
Petition for Amendment

Air Quality Conditions of Certification

for the

Walnut Creek Energy Park

City of Industry, California

(05-AFC-02C)

Submitted to the:

California Energy Commission

Submitted by:

Walnut Creek Energy, LLC

DOCKET	
05-AFC-2C	
DATE	_____
RECD.	MAR 30 2011

With Technical Assistance by:



March 2011

(As Amended to reflect conditions in Revised DOC issued by SCAQMD 3/11/2011)

Contents

Section	Page
Acronyms and Abbreviations	v
Executive Summary.....	vii
1. Introduction.....	1-1
1.1 Overview	1-1
1.2 Administrative History	1-2
1.3 Siting Regulations	1-3
1.4 Facility Ownership.....	1-4
1.5 Necessity of Proposed Changes.....	1-4
1.6 Objectives and Benefits of Proposed Changes.....	1-5
1.6.1 Quick-start and Fast-ramping Capability	1-6
1.6.2 Replacement of Older Generation	1-8
1.7 Consistency of Changes with Certification	1-9
1.8 Summary of Environmental Impacts	1-10
1.9 Conditions of Certification	1-10
1.10 References	1-10
2. Description of Amendment.....	2-1
2.1 Offset Exemption under SCAQMD Rule 1304.....	2-1
2.2 Startups and Shutdowns	2-4
2.3 SO _x RECLAIM Trading Credits.....	2-6
2.4 CO Emission Limit.....	2-6
3. Environmental Analysis.....	3-1
3.1 Air Quality	3-1
3.1.1 Environmental Baseline Information	3-1
3.1.2 Conditions of Certification.....	3-3
3.2 LORS.....	3-7
4. Potential Effects on the Public	4-1
5. List of Property Owners	5-1
6. Potential Effects on Property Owners	6-1

Tables

1-1	Conditions of Certification to Be Amended
1-2	Information Requirements for Post-certification Modifications
1-3	Aging Power Plants in the LA Basin Local Reliability Area
2-1	Required Offsets for Non-RECLAIM Pollutants (per-turbine basis, lb/day)
2-2	Calculation of NO _x RECLAIM Trading Credits
2-3	Calculation of SO _x RECLAIM Trading Credits

- 3-1 South Coast Air Basin Attainment Status
- 3-2 Criteria Pollutant Precursor Relationships, per SCAQMD Rules
- 3-3 Compliance with Laws, Ordinances, Regulations, and Standards

Figures

- 1-1 Example of Wind Generation Variability
- 1-2 CAISO Resources Required for Renewables Integration
- 1-3 Example of Over-generation

Attachments

- A Emissions and Offset Calculations
- B 1-Hour NO₂ Modeling Information
- C Property Owners within 1,000 feet of the Proposed Facility

Acronyms and Abbreviations

$\mu\text{g}/\text{m}^3$	microgram(s) per cubic meter
AESHB	AES Huntington Beach, LLC
AFC	Application for Certification
BACT	Best Available Control Technology
CAISO	California Independent System Operator
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO	carbon monoxide
COC	Condition of Certification
DOC	Determination of Compliance
EME	Edison Mission Energy
EMHB	Edison Mission Huntington Beach, LLC
EPA	U.S. Environmental Protection Agency
ERC	emission reduction credit
FDOC	Final Determination of Compliance
HB	Huntington Beach
LORS	laws, ordinances, regulations, and standards
MMBtu/MWh	million British thermal units per megawatt hour
MW	megawatt(s)
NAAQS	National Ambient Air Quality Standards
NO _x	oxides of nitrogen
NSR	New Source Review
PM	particulate matter
PM10	particulate matter less than 10 microns in equivalent diameter
PPA	power purchase agreement
ppm	part(s) per million

PRA	Priority Reserve Account
PRC	Priority Reserve Credit
PSD	Prevention of Significant Deterioration
PTC	Permit to Construct
PTO	Permit to Operate
RECLAIM	Regional Clean Air Incentives Market
RTC	RECLAIM Trading Credits
SCAQMD	South Coast Air Quality Management District
SO ₂	sulfur dioxide
SO _x	oxides of sulfur
STG	steam turbine generator
tpy	ton(s) per year
VOC	volatile organic compound
WCE	Walnut Creek Energy, LLC
WCEP	Walnut Creek Energy Park

