 ton/yr. AFC, Table 4.1-11 and 40 CFR 52.21 (b)(1)(23). If NOx emissions equal or exceed 40 ton/yr, Prevention of Significant Deterioration (PSD) review is required for this pollutant. The NOx emissions are underestimated and are not adequately supported. When the omissions and underestimates are corrected, NOx emissions likely will equal or exceed 40 ton/yr, thus triggering PSD review for NOx.

The AFC indicates that during a CTG startup, there are approximately 30 minutes with elevated emissions (emissions higher than during normal operation), followed by 30 minutes of normal operating emissions. Similarly, the AFC indicates that during a CTG shutdown, there are approximately 48 minutes of normal operation, followed by 12 minutes with elevated emissions. AFC, p. 4.1-19. The AFC also reports 98.7 lb/hr of NOx during CTG startups, 22.7 lb/hr of NOx during shutdowns, and 23.4 lb/hr during

normal operation. AFC, Tables 4.1-18 and 4.1-19. These estimates are internally inconsistent.

Data Request 17: The emission calculations assume that hourly NOx shutdown emissions (22.7 lb/hr) are less than normal operating emissions (23.4 lb/hr). AFC, Table 4.1-18. This is technically infeasible as shutdown emissions include 12 minutes of higher than normal operating emissions (23.4 lb/hr) plus 48 minutes of normal operating emissions (23.4 lb/hr). Thus, there is an error in either the emission calculations or the statement of facts governing them. Our calculations indicate shutdown emissions should be at least 54.5 lb/hr,[7] which increases the net increase in NOx emission to 39 ton/yr, just 1 ton/yr shy of the NOx PSD significance threshold. Please check the NOx shutdown emissions and revise the NOx emission calculations, including the NOx netting analysis, to correct any errors.

Data Request 18: The AFC fails to disclose the emission rate assumed during the 30 minutes of elevated emissions during startup and the 12 minutes of elevated emissions during shutdown, or the source of these estimates.[8] Please disclose the assumed startup/shutdown elevated emission rates/concentrations and provide vendor guaranteed startup/shutdown emission curves (e.g., NOx in ppm versus load/time since start of startup and shutdown) to support these assumptions.

Data Request 19: The PSD netting analysis for NOx used baseline years of 2012 to 2013, during which NOx emissions from existing U1 and U2 averaged 4.9 ton/yr. AFC, Table C-2.14, pdf 64. However, if any other two year period in the six year look-back period from 2009 to 2014 were used, the baseline emissions would be much smaller, ranging from 0.66 to 2.17 ton/yr. AFC, Appx. C-2, Table C-2.13a, pdf 58. The use of any other two year period, coupled with the error in the shutdown NOx emissions discussed in Data Request 18, would result in a net increase in NOx emissions, pursuant to 40 CFR 52.21.b.23.i, that exceeds the PSD significance threshold for NOx of 40 ton/yr, triggering federal PSD review for NOx and thus, federal PSD review for GHG. The AFC asserts without any support that "[t]his 2-year period was determined to be the most representative because it best reflects the current market conditions of the electricity system in the project area." "Current market conditions" is not consistent with the concept of "baseline" prior to the start of construction under 40 CFR 52.21. Please justify the choice of 2012 to 2013 as the baseline years for NOx. Your justification

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[7] The elevated NOx emission rate assumed during startup: (0.5 hr)(23.36 lb/hr) + (0.5 hr)x = 98.68 lb/hr, where x is the emission rate in lb/hr assumed during the elevated portion of a startup. Solving this equation, x=174 lb/hr during the elevated portion of the startup. Thus, the startup emission rate of 98.68 lb/hr assumes 174 lb/hr of NOx emissions during the elevated portion of the startup.

[8] Our calculations indicate that the 30 minutes of elevated emissions during startup release 174 lb/hr.

should include a discussion of "current market conditions" as they relate to 40 CFR 52.21.

Data Request 20: If warranted by any of your responses to Data Requests 17 to 19, please conduct a PSD analysis for NOx emissions.

Data Request 21: Startup and shutdown emissions comprise about 35% of the total annual NOx emissions. Please explain how compliance with startup and shutdown emissions rates will be assured during facility operation. Will CEMS and/or stack tests be used to demonstrate compliance?

Data Request 22: The NOx emission calculations do not include malfunction emissions. Please revise the emission calculations to include an estimate of malfunction emissions.

