CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

DATE: May 6, 2016

TO: Interested Parties

FROM: Mary Dyas, Compliance Project Manager

SUBJECT: **Blythe Energy Project (99-AFC-8C)**
Staff Analysis Petition to Amend – Reduce PM10 and SOx Limits

On August 18, 2015, Blythe Energy, Inc. (Blythe Energy) filed a petition with the California Energy Commission requesting to modify the Final Decision for the Blythe Energy Project (BEP). The modifications proposed include reducing hourly and annual particulate matter (PM10) mass emission limits, reducing the annual natural gas fuel sulfur content limit, and reducing the annual oxides of sulfur (SOx) mass emission limit from the overly conservative emission limits required within the license to more accurately reflect potential emissions from the facility.

The combined-cycle, natural gas-fired, 520-megawatt facility was certified by the Energy Commission in its Decision on March 21, 2001, and began commercial operation in July 2003. The facility is located in the city of Blythe, in Riverside County.

The amendment proposed by this petition would modify existing Air Quality Conditions of Certification **AQ-T2**, **AQ-T4**, **AQ-T6**, **AQ-T7**, and add **AQ-T7a** to make them consistent with the proposed changes to the Mojave Desert Air Quality Management District permits. However, the proposed amendment would not result in any environmental impacts or inconsistency with any laws, ordinances, regulations, or standards. The proposed changes will reduce the facility's potential to emit PM10and SOx from BEP. No change in annual fuel consumption will result from this amendment, and therefore there would be no change in greenhouse gas emissions as a result of the proposed amendment.

Energy Commission staff reviewed the petition and air quality documents, and assessed the impacts of the information provided on environmental quality and on public health and safety. It is staff's opinion that, with the implementation of the revised Air Quality conditions of certification, the facility would remain in compliance with applicable LORS, and the proposed changes to conditions of certification would not result in any significant, adverse, direct, indirect, or cumulative impacts to the environment (Cal. Code of Regs., tit. 20, § 1769). Staff intends to recommend approval of the petition at the June 8, 2016 Business Meeting of the Energy Commission.

The Energy Commission's webpage for this facility, http://www.energy.ca.gov/sitingcases/blythe/index.html, has a link to the petition and the Staff Analysis on the right side of the webpage in the box labeled "Compliance Proceeding." Click on the "Documents for this Proceeding (Docket Log)" option. After

the Final Decision, the Energy Commission's Order regarding this petition will also be available from the same webpage.

This notice has been mailed to the Energy Commission's list of interested parties and property owners adjacent to the facility site. It has also been e-mailed to the facility listserv. The listserv is an automated Energy Commission e-mail system by which information about this facility is e-mailed to parties who have subscribed. To subscribe, go to the Commission's webpage for this facility, cited above, scroll down the right side of the project webpage to the box labeled "Subscribe," and provide the requested contact information.

Any person may comment on the Staff Analysis. Those who wish to comment on the analysis are asked to submit their comments by 5:00 p.m., June 6, 2016. To use the Energy Commission's electronic commenting feature, go to the Energy Commission's webpage for this facility, cited above, click on the "Submit e-Comment" link, and follow the instructions in the on-line form. Be sure to include the facility name in your comments. Once submitted, the Energy Commission Dockets Unit reviews and approves your comments, and you will receive an e-mail with a link to them.

Written comments may also be mailed or hand-delivered to:

California Energy Commission
Dockets Unit, MS-4
Docket No. 99-AFC-8C
1516 Ninth Street
Sacramento, CA 95814-5512

All comments and materials filed with and approved by the Dockets Unit will be added to the facility Docket Log and become publically accessible on the Energy Commission's webpage for the facility.

If you have questions about this notice, please contact Mary Dyas, Compliance Project Manager, at (916) 651-8891, or by fax to (916) 654-3882, or via e-mail to mary.dyas@energy.ca.gov.

For information on participating in the Energy Commission's review of the petition, call Alana Mathews, Public Adviser, at (916) 654-4489 or (800) 822-6228 (toll-free in California) or send your e-mail to publicadviser@energy.ca.gov. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail to mediaoffice@energy.ca.gov.