Executive Summary

Walnut Creek Energy, LLC (WCE) petitions the California Energy Commission to amend the certification for Walnut Creek Energy Park (WCEP) (05-AFC-02C). WCE requests revisions to several air quality Conditions of Certification (COC) set forth in the February 2008 certification for WCEP. The changes requested include modifications to the mitigation measures regarding emission offsets, an increase in startups, and a reduction in the CO emission limit. Specifically, WCE requests changes to COC AQ-SC7 and AQ-SC8 and the addition of AQ-19 regarding offsets for emissions of particulate matter (PM), SO_x and VOC; AQ-3 regarding the number of start-ups per year; AQ-4 to lower the CO emissions limit; and AQ-16 regarding the NO_x and SO_x RECLAIM Trading Credit obligation. This petition does not involve modifications to the power plant equipment or the facility design.

The requested changes to the air quality COCs take into account the current severe scarcity of emission reduction credits (ERCs) in the South Coast Air Basin and the rescission of the amendment to the South Coast Air Quality Management District's (SCAQMD) Rule 1309.1 that previously permitted power plants to obtain offsets from their Priority Reserve Account (PRA). WCE proposes instead to offset the facility's emissions by retiring certified ERCs and a partial offset exemption under SCAQMD Rule 1304(a)(2) for replacing older steam boiler equipment with newer quick-start and more efficient advanced natural-gas-fired generation (existing COC AQSC-7 and AQSC-7 and new COC AQ-19).

Subject to obtaining certain regulatory and other consents and receipt of related revisions to the SCAQMD Final Determination of Compliance (FDOC) for the WCEP, Edison Mission Huntington Beach, LLC (EMHB), an affiliate of WCE under common ownership, will purchase two electric utility steam boilers and their associated steam turbine generators (STGs) from AES Huntington Beach, LLC (AESHB) and will permanently retire these units per the requirements of SCAQMD's Rule 1304(a)(2) to qualify for a partial emissions offset exemption. The two boilers and steam turbines to be purchased are AESHB's Units 3 and 4, which are currently in operation at AESHB's Huntington Beach facility. EMHB will lease the two units (HB 3 and 4) back to AESHB, who will remain as the operator until the required permanent shutdown. CEC approval of the ownership change will be a separate proceeding under Huntington Beach Generating Station Retool Project, 00-AFC-13.

In connection with this request and per applicable regulatory requirements, WCE will:

- Apply to the Federal Energy Regulatory Commission and CEC for approval of the change of ownership of HB 3 and 4's boilers and STGs
- Provide evidence to CEC and SCAQMD of common ownership of WCE and HB 3 and 4's boilers and STGs prior to SCAQMD's issuance of WCE's Permit to Construct (PTC)
- Demonstrate that EMHB holds sufficient RECLAIM Trading Credits (RTCs) for HB 3 and 4 for the compliance year in which the change of ownership occurs, consistent with SCAQMD requirements

- Cause EMHB to surrender the operating permits for HB 3 and 4 prior to startup (first fire) of the WCEP turbines in accordance with the SCAQMD PTC, draft Permit to Operate (PTO), and amended CEC License, at which time HB 3 and 4's boilers will be rendered permanently inoperable

WCE also seeks to resolve an inconsistency between the Decision, SCAQMD's FDOC, and the requirements of WCE's Power Purchase Agreement (PPA) regarding the number of startups per year (COC AQ-3). WCE also seeks to lower the emission limit for CO from 6 parts per million (ppm) to 4 ppm, to reflect a change in best available control technology (BACT) (COC AQ-4). Finally, WCE seeks to increase the project's NO_x RECLAIM Trading Credit obligation to be consistent with increased startups (AQ-16).

The revisions to the COC for WCEP, as proposed, will not cause significant adverse impacts to the environment and will not cause environmental impacts substantially different than those addressed in the Commission Decision. The proposed project revisions are consistent with all applicable LORS. This Petition for Amendment is based on a change in SCAQMD rules and is not based on new information that changes or undermines any other basis for the Commission Decision.