Data Request 23: Please provide the raw NOx CEMS data for existing Units 1 and 2 relied on to estimate NOx emissions for the lookback period 2009 to 2014 (AFC, Table C-2.13a, pdf 58) in an unlocked Excel spreadsheet, including firing rate in MMBtu/hr and MW generated.

Data Request 24: The analysis to determine if a project is a major modification under VCAPCD Rule 26.1 concludes that 40.5 ton/yr of NOx offsets are required and that the applicant controls 52.7 tons/yr of offsets. AFC, Appx. C-2, Table C-2.15, pdf 65. The AFC also indicates the applicant has purchased sufficient offsets for the project. AFC, p. 4.1-41. Please provide copies of the offset certificates and supporting files for all NOx offsets you propose to surrender to meet VCAPCD Rule 26.1.

Data Request 25: The BACT analysis identifies operating practices to minimize NOx, CO and VOC emissions during startup and shutdown and concludes these constitute BACT for these periods. However, these periods are excluded from the BACT emission limits. AFC, Appx. C-3, pp. 18-19, Table C-3.4. Please adopt these practices as mitigation measures and explain how compliance with these practices will be confirmed.

Background: Construction and Decommissioning Emissions

The AFC, Appendix C-6, includes construction emissions and air quality modeling of these emissions. However, the emissions are inadequately supported, the significance of the emissions are not discussed, and mitigation is not proposed for significant impacts.

Data Request 26: Construction and decommissioning emissions were estimated using the CalEEMod model. AFC, Appendix C-6, p. C-6-2. The specific version of this model is not identified. This model has been modified several times, including three releases in 2013: 2013.2, 2013.2.1, and 2013.2. These versions incorporated revised emission factors for entrained fugitive road dust emissions; incorporated the CARB's EMFAC2011 and OFFROAD databases; added nitrous oxide (N_2O) calculations from off-road and on-road sources; corrected the unmitigated fugitive dust emissions of PM10

from haul trucks, updated climate zone options; and modified the running loss equation for emissions of ROG from on-road vehicles to match emission factors (per vehicle trip instead of per mile driven).[9] Which version is relied on in the calculations in Appendix C-6? Please provide all CalEEMod model inputs and outputs in original electronic format if not otherwise provided in response to these data requests.

Data Request 27: The AFC refers the reader to Appendix C-6 for construction mitigation. AFC, p. 4.1-41. Appendix C-6, Sec. C-6.2, lists 13 "typical mitigation measures," which were assumed to be in place in the emission calculations. AFC, p. C-6-3 to C-6-5. However, all of these measures mitigate only particulate matter emissions, neglecting potentially significant NOx impacts. See Data Request 17, 19. Further, the AFC fails to specifically commit to implementing any of these mitigation measures, which were assumed to be in place in the emission calculations. Please expand the construction emission analysis to specifically commit to implement these "typical mitigation measures" plus any additional measures required to reduce NOx and PM10/PM2.5 impacts to a less than significant level.

Data Request 28: The AFC fails to make any findings as to the significance of the "mitigated" construction emissions, i.e., are the mitigated emissions still significant, requiring additional mitigation? Appendix C-6 includes ambient air quality modeling for construction emissions, but no conclusions are drawn from these analyses nor mitigation proposed, even though they are significant. See Data Request 39. Please discuss the significance of construction emissions, based either on the ambient air quality monitoring or established significance thresholds for construction emissions, such as those adopted by Ventura County and other nearby air pollution control districts.[10] The daily construction emissions reported in AFC, Table C-6-1, exceed the NOx construction significance thresholds of 24 to 25 lb/day established by Ventura, Shasta, Butte and Colusa counties and the PM10 significance threshold of 2.5 lb/day established by nearby San Luis Obispo County Air Pollution Control District. Thus, mitigated NOx and PM10 emissions are significant, requiring mitigation. This is consistent with the results of the air quality modelling. Thus, construction impacts are significant and must be mitigated. Please revise the AFC to evaluate the significance of the "mitigated" construction emissions and propose additional mitigation.

Data Request 29: The construction emission calculations assume that EPA Tier 4i engines would be used for the larger equipment (>75 hp) and EPA Tier 4 engines for the smaller equipment (<75 hp). AFC, p. C-6-4. Please specify this as a mitigation measure

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[9] CalEEMod, List of Revisions; Available at: http://www.aqmd.gov/docs/default-source/caleemod/Model/2013.2.2/revisions-2013-2-2.pdf?sfvrsn=0.