Mail List: 747
Listserv: BlythePower

BLYTHE ENERGY PROJECT (99-AFC-8C)
Petition to Amend the Commission Decision
EXECUTIVE SUMMARY
Mary Dyas

INTRODUCTION

On August 18, 2015, Blythe Energy, Inc (Blythe Energy) filed a Petition to Amend (PTA) with the California Energy Commission requesting to modify the Final Decision for the Blythe Energy Project (BEP). Staff has completed its review of all materials received.

The purpose of the Energy Commission's review process is to assess any impacts the proposed modifications would have on environmental quality and public health and safety. The process includes an evaluation of the consistency of the proposed changes with the Energy Commission's Final Decision (Decision), and if the project, as modified, will remain in compliance with applicable laws, ordinances, regulations, and standards (LORS). (Cal. Code Regs., tit. 20, § 1769).

This Staff Analysis contains the Energy Commission staff's evaluation of the affected technical area of Air Quality.

PROJECT LOCATION AND DESCRIPTION

The combined-cycle, natural gas-fired, 520-megawatt facility was certified by the Energy Commission in its Decision on March 21, 2001, and began commercial operation in July 2003. The facility is located in the city of Blythe, Riverside County, on private property about 5 miles west of downtown Blythe on a 76-acre parcel.

DESCRIPTION OF PROPOSED MODIFICATIONS

The purpose of this proposed amendment is to reduce hourly and annual particulate matter (PM10) mass emission limits, reduce the annual natural gas fuel sulfur content limit, and reduce the annual oxides of sulfur (SOx) mass emission limit from the conservative emission limits required within the license to more accurately reflect potential emissions from the facility. The proposed reductions in permitted annual particulate matter less than 10 microns (PM10) mass emissions will be used as simultaneous emissions reductions at this stationary source.

BACKGROUND

On February 12, 2015, Blythe Energy filed a petition with the Energy Commission requesting to modify the Final Decision for the BEP to reduce allowable annual oxides of nitrogen (NOx), carbon monoxide (CO), and PM10 emissions. This amendment was approved on July 8, 2015. The February 2015 PTA involved several permit changes to reduce facility-wide annual mass emissions limits in the Energy Commission's Final

Decision, the Order Approving a Petition to Modify Air Quality Conditions in 2005, and the January 7, 2015 Letter Approving the Addition of a Turndown Upgrade Package to the Two Existing Gas Turbines at Blythe Energy Project. All of the proposed changes were reviewed and approved by the District in a Final Decision/Final Determination for New Source Review Action & Title V Federal Operating Permit issued on May 7, 2015. Under Mojave Desert Air Quality Management District (District) regulations, the current proposed reductions in PM10 can only be used to offset simultaneous increases, and therefore could not be included in the February 2015 PTA for the project.

The proposed changes in the current PTA will reduce the BEP's potential to emit for PM10 and SOx , but will not have any effect on actual emissions or operations. No change in annual fuel consumption will result from this PTA, and therefore there would be no change in greenhouse gas emissions as a result of the proposed amendment.

The changes proposed by this petition would modify existing Air Quality Conditions of Certification **AQ-T2**, **AQ-T4**, **AQ-T6**, **AQ-T7**, and add **AQ-T7a** to make them consistent with the proposed changes to the District permits. However, the proposed amendment would not result in any environmental impacts or inconsistency with any LORS.

NECESSITY FOR THE PROPOSED MODIFICATIONS

Blythe Energy is requesting these changes because the hourly and annual PM10 emission limits in the original BEP license were based on conservative emission limit guarantees provided by the turbine manufacturer, Siemens, as Blythe Energy did not have actual emission test results information during the certification proceeding. It has since been determined that the turbine manufacturer's emissions guarantees were overly conservative. Blythe Energy now has sufficient operating experience and test data to propose the new, lower PM10 limits. Additionally, since the BEP was licensed, a lower maximum annual average natural gas fuel sulfur content has been permitted at other facilities under the Energy Commission's jurisdiction, including the adjacent Sonoran Energy Project (SEP). As BEP's annual SOx emission limit is based on a higher annual average natural gas fuel sulfur content, SOx emission limits are overestimated and conservative.