Introduction

1.1 Overview

Walnut Creek Energy, LLC (WCE) petitions the California Energy Commission (CEC or Commission) to amend the certification for Walnut Creek Energy Park (WCEP) (05-AFC-02C). This amendment would involve modifications to several air quality Conditions of Certification (COC). Note that COCs with the prefix AQSC- are conditions of the CEC Staff and COCs with the prefix AQ- are conditions of the South Coast Air Quality Management District (SCAQMD). The proposed project revisions are consistent with all applicable LORS. This Petition for Amendment is based on SCAQMD rules and is not based on new information that changes or undermines any other basis for the final Decision. Table 1-1 presents the COCs that WCE is seeking to amend.

TABLE 1-1
Conditions of Certification to Be Amended

Condition of Certification	Amendment Requested
AQSC-7, AQSC-8, and AQ-19 (new)	Recognize emission reduction credit exemption allowed by Rule 1304(a)(2) as a result of decommissioning HB Units 3 and 4, and stipulate offset requirements for non-exempt emissions
AQSC-7	Specify revised offset requirements
AQ-3	Increase the number of startups from 350 to 480
AQ-4	Decrease the carbon monoxide (CO) emission limit from 6 parts per million (ppm) to 4 ppm to meet new best available control technology (BACT) requirements
AQ-16	Increase the first year and second year NO _x RECLAIM Trading Credit obligations to reflect the increase in startups, and adding SO _x RECLAIM Credit obligations

This petition does not involve modifications to any of the power plant equipment or to the facility design.

The requested COC changes related to emission offsets (existing COCs AQSC-7, AQSC-8, and proposed new COC AQ-19) take into account the current severe scarcity of emission reduction credits (ERCs) in the South Coast Air Basin and the rescission of the amendment to SCAQMD's Rule 1309.1 that previously permitted power plants to obtain offsets from SCAQMD's Priority Reserve Account (PRA), also called Priority Reserve Credits (PRC). The Commission Decision allows the project owner to offset emissions either through the surrender of certified ERCs or through the PRA, per SCAQMD Rule 1309.1. However, because PRA offsets are no longer available, WCE proposes instead to meet the SCAQMD emissions offset requirements with a combination of certified ERCs and a partial (89.91 percent) exemption from providing ERCs as offsets that is offered under SCAQMD Rule 1304(a)(2) for replacing older existing utility steam boiler equipment with newer and

more efficient advanced natural-gas-fired generation. To achieve this, WCE would purchase the steam boilers and steam turbine generators of Huntington Beach (HB) Units 3 and 4 from AES Southland Holdings, LLC and its subsidiary, AESHB and would retire HB Units 3 and 4.

1.2 Administrative History

WCE filed the WCEP Application for Certification (AFC) at the CEC under CEC Docket No. 05-AFC-2 in 2005 (WCE, 2005) and filed a Permit to Construct (PTC) application with SCAQMD at the same time under Facility ID #146546. Because the CEC has exclusive jurisdiction over permitting thermal power plants greater than 50 megawatts (MW) in California, the CEC requested a Determination of Compliance (DOC) from SCAQMD per SCAQMD's Rule 1301(b)(2)). SCAQMD issued the Final Determination of Compliance (FDOC) on February 14, 2007, and amended the FDOC on February 26, 2008, and its proposed conditions were incorporated into the CEC's Commission Decision, which certified the WCEP on February 27, 2008 (CEC, 2008). This Petition, as amended, is filed based on the Revised DOC issued by SCAQMD on March 11, 2011.

SCAQMD Regulation XIII requires a demonstration that emission increases subject to the New Source Review (NSR) program do not interfere with the attainment or maintenance of any state or national ambient air quality standards for each applicable pollutant, unless adequate emissions offsets are provided. SCAQMD's FDOC and CEC's Decision require that WCE provide offsets for increases of oxides of nitrogen (NO_x), sulfur dioxide (SO₂), volatile organic compounds (VOC), CO, and particulate matter less than 10 microns in equivalent diameter (PM₁₀) emissions, where PM₁₀ offsets would serve as mitigation for both PM₁₀ and PM_{2.5} emissions. The Decision found that WCEP would not cause air quality to exceed the state and national ambient air quality standards, and would not have a significant impact on the progress toward attainment of the state and federal annual and 24-hour average PM₁₀ standards, which were already being exceeded. Furthermore, the Decision found that all air pollutants would be mitigated to a level of insignificance by use of BACT and retirement or surrender of emission offsets or credits, and would not cause an adverse cumulative impact.