[10] BAAQMD, California Air District CEQA Significance Thresholds, Appendix A, Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Thresholds_Report_Revised_Appendices_082309.ashx?la=en.

to assure it is implemented.

Data Request 30: Unpaved/paved surface travel emissions were calculated based on CalEEMod statewide average silt content of 8.5% and silt loading of 0.1 g/m2. AFC, p. C-6-3. Please provide site-specific, measured values for silt content and silt loading.

Data Request 31: The AFC indicates that the input to the CalEEMod model – the number, type, and engine rating of construction equipment – were based on information provided by the owner's engineer. AFC, p. C-6-4. Please provide all correspondence containing and/or relating to this information.

Background: Ambient Air Quality Modeling

The AFC includes ambient air quality modeling results for normal operation (Table 4.1-27, 4.1-29), the commissioning period (Table 4.1-30), for a comparison to PSD significance thresholds (Table 4.1-31), and for construction (Table C-6-5). These results indicate that the Project would result in significant NOx and PM10 ambient air quality impacts that are not acknowledged or mitigated in the AFC.

Data Request 32: The AFC concludes that "during normal operation, the results indicate that P3 would not cause or contribute to violations of state or federal air quality standards, with the exception of the 24-hour and annual state PM10 standards [Table 4.1-29]." The AFC then dismisses this significant impact, arguing "existing background concentrations already exceed state standards." AFC, p. 4.1-28. The significance test is "cause or contribute to violations of state or federal air quality standards." The Project clearly contributes to violations, which is a significant impact. Please explain how this significant impact will be mitigated.

Data Request 33: The AFC concludes that "during commissioning activities P3 would not cause or contribute to violations of state or federal air quality standards, with the exception of the 24-hour state PM10 standard [Table 4.1-30]." The AFC again dismisses this significant impact, arguing "existing background concentrations already exceed state standards." AFC, p. 4.1-29. The significance test is "cause or contribute to violations of state or federal air quality standards." The Project clearly contributes to violations, which is a significant impact. Please explain how this significant impact will be mitigated.

Data Request 34: The AFC argues that the "maximum project impact, combined with maximum background levels, are below the most stringent state and federal ambient air quality standards.." AFC, p. 4.1-29. However, AFC Tables 4.1-29 (normal operation) and Table 4.1-30 (commissioning), for both new equipment and new equipment plus Unit 3, contain errors for the 98th percentile values. All of the sums are wrong, and much higher than reported. For example, Table 4.1-29 shows the maximum 98th percentile NOx impact is 23.9 ug/m3 and the background is 67.8 ug/m3. The sum of these two equals 91.7 ug/m3, not 69.3 ug/m3, as shown in Table 4.1-29 for new equipment.

Similarly, Table 4.1-30 reports the maximum 98th percentile project impact is 70.5 ug/m3 and the background is 67.8 ug/m3. The sum of these two equals 138.3 ug/m3, not 95 ug/m3, as reported in Table 4.1-30 for new equipment. Thus, please check Tables 4.1-29 and 4.1-30 and provide corrected versions.

Data Request 35: The 98th percentile analysis of the 1-hour NOx standard in Table 4.1-29 adds the modelled impact to the background. The background was calculated as "the 3-year average of the 98th percentile, because that is the basis of the federal standard." AFC, Table 4.1-29, footnote a. This footnote is not adequate to determine whether the applicant followed established EPA guidance on making this determination.[11] Thus, please provide unlocked Excel spreadsheets or other calculations that disclose how the background 1-hour NOx concentration was determined for NOx impacts during normal operation, including all background ambient NOx data used in the calculations.

Data Request 36: The 98th percentile analysis of the 1-hour NOx standard in Table 4.1-30 adds the modelled impact to the background. The background was calculated as "the 98th percentile, because that is the basis of the federal language." AFC, Table 4.1-30, footnote a. This footnote differs from that on Table 4.1-29, excluding the "3-year average." This footnote is not adequate to determine whether the applicant followed established EPA guidance on making this determination, as set out in EPA 2014. Thus, please provide unlocked Excel spreadsheets or other calculations that disclose how the background 1-hour NOx concentration was determined for NOx impacts during the commissioning, including all background ambient NOx data used in the calculations.