BEP was required to surrender emission reduction credits (ERCs) to offset the original permitted emissions from the project. Because the permitted emissions from BEP are being reduced, the offset obligation will also be reduced. Although the emission reductions generated by simultaneous reductions at BEP are not eligible for banking as ERCs, since both BEP and the Blythe II/ SEP are regulated as a single source under the District's Regulation XIII, the project owner proposes to use the emissions reductions from BEP to reduce the offset liability for the proposed SEP facility, based on District Rule 1305 (B)(2)(b) of Regulation XIII. These proposed new, lower limits are based on actual operating experience and will more accurately reflect the actual emissions from the gas turbines.

STAFF'S ASSESSMENT OF THE PROPOSED PROJECT CHANGES

Energy Commission technical staff reviewed the petition to amend for potential environmental effects and consistency with LORS. Staff has determined that the technical or environmental areas of Biological Resources, Cultural Resources, Efficiency, Facility Design, Geological Hazards and Resources, Hazardous Materials Management, Land Use, Noise and Vibration, Paleontological Resources, Public Health, Reliability, Socioeconomics, Soil and Water Resources, Traffic and Transportation, Transmission Line Safety And Nuisance, Transmission System Engineering, Visual Resources, Waste Management, and Worker Safety and Fire Protection are not affected by the proposed changes, and no revisions or new conditions of certification are needed to ensure the project remains in compliance with all applicable LORS.

Staff determined that the technical area of Air Quality would be affected by the proposed project changes and has proposed revised conditions of certification in order to assure compliance with LORS. The **Environmental Justice Population Figure** shows 2010 census blocks in the six-mile radius of the BEP with a minority population greater than or equal to 50 percent. The population in these census blocks represents an EJ population based on race and ethnicity as defined in the Council on Environmental Quality's *Environmental Justice: Guidance Under the National Environmental Policy Act*.

Based on the American Community Survey (ACS) data in the **Environmental Justice Population Table**, staff concluded that when compared with the below-poverty-level population in Riverside County, the Census County Division (CCD) of Blythe has a higher percent of people living below the poverty level, and thus are considered an EJ population based on poverty as defined in *Environmental Justice: Guidance Under the National Environmental Policy Act*.

Environmental Justice Population Table-
Poverty Data within the Project Area

	Total Population	Population Below Poverty Level	Percent Below Poverty Level (%)
	Estimate*	Estimate	Estimate
CCDs** in a Six-Mile Radius			
Blythe CCD	15,510 ±669	3,765 ±618	24.3 ±4.0
Reference Geography			
Riverside County	2,232,372 ±1,497	376,737 ±8,134	16.9 ±0.4

Notes: *Population for whom poverty is determined. ** Census County Division. Staff's analysis of the 2010 – 2014 estimates returned coefficient of variation values less than 15, indicating the data is reliable.

Air quality impacts from the proposed changes are considered less than significant including impacts to the environmental justice population. Therefore, there are no Air Quality environmental justice issues related to the proposed modifications.

A summary of staff's conclusions reached in each technical area are summarized in **Executive Summary Table 1**. The details of the proposed changes to the Air Quality conditions of certification can be found in the Air Quality analysis.

Executive Summary Table 1
Summary of Impacts to Each Technical Area

TECHNICAL AREAS REVIEWED	STAFF RESPONSE			Revised Conditions of Certification Recommended
	Technical Area Not Affected	No Significant Environmental Impact*	Process As Amendment	
Air Quality			X	X
Biological Resources	X			
Cultural Resources	X			
Efficiency	X			
Facility Design	X			
Geological Hazards & Resources	X			
Hazardous Materials Management	X			
Land Use	X			
Noise and Vibration	X			
Paleontological Resources	X			
Public Health	X			
Reliability	X			
Socioeconomics	X			
Soil and Water Resources	X			
Traffic and Transportation	X			
Transmission Line Safety & Nuisance	X			
Transmission System Engineering	X			
Visual Resources	X			
Waste Management	X			
Worker Safety and Fire Protection	X			

*There is no possibility that the modifications may have a significant effect on the environment and the modification will not result in a change or deletion of a condition adopted by the commission in the final decision or make changes that would cause the project not to comply with any applicable laws, ordinances, regulations, or standards (LORS) (20 Cal. Code Regs., § 1769 (a)(2)).