Because of the need for new generation in the region and a severe shortage of ERCs for PM₁₀ and SO_x (as a precursor to PM₁₀), the Commission Decision includes a provision for WCE to offset PM and oxides of sulfur (SO_x) emissions using either traditional ERCs or those made available through SCAQMD's PRA. WCE has obtained offsets to mitigate emissions of NO_x, as a precursor to ozone, through SCAQMD's Regional Clean Air Incentives Market (RECLAIM) Trading Credit (RTC) program and for VOCs by purchase of ERCs on the open market.

The Commission Decision states:

The SCAQMD has established a [sic] Priority Reserve Credits (PRCs) for SO_x, and PM₁₀, requiring the Applicant to pay a mitigation fee to the District commensurate with the levels of emissions of each pollutant from the project and retire purchased credits at a ratio of 1.0:1.0, and continue to attempt to secure traditional ERCs for each pollutant (CEC, 2008:17).

SCAQMD's amendment to Rule 1309.1 to allow the SCAQMD to use credits from its PRA to offset power plant emissions was subsequently challenged in state court. The state court found the California Environmental Quality Act (CEQA) analysis supporting the amendment to Rule 1309.1 allowing power plants access to ERCs to be inadequate, leading to its repeal in January 2010. For this reason, PRCs are not at this time available to WCEP under Rule 1309.1.

The need to replace aging, inefficient, inflexible, older existing generation resources (most of which are banned from continued use of once-through-cooling after 2020), combined with the inability to permit new sources, puts the southern California power grid at risk. Despite having undergone a CEQA-equivalent review by the CEC and having obtained all necessary permits, construction of the WCEP cannot take place until sufficient offsets are obtained or another path is identified for regulatory compliance. An exemption to the requirements for providing emission offsets per SCAQMD's Rule 1303, is allowed for electric generating plants under SCAQMD's Rule 1304(a)(2), and would significantly benefit air quality in the basin by retiring older, less efficient generation and replacing it with efficient and clean peaking generation that is capable of supporting the integration of renewable power and the overall stability of the grid. Senate Bill 826 (signed into law October 11, 2009), authorizes the SCAQMD to issue permits under the Rule 1304(a)(2) exemption through May 1, 2012.

1.3 Siting Regulations

This Petition for Amendment contains all of the information that is required pursuant to the CEC's Siting Regulations (California Code of Regulations [CCR] Title 20, Section 1769, Post Certification Amendments and Changes). The information necessary to fulfill the requirements of Section 1769 is provided in Sections 1.0 through 6.0, as summarized in Table 1-2.

TABLE 1-2
Information Requirements for Post-certification Modifications

Section 1769 Requirement	Section of Petition Fulfilling Requirement
(A) A complete description of the proposed modifications, including new language for any conditions that will be affected	Section 2.0—Proposed modifications Sections 3.1 to 3.15—Proposed changes to Conditions of Certification are located at the end of the Air Quality section
(B) A discussion of the necessity for the proposed modifications	Section 1.3
(C) If the modification is based on information that was known by the petitioner during the certification proceeding, an explanation why the issue was not raised at that time	Section 1.3
(D) If the modification is based on new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision, an explanation of why the change should be permitted	Sections 1.4, 3.1
(E) An analysis of the impacts the modification may have on the environment and proposed measures to mitigate any significant adverse impacts	Section 3.1

TABLE 1-2
Information Requirements for Post-certification Modifications

Section 1769 Requirement	Section of Petition Fulfilling Requirement
(F) A discussion of the impact of the modification on the facility's ability to comply with applicable laws, ordinances, regulations, and standards	Section 3.1
(G) A discussion of how the modification affects the public	Section 4.0
(H) A list of property owners potentially affected by the modification	Section 5.0
(I) A discussion of the potential effect on nearby property owners, the public and the parties in the application proceedings	Section 6.0

1.4 Facility Ownership

WCE will own the WCEP, and is an indirect subsidiary of Edison Mission Energy (EME), as is EMHB, such that they are under common ownership. EME is an independent power developer, owner, and operator engaged in the business of owning or leasing, operating, and selling energy and capacity from electric power generation facilities. WCE leases the property on which the WCEP will be built from the Industry Urban-Development Agency.