Data Request 37: Table 4.1-29 and 4.1-30 indicate that the new equipment and new equipment plus Unit 3 would violate the state 24-hour and annual average PM10 standards. The AFC dismisses these significant impacts, arguing "existing background concentrations already exceed state standards." AFC, p. 4.1-28. However, Ventura County is nonattainment for the State standard. CEC Data Request 2. Elsewhere, the AFC correctly notes that "PSD source emissions must not cause or contribute to an exceedance of any ambient air quality standard." AFC, p. 4.1-8. As the modeled PM10 concentrations contribute to an existing exceedance of the state PM10 standards, this is a significant impact that cannot be dismissed just because the background concentrations already exceed state standards. Thus, please recommend mitigation to eliminate this significant impact.

Data Request 38: The construction air quality analysis in Table C-6-5 for the 98th percentile 1-hour NOx emissions contains a calculation error. The total impact should be 213.5 ug/m3 (145.7 + 67.8 = 213.5), which exceeds the federal NOx standard of 188

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[11] Memorandum from R. Chris Owen and Roger Brode, Re: Clarification on the Use of ARMOD Dispersion Modeling for Demonstrating Compliance with the NO2 National Ambient Air Quality Standard, September 30, 2014 (EPA 2014).

ug/m3. Thus, construction NOx air quality NOx impacts are significant and unmitigated. Please revise Table C-6-5 to correct this error, modify the AFC to disclose a significant NOx construction impact, and propose NOx mitigation.

Data Request 39: The construction air quality analysis in Table C-6-5 indicates that both the 24-hour (72.7 v. 50 ug/m3) and annual PM10 (24.6 v. 20 ug/m3) modeled maximum impacts exceed state PM10 standards. These exceedances are not identified as significant construction impacts or mitigated in the AFC. Thus, please revise the AFC to acknowledge these impacts and propose mitigation to reduce them to a less than significant level.

Data Request 40: Please provide all of the modeling input and output files in original electronic format, relied on to estimate operation and construction air quality impacts described in AFC Section 4.1.3.3 and Appendix C-6.

Data Request 41: The in-stack NO2/NOx ratios used to model NOx emissions from the new gas turbine were provided by the turbine vendor. AFC, p. A-9. Please provide all communications between the turbine vendor and the applicant regarding these in-stack ratios, including supporting test data to verify their accuracy for the GE7HA.01 turbine.

Background: GREENHOUSE GAS EMISSIONS

The AFC argues that PSD review does not apply for GHG emissions, as the net emission change is below PSD significance thresholds for all criteria pollutants, except GHG emissions. AFC, p. 4.1-9. However, the Project triggers federal PSD review for both PM2.5 and NOx when the errors in the AFC's analysis are corrected. Thus, PSD review is also triggered for greenhouse gas emissions (GHG) as they exceed the significance threshold of 75,000 ton/yr (AFC, Table 4.1-11) by a significant amount (340,557 MT/yr). AFC, Table C-2.16.

Data Request 42: Please conduct a top down BACT analysis for GHG emissions that includes energy storage, energy efficiency, and rapid-start combined cycle gas turbines.

Data Request 43: Please provide all analyses that considered rapid start combined cycle turbines and energy storage options as project alternatives.

Background: HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS

The AFC estimated HAP emissions using outdated emission factors from AP-42 and the CARB CATEF database. AFC Table C-8.1. Since these emission factors were published, many stack tests have been conducted on gas turbines similar to the GE 7HA.1 proposed for the project.

Data Request 44: Please provide stack tests obtained from the turbine vendor and from air district files to support normal operation and startup/shutdown HAP emissions.

Data Request 45: Please provide all information that supports NRG's assertion that all major stationary sources owned or operated by NRG Energy, Inc. in California are in compliance with all applicable federal Clean Air Act emissions limitations and standards.

Data Request 46: Attachment 2 to the response to Data Adequacy indicates that not all air districts with units were copied. Please explain these omissions.

DATED: August 4, 2015

SHUTE, MIHALY & WEINBERGER LLP

By: s/ Ellison Folk
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October 1, 2015

John Chillerni, President
NRG Oxnard Energy Center, LLC
100 California Street, Suite 650
San Francisco, California 94111

Re: Puente Power Project (15-AFC-01); Data Requests, Set 3 (Nos. 68-79)

Dear Mr. Chillerni:

Pursuant to Title 20, California Code of Regulations, section 1716(a), the City of Oxnard requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

In this Set 3, Data Requests are being made in the technical area of Air Quality. Written responses to the enclosed data requests are due to the City staff on or before November 2, 2015.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to the City and me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 17.16(f)).