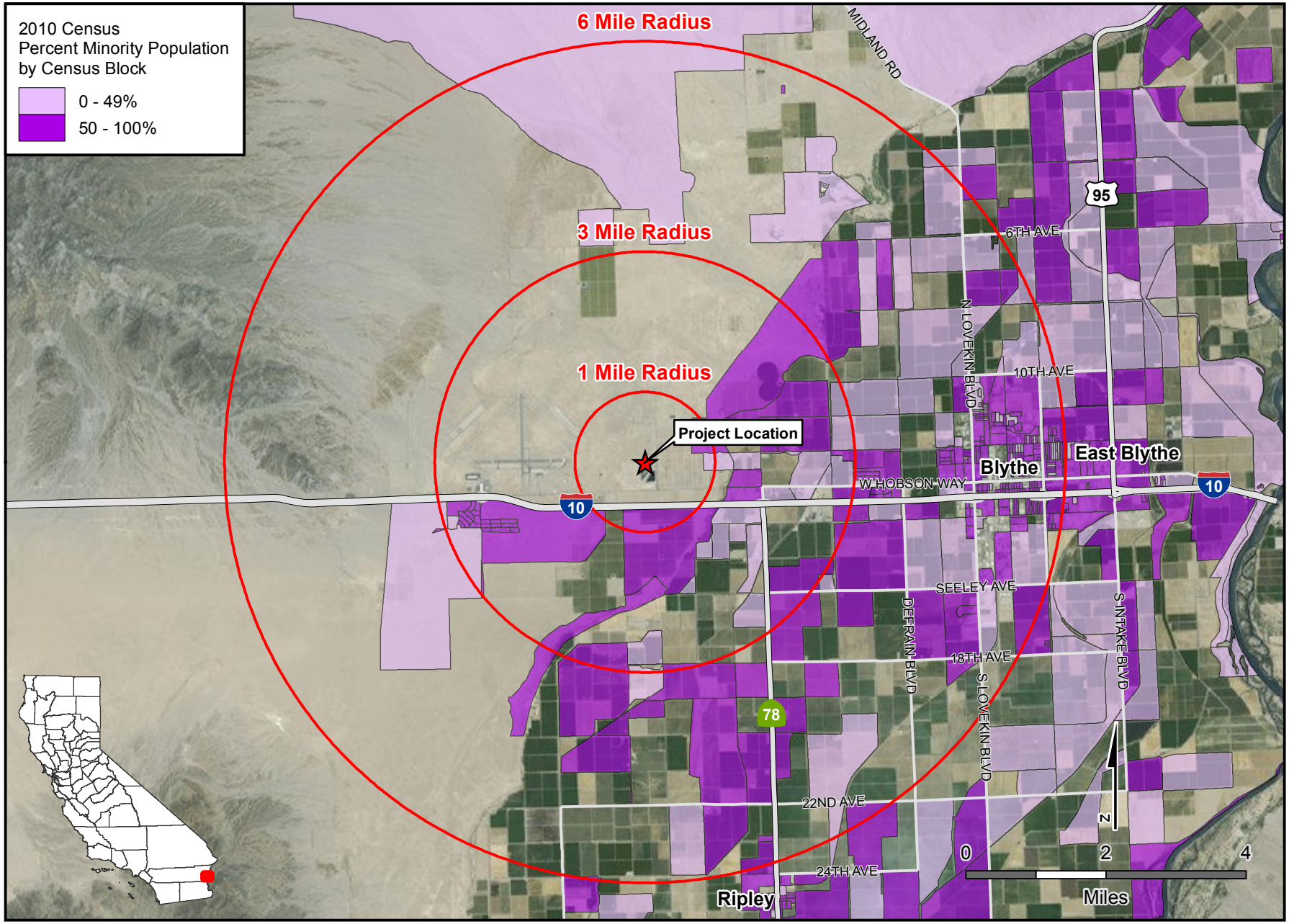
STAFF RECOMMENDATIONS AND CONCLUSIONS

Staff concludes that the following required findings, mandated by Title 20, California Code of Regulations, section 1769 (a)(3), can be made, and staff recommends approval of the petition by the Energy Commission:

- The proposed modification(s) would not change the findings in the Energy Commission's Decision pursuant to Title 20, California Code of Regulations, section 1755;
- There would be no new or additional unmitigated, significant environmental impacts associated with the proposed modification;
- The facility would remain in compliance with all applicable LORS;
- The modifications proposed in the petition would not result in any additional impacts beyond those already analyzed in the Commission Decision and subsequent amendments or the Final Determination of Compliance;
- The proposed modifications would be beneficial to the project owner as it will reduce the BEP's potential to emit SOx and PM10 but will not have any effect on actual emissions; and
- The proposed modification is based on information that was not known and could not have been known prior to Commission certification, and will ensure that BEP maintains its emissions at levels well below the approved limits, thereby keeping air quality impacts below those previously analyzed.

ENVIRONMENTAL JUSTICE POPULATION FIGURE

Blythe Energy Project - Census 2010 Minority Population by Census Block



CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: Census 2010 PL 94-171 Data

BLYTHE ENERGY PROJECT (99-AFC-08C)

Petition to Amend the Commission Decision

AIR QUALITY

Tao Jiang, Ph.D., P.E.

SUMMARY OF CONCLUSIONS

In this petition to amend the Blythe Energy Project (BEP), the petitioner proposes to modify the existing **Air Quality** Conditions of Certification. Staff concludes that with the adoption of the attached conditions of certification, the amended BEP would not result in significant adverse air quality related impacts, and that the BEP would continue to comply with all applicable federal, state and Mojave Desert Air Quality Management District (District) air quality laws, ordinances, regulations, and standards (LORS).

INTRODUCTION

On August 18, 2015, Blythe Energy Inc. filed a Petition to Amend (PTA) with the Energy Commission requesting to change certain Air Quality Conditions of Certification for the BEP (BEP 2015). The BEP was originally certified by the Energy Commission on March 21, 2001 and began commercial operations in July 2003. The facility is a nominal 520 megawatt natural gas-fired combined-cycle power plant located in the City of Blythe.

The current amendment requests to reduce particulate matter less than 10 micrometers in diameter (PM10) and oxides of sulfur (SOx) mass emissions limits to more closely reflect the current actual lower emissions from the facility. The amendment proposes to modify several Air Quality Conditions of Certification. However, the amendment does not involve significant modifications to any plant equipment, facility design or operating parameters. While these new permit limits would reduce the Potential to Emit (PTE), they are not expected to change actual emissions from BEP. All changes have been reviewed and approved by the District in a Preliminary Determination on Title V Federal Operating Permit Significant Modification (MDAQMD 2015) issued on December 18, 2015.

SUMMARY OF THE DECISION

BEP was certified by the Energy Commission on March 21, 2001 (CEC 2001) and began commercial operations in July 2003. The Energy Commission Approved a Petition to Modify Air Quality Conditions in 2005 (CEC 2005a), including CO emission limits, startup/shutdown emission limits and duration limits. In January 2015, the Energy Commission approved the addition of a turndown upgrade package to the two existing combustion turbines (CEC 2015a). In July 2015, the Energy Commission approved another petition to reduce allowable annual NOx, CO, and PM10 Emissions (CEC 2015b).

The current amendment proposes changes to several Air Quality Conditions of Certification. More specifically:

- Reduction of annual natural gas fuel sulfur content limit (AQ-T2);
- Reduction of hourly PM10 emission limit (AQ-T4);
- Reduction of Daily PM10 emission limit (AQ-T6);
- Reduction of Annual SOx and PM10 emission limits (AQ-T7); and
- Addition of combined annual emission limits of NOx, CO, VOC, SOx and PM10 for Blythe Energy Project and Sonoran Energy Project (AQ-T7a).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS - COMPLIANCE

The proposed BEP is subject to all the LORS described in the Decision for BEP (CEC 2001) and previous amendments (CEC 2005b, CEC2015a, CEC 2015c). The analysis of this amendment would not change any LORS.