1.5 Necessity of Proposed Changes

The WCEP is currently licensed by the CEC, has a FDOC issued by SCAQMD, and has a 10-year PPA that was awarded in Southern California Edison's competitive bid process and approved by the California Public Utilities Commission and the Federal Energy Regulatory Commission. To meet the commitments in the PPA, construction must begin in mid-2011, with commercial operation and integration to the California grid by summer of 2013. The project began permitting in late 2005 and was found data adequate by the CEC on February 1, 2006. It received its license from the CEC in February 2008 after extensive public outreach and no significant opposition during any of the hearings conducted by the CEC and SCAQMD.

The Siting Regulations require a discussion of the necessity for the proposed revision to WCEP certification and whether the modification is based on information known by the petitioner during the certification proceeding (Title 20, CCR, Sections 1769 [a][1][B] and [C]). This Petition for Amendment requests approval to change COCs AQ-5C7 and AQ-5C8, and to add COC AQ-19, which are related to WCEP's air quality mitigation measures, specifically offsetting of particulate matter (PM10 and PM2.5), SO₂, and VOC emissions. This change is necessary because credits from SCAQMD's PRA are no longer available to the WCEP for these pollutants under the portion of Rule 1309.1 that was rescinded subsequent to CEC certification of the WCEP. The proposed changes to WCEP's certification include the recognition that the majority of WCEP's emissions would be exempt from a requirement to supply emission offsets under SCAQMD Rule 1304(a)(2) by replacing existing aging utility boiler equipment with WCEP's more efficient and flexible generation. The COCs currently allow emission offsets using traditional ERCs or credits from SCAQMD's PRA.

The exemption under SCAQMD Rule 1304(a)(2) encourages the retirement of existing older and less efficient boilers with newer, quick-start, and more efficient equipment as long as any net increase in generation would be offset using other means. The proposed shutdown of existing aging utility steam boilers would help to support many significant public policy initiatives that will promote public health and clean air, and would result in a more effective mitigation strategy than the originally proposed use of the PRA credits.

Under the Rule 1304(a)(2) exemption, WCEP's emissions will be offset in compliance with the Clean Air Act through a debit to SCAQMD's internal credit bank, the same source that CEC has already reviewed and accepted in WCEP's license by using the PRA and Rule 1309.1.

In addition, this amendment seeks to reduce the WCEP's CO emission limit from 6 ppm as required by SCAQMD Permit Condition AQ-4, to 4 ppm to comply with new BACT requirements in the South Coast Air Basin; and correct an inconsistency in the SCAQMD Permit Condition AQ-3 between the Decision, the FDOC, and WCE's Power Purchase Agreement (PPA) regarding startups and shutdowns by requesting an increase in startups.

These changes are needed to support final permitting and construction of the WCEP. The WCEP will provide 500 MW of voltage support in the South Coast Air Basin, and five quick-starting, fast-ramping turbines that are essential to integrating renewable energy into the grid to meet the State of California's ambitious Renewable Portfolio Standards of 33 percent by 2020.

1.6 Objectives and Benefits of Proposed Changes

WCEP's offset exemption under Rule 1304(a)(2) would have the following significant benefits:

- Allow the earlier retirement of older, less-efficient power plant boilers.
- Allow the accelerated retirement of coastal plant boiler units that use once-through cooling, supporting the State Water Resources Control Board's Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling, adopted May 4, 2010 and effective October 1, 2010. This will reduce impacts on marine life caused by once-through cooling.
- Replace inflexible and outmoded technology with state-of-the art peaking generation that is capable of starting and ramping up quickly to support the reliable integration of intermittent renewable generation to the grid.
- Reduce the basin-wide electrical generation potential to emit by replacing electric generating equipment with no operating restrictions with equipment limited to 4,000 operating hours per year, 40 start-up sequences per month, and two starts per day.
- Improve existing air quality in the South Coast Air Basin by retiring older, less-efficient generation and from the surrender of certified ERCs through interpollutant trade.

The following discussion outlines the importance of the WCEP to the South Coast Air Basin.

1.6.1 Quick-start and Fast-ramping Capability

The WCEP will provide quick-start and fast-ramping capability that can integrate and backup wind and solar renewable energy resources in the South Coast Air Basin that are inherently intermittent. The kind of voltage support that WCEP would provide is essential to support these renewable resources. Figure 1-1 shows an example of wind generation during a week of very high electrical demand in 2006. Wind generation is typically highly variable and, as the chart shows, is at or near its lowest when electrical demand is at its peak.