If you have any questions regarding the enclosed data requests, please call me at (415) 552-7272.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Ellison Folk

Encl.

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STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the matter of: Application for Certification of the **PUENTE POWER PROJECT**	DOCKET NO. 15-AFC-01 **CITY OF OXNARD'S DATA REQUESTS, SET 3**

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AIR QUALITY

Background

On September 3, 2015, NRG provided responses and objections to the City of Oxnard's First Set of Data Requests related to air quality emissions from the proposed P3 facility. NRG objected to the requests for certain Excel spreadsheets and technical data on the grounds that the information is confidential trade secret. NRG indicated it would provide at least some of this information subject to a nondisclosure agreement, but has not yet done so. The following data requests follow up on responses to the City's First Set of Data Requests and seek additional information and/or clarification of NRG's initial responses.

Data Request 68:

In its Data Requests 5, 6, and 8, the City requested a copy of the formal vendor guarantee and any evidence that supports the emissions calculations used for the gas turbine. In response, NRG referenced the vendor letter included in Appendix C-2 to the AFC. This is not a formal vendor guarantee. Please provide a copy of the formal vendor guarantee, including all of the operating conditions under which the vendor guarantee is valid. In addition, please explain the experience upon which the Applicant is confident that the turbines will meet the emission limits throughout the life of the project. Please include in such response all evidence (such as stack tests) that demonstrates that the emission rate of 10.6 lb/hour used in emissions calculations has been achieved by the gas turbine in comparable operating modes. The applicant's assertion that it "does not possess the requested information," is not responsive. The applicant or the applicant's consultants can request this information from the vendor and collect it from air districts that have required stack tests on similar GE Frame 7 turbines. Further, the applicant's consultant, Sierra Research, who prepared this response, certainly has a large collection of responsive stack tests conducted on similar GE Frame 7 turbines. If such evidence is in the possession of GE or Sierra Research, please request this information from them.

Data Request 69:

In response to Data Request 11, NRG referenced an emissions inventory from the Ventura Air Pollution Control District. Please provide a copy of the emission inventory that was relied upon to calculate the baseline data. Please provide any primary source data that you have to support these emissions factors, including actual stack tests for MGS Units 1 and 2. If such evidence is in the possession of GE or Sierra Research, please request this information from them.

Data Request 70:

In Data Request 16, the City requested that the Applicant identify options to mitigate the net emission increase for ROC, PM10, and PM2.5. The response indicates that the mitigation is the shutdown of MGS Units 1 and 2 and funding of air quality mitigation programs. The shutdown of MSG Units 1 and 2 is relied on in the netting analysis. Thus, it cannot also be mitigation for the resulting net increase. Please explain how the net increase in emissions will be mitigated. This response also identifies an "air quality mitigation program." This is too vague to satisfy mitigation. Please identify all actions/projects and resulting emission reductions that will be included in the "air quality mitigation program."

Data Request 71:

In Data Request 18, the City requested vendor guaranteed startup/shutdown emission "curves", e.g., NOx in ppm versus load/time since the beginning of startup and shutdown to support the startup and shut down emissions. Instead, the applicant simply repeated the unsupported information in the AFC, referring to DR-8 and DR-17. Please provide the support for these assumed startup and shutdown emissions, in the form of startup/shutdown emission curves and any supporting measurement, e.g., stack test or CEMS data.

Data Request 72:

In response to Data Request 24, NRG stated it does not possess the certificates for emissions offsets that it intends to rely on. The only way to verify the adequacy of the proposed offsets is by reviewing the certificates and the backup file that supports the certificates. Please provide copies of these certificates and the supporting files. If they are in the possession of SCE, SCE's consultants, or the air district, please request this information from them.

Data Request 73:

In Data Request 25, NRG states that it is not required to include start-up and shut down emissions in determining compliance with BACT. Please provide the legal justification for excluding start-up and shut down emissions from the BACT requirements.

Data Request 74:

In Data Requests 27 and 28, the City noted that the Applicant's analyses indicated mitigated construction emissions are significant and that additional mitigation is required. The applicant responded that these emissions are "short-term in nature with maximum ambient impacts that tend to occur very near the location of the activities." The response gives an example of the 24-hour and annual average PM10 ambient impacts, arguing that impacts are significant only within about 300 feet of the fenceline and thus not significant. This circular argument is not responsive. The construction air quality analysis in Appendix C-8 indicates that mitigated construction emissions are in fact significant, requiring additional mitigation. Please identify additional construction mitigation to reduce the significant construction emission impacts to a less than significant level.