ANALYSIS OF REQUESTED CHANGES

HOURLY, DAILY AND ANNUAL PM10 EMISSION LIMITS

The PM10 emissions limits in the BEP license (including all amendments prior to the current proposal) were approved based in part on conservative emissions guarantees provided by the combustion turbine manufacturer. Based on operating experience and recent source test reports, BEP determined that the PM10 mass emission rates used to establish emissions limits in the current license were overly conservative and they now propose to lower these limits.

Air Quality Table 1 summarizes PM10 test results during 2014 annual source testing of the BEP combustion turbines. Based on these test results, BEP now proposes to reduce the hourly and daily combustion turbine PM10 limits, which are shown in **Air Quality Table 2**.

Air Quality Table 1
2014 PM10 Source Test Results for BEP Combustion Turbines (lb/hr)

Unit	Run 1	Run 2	Run 3	Average
Unit 1	4.6	1.6	1.5	2.5
Unit 2	2.4	2.7	0.8	1.9

Source: BEP 2015.

Air Quality Table 2
Current and Proposed PM10 Emissions for BEP Combustion Turbines

	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)
Current Limit	11.5	565
Proposed Limit	6.2	298.5
Net Change	(5.3)	(266.5)

Source: BEP 2015 and independent staff assessment.

The proposed reduction in hourly and daily PM10 emission limits for combustion turbines would also reduce the facility wide annual PM10 PTE. The derivation of the proposed new facility-wide annual PM10 limit is shown in Air Quality Table 3. Based on the source test results, BEP proposed to reduce the facility wide annual PM10 emissions from 100 tons per year (tpy) to 56.9 tpy.

Air Quality Table 3
Proposed and Current BEP Facility Wide Annual PM10 PTE (tpy)

	PM10 PTE
Combustion Turbines (proposed)	54.5[a]
Main Cooling Tower (current)	2.24
Chiller Cooling Tower (current)	0.16
Diesel Fire Water Pump (current)	0.0067
Total (proposed)	56.9
Current Permit Limit (CEC 2015b)	97
Net Change	(40.1)

Source: BEP 2015 and independent staff assessment.

Note: a Annual PTE for combustion turbines are calculated as 6.2 lb/hr per unit *2 units * 8,760 hrs/yr.

ANNUAL SOX EMISSION LIMIT

The annual SOx emission limit for BEP was based on a maximum annual average natural gas fuel sulfur content of 0.5 grains per 100 standard cubic feet (gr/100scf). Recent licensed projects, including the adjacent Blythe II/Sonoran Energy Project, have assumed much lower annual average sulfur content. Therefore, BEP now proposes a new limit of 0.25 grams (gr)/100standard cubic feet (scf) sulfur content to be used for the calculation of annual SOx emissions, expressed as sulfur dioxide (SO_2). This would reduce BEP's SOx annual PTE from 24 tpy to 12 tpy.

SIMULTANEOUS EMISSIONS REDUCTIONS

BEP was required to surrender emission reduction credits (ERCs) to offset the original permitted emission from the project. Because the permitted emissions from BEP are being reduced, the offset obligation will also be reduced. Although the emission reductions generated by simultaneous reductions at BEP are not eligible for banking as ERCs, since both BEP and the Blythe II/Sonoran Energy Project (SEP) are regulated as a single source under the District's Regulation XIII, the project owner proposes to use the emissions reductions from BEP to reduce the offset liability for the proposed SEP facility, based on District Rule 1305 (B)(2)(b) of Regulation XIII. As a result, staff proposes new Conditions of Certification **AQ-T7a** for combined annual emission limits for BEP and SEP to ensure no net emission increases from these two projects combined.