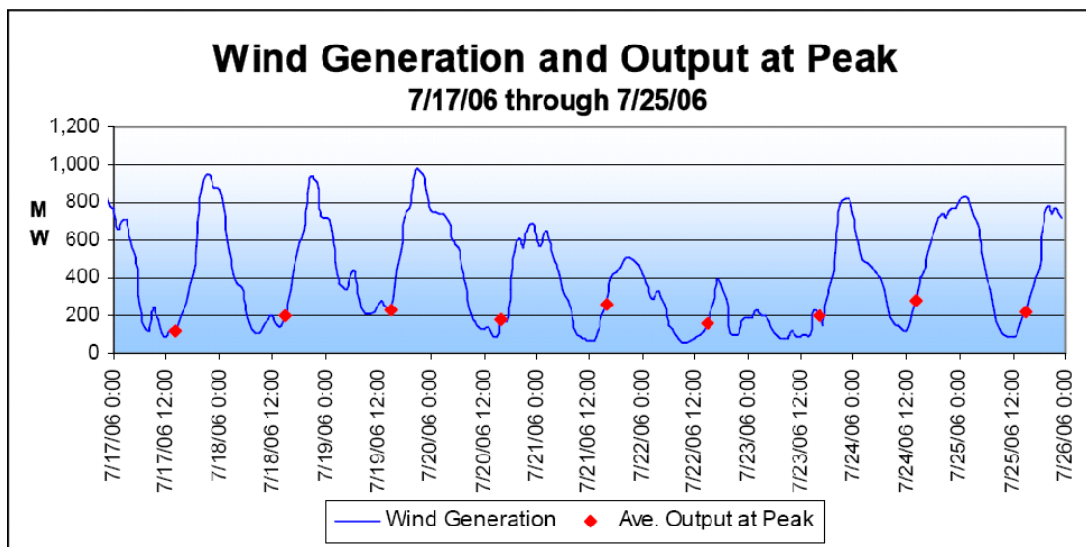


FIGURE 1-1
Example of Wind Generation Variability

The California Independent System Operator (CAISO) has clearly identified that fast-ramping, quick-start units are required for integration of renewable power generators to the system, and WCEP's 10-minute start time and fast-ramping capability is essential to provide this service.

The existing, aging power plants in the South Coast Air Basin cannot provide quick-start and fast-ramping voltage support services to the grid. Instead, they require long start times that often result in excess power dumped at negative pricing, as well as excess greenhouse gas emissions resulting from power generation that is not needed. Figure 1-3 demonstrates the frequency of negative pricing in May and June of 2010.

This figure is from CAISO's Monthly Market Performance Report for May and June 2010, and shows that most days in May and June experienced some degree of negative pricing as a result of over-generation. Over-generation occurs when more power is produced than can be used, even after all operating power plants are backed down to their minimum operating level. When this occurs, the wholesale grid electricity price becomes negative, reflecting the need to pay neighboring states to accept CAISO's excess or to pay renewable electricity producers to curtail output. CAISO's Market Performance Reports for subsequent months

show this problem continuing even in July and August when 3.6 percent and 1.9 percent, respectively, of all the hours in those months had negative real-time pricing.