Data Request 75:

In Data Request 29 the City noted that construction emission calculations assume that EPA Tier 4i engines would be used for larger equipment and EPA Tier 4 engines for smaller equipment and requested that these assignments be specified as mitigation measures. The response argues that the assumed use is an element of project design. However, the assignments are hidden from view, buried in modeling files, preventing any meaningful public review. Thus, please provide a table that shows each piece of construction equipment, the EPA Tier engine assumed in the emission calculations, and a commitment in the AFC itself to implement the assignments as mitigation for construction emissions.

Data Request 76:

In Data Request 30, the City requested site-specific measurements of silt content to support estimated fugitive dust emission calculations. The response states that haul roads would be covered with gravel, which will not occur until prior to construction, making it impossible to sample these roads. However, the graveled haul roads are not the only source of fugitive dust emissions that rely on silt content. Site grading, haul road grading before gravelling, and all bulldozing also depend on silt content. These site preparation and grading activities will generate significant amounts of fugitive dust. The measurement of silt content is a very simple and inexpensive test that is recommended when AP-42 calculation methods are used, which is the case here. See AP-42, Appendix C.1. Thus, please provide representative site-wide and site-specific, measured values for silt content and silt loading to verify fugitive dust emissions from site preparation and grading.

Data Request 77:

In Data Request 44, the City noted that the AFC estimated HAP emissions using outdated emission factors from AP-42 and the CARB CATEF database for all operational conditions. AFC Table C-8.1. We requested that the applicant verify these emission factors by providing stack tests to support normal operation and startup/shutdown HAP emissions. The applicant responded that it "does not possess the requested information for the GE 7HA.01 turbine." This is not responsive. The applicant or the applicant's consultants can request this information from the vendor and collect it from air districts that have required stack tests on similar GE Frame 7 turbines. Further, the applicant's consultant, Sierra Research, who prepared this response, certainly has a large collection of responsive stack tests conducted on similar GE Frame 7 turbines. The use of outdated HAP emission factors, conducted on turbines that are not representative of the Frame 7 turbines proposed here, especially during startups and shutdowns, is not a valid basis to estimate health +risks because since these emission factors were measured, changes have occurred in turbine design that affect emissions. Further, studies have demonstrated significant increases in many HAPS during startup and shutdown from similar Frame 7 turbines. The formaldehyde emission factor (formaldehyde is a carcinogen), for example, increased from 15 lb/10^{12} Btu to 7,539 lb/10^{12} Btu, or by a factor of 503, and the formaldehyde emissions increased from 0.11 to 16.08 tons/yr or by factor of 146, when the load was reduced from 100% to 30%.[1] Thus, we request that the applicant obtain and docket more recent and relevant HAP stack test information for similar GE Frame 7 turbines that includes normal operation as well as startup and shutdown conditions and use it to revise its HAP emission estimates.

Data Request 78:

In Data Request 23, the City requested raw NOx CEMS data for existing Units 1 and 2 that was relied on to estimate NOx emissions for the lookback period 2009 to 2014, including firing rate in MMBtu/hr and MW generated. The response is incomplete. Please provide the following

[1] Gas Research Institute (GRI), Gas-Fired Boiler and Turbine Air Toxics Summary Report, Final Report, August 1996, Table S-5.

information: (1) The units for the "GASFLOW" columns in the provided spreadsheet. (2) The firing rate in MMBtu/hr and the MWhr generated for each measurement period. (3) The unlocked Excel spreadsheet that shows the calculations used to generate NOx emissions for the lookback period 2009 to 2014. (4) All stack tests conducted on Units 1 and 2. (5) Please explain why there are many zero NOx values when Units 1 and 2 were running and emitting NOx. (6) Please explain how these zero NOx values were handled in calculating annual NOx emissions for the lookback period.

Data Request 79:

Unit 3 will continue to operate after the new unit starts up. An increase in emissions from this unit may affect the conclusions as to applicability of PSD review and air quality impacts. Thus, please respond to the following questions regarding Unit 3. (1) Are any changes in the operation of Unit 3 anticipated? If yes, please describe them and quantify any emission changes. (2) Please provide all CEMS data and stack tests for Unit 3.

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