ENVIRONMENTAL JUSTICE IMPACTS

Air quality impacts from the proposed changes are considered less than significant including impacts to environmental justice populations. No changes to the project mitigation are being proposed including ERCs. Therefore, there are no Air Quality environmental justice issues related to the proposed facility modifications and no minority or low-income populations would be significantly or adversely impacted.

CONCLUSIONS AND RECOMMENDATIONS

The requested project changes would conform to applicable federal, state, and District LORS. Therefore the amended project would not cause any significant adverse air quality impacts, provided that the following conditions of certification are included. Staff recommends that the revised conditions of certification be approved as shown below.

AMENDED AND NEW CONDITIONS OF CERTIFICATION

Below is a list of conditions of certification that staff recommends to be revised from those approved in the 2001 Energy Commission Final Decision (CEC 2001) and the 2005 (CEC 2005b), January 2015 (CEC 2015a) and July 2015 (CEC 2015b) Orders Approving Petitions to Amend. These changes also reflect the December, 2015 District Preliminary Decision. **Underline and bold** is used for new language.

District Preliminary Determination on Title V Federal Operating Permit Significant Modification

AQ-T2 The turbines shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.5 grains per 100 dscf **on a twenty-four hour basis and not exceeding 0.25 grains per 100 dscf** on a rolling twelve month average basis. The turbines shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

Verification: The project owner shall incorporate into the Quarterly Operations Report either a monthly laboratory analysis showing the fuel sulfur content, a monthly fuel sulfur content report from the fuel supplier(s), or the results from a custom fuel monitoring schedule approved by U.S. EPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG.

AQ-T4 Emissions from the turbines (including the associated duct burners) shall not exceed the following emission limits at any firing rate, except for CO, NO_x and VOC during periods of startup, shutdown and malfunction:

a. Hourly rate, computed every 15 minutes, verified by CEMS and annual compliance tests:

i. NOx as NO_2 — the most stringent of 19.80 lb/hr or 2.5 ppmvd corrected to 15% O_2 and averaged over one hour~~)~~.

ii. NOx as NO_2 — effective May 7, 2016, 2.0 ppmvd corrected to 15% O_2 and averaged over a rolling 12 month period.

iii. CO — the most stringent of 17.5 lb/hr or 4.0 ppmvd corrected to 15% O_2 and averaged over 3 hours.

iv. CO – 10 lb/hr averaged over a rolling 12-month period

b. Hourly rates, verified by annual compliance tests or other compliance methods in the case of SOx:

i. VOC as CH_4 — 2.9 lb/hr (based on 1 ppmvd corrected to 15% O_2).

ii. SOx as SO_2 — 2.7 lb/hr (based on 0.5 grains/100 dscf fuel sulfur).

iii. PM10 — ~~11.5~~**6.2** lb/hr.

Verification: The project owner shall submit the following in each Quarterly Operations Report: All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, monthly, total quarterly, total calendar year, and rolling 12-month emissions of NO_x, CO, PM10, VOC and SO_x (including calculation protocol); total monthly and rolling 12-month fuel use in the gas turbines and duct burners; average NO_2 concentration and average CO mass emission rate, for all operating periods except during startup, shutdown and malfunction, for each gas turbine and associated duct burner, calculated on a rolling 12-month basis; a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430; operating parameters of emission control equipment, including but not limited to ammonia injection rate, NO_x emission rate and ammonia slip; any maintenance to any air pollutant control system (recorded on an as-performed basis); and any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.

AQ-T6 ~~Emissions~~**Aggregate emissions** from the turbines, including the duct burner**s**, shall not exceed the following emission limits, based on a calendar day summary:

a. NOx — 5762 lb/day, verified by CEMS.

b. CO — 8004 lb/day, verified by CEMS.

c. VOC as CH4 — 239 lb/day, verified by compliance tests and hours of operation in steady-state, pre-mix mode.

d. SOx as SO_2 — 130 lb/day, verified by fuel sulfur content and fuel use data.

e. PM10 — ~~565~~**298.5** lb/day, verified by compliance tests and hours of operation.