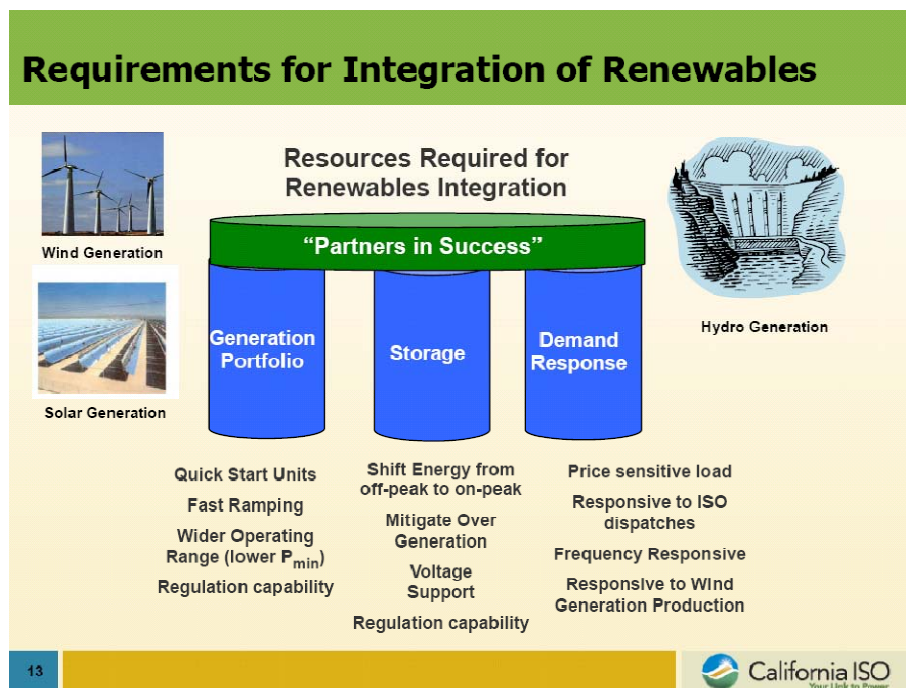


FIGURE 1-2
CAISO Resources Required for Renewables Integration
Source: CAISO

As wind generation increases, the need for reliable peaking generation for voltage support and wind load-following will increase. WCEP provides a plant that can easily turn on and off, and ramp production rapidly. The WCEP’s 2013 operation date is timed to meet significant increases in intermittent electricity from 2009 through 2015, over 3,500 MW more than are online now. Increasing renewable capacity without flexible, quick-starting projects like WCEP will lead to a need to curtail wind generation and also to keep older power plants with higher emission rates running through non-peak hours so that they can be available during peak times.

Older, utility steam boiler generating units require between 6 and 19 hours, depending on design, to start operation when called. These units do not have fast-ramping capability to adjust to highly variable renewable energy output. The WCEP units can be started in 10 minutes and have state-of-the-art, fast-ramping, highly efficient peaking capacity.

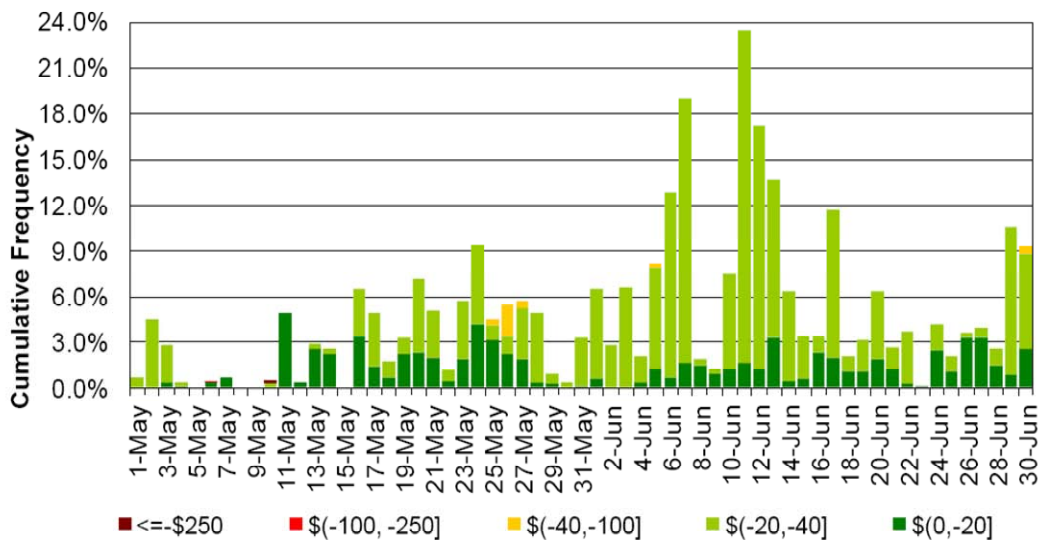


FIGURE 1-3
Example of Over-generation

1.6.2 Replacement of Older Generation

Decommissioning of aging power plants in the South Coast Air Basin will leave southern California short of the 10,000 MW of local capacity that CAISO requires. Fully 5,800 MW of the existing capacity in CAISO’s Los