Verification: The project owner shall submit the following in each Quarterly Operations Report: All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NO_x, CO, PM_{10}, VOC and SO_x (including calculation protocol); a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430; operating parameters of emission control equipment, including but not limited to ammonia injection rate, NO_x emission rate and ammonia slip; any maintenance to any air pollutant control system (recorded on an as-performed basis); and any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.

AQ-T7 Emissions from all units at this facility, including the cooling towers, shall not exceed the following emission limits, based on a rolling 12 month summary:

a. NOx —97 tons/year, verified by CEMS.

b. CO —97 tons/year, verified by CEMS.

c. VOC as CH_4 — 24 tons/year, verified by compliance tests and hours of operation in steady-state, pre-mix mode.

d. SOx as SO_2 — ~~24~~**12** tons/year, verified by fuel sulfur content and fuel use data.

e. PM10 — ~~97~~**56.9** tons/year, verified by compliance tests and hours of operation.

These limits shall apply to all emissions from all units at this facility, and shall include emissions during all modes of operation, including startup, shutdown and malfunction.

Verification: The project owner shall submit the following in each Quarterly Operations Report: All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, monthly, total quarterly, total calendar year, and rolling 12-month emissions of NO_x, CO, PM10, VOC and SO_x (including calculation protocol); total monthly and rolling 12-month fuel use in the gas turbines and duct burners; average NO_2 concentration and average CO mass emission rate for all operating periods except during startup, shutdown and

malfunction for each gas turbine and associated duct burner, calculated on a rolling 12-month basis; a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430; operating parameters of emission control equipment, including but not limited to ammonia injection rate, NO_x emission rate and ammonia slip; any maintenance to any air pollutant control system (recorded on an as-performed basis); and any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.

AQ-T7a **Emissions from all permit units at the Blythe Energy Project, when combined with the emissions from all permitted units located at the adjacent Sonoran Energy Project, shall not exceed the following emission limits, based on a rolling 12 month summary:**

a. **NOx – 182.6 tons/year, verified by CEMS**
b. **CO – 175 tons/year, verified by CEMS**
c. **VOC as CH4 – 48.3 tons/year, verified by compliance tests and hours of operation in steady-state, pre-mix mode**
d. **SOx as SO_2 – 20.8 tons/year, verified by fuel sulfur content and fuel use data**
e. **PM10 – 97 tons/year, verified by compliance tests and hours of operation**

These limits shall include emissions during all modes of operation, including startup, shutdown and malfunction. (NOTE: Pursuant to Regulation XIII the District considers the Blythe Energy Project and the Sonoran Energy Project to be one facility. Each of these projects has been separately certified by the Energy Commission pursuant to Public Resources Code Section 25500.)

Verification: See Verification of AQ-T7.

REFERENCES

BEP 2015 - Blythe Energy Inc. Petition of Amend Blythe Energy Project (99-AFC-08C), August 18, 2015.

CEC 2000 - California Energy Commission. Final Staff Assessment/Environmental Assessment Filed Jointly (99-AFC-08). November 14, 2000.

CEC 2001 - California Energy Commission. Commission Decision of Blythe Energy Project (99-AFC-08). March 26, 2001.

CEC 2005a - California Energy Commission, Preliminary Staff Assessment (99-AFC-08C). January 24, 2005.

CEC 2005b - California Energy Commission, Order Approving a Petition to Modify Air Quality Conditions (99-AFC-08C). June 24, 2005.

CEC 2015a – California Energy Commission. Letter Approving Requested Modification to Add a Turndown Upgrade Package to the Two Existing Gas Turbines at Blythe Energy Center (99-AFC-8C). January 7, 2015.

CEC 2015b – California Energy Commission. Order Approving a Petition to Reduce Allowable Annual Nox, CO, and PM10 Emissions at Blythe Energy Center (99-AFC-8C). July 16, 2015.

CEC 2015c – California Energy Commission. Staff Analysis of Petition to Amend (99-AFC-8C). June 3, 2015.

MDAQMD 2015 - Mojave Desert Air Quality Management District. Preliminary Determination on Title V Federal Operating Permit Significant Modification. December 18, 2015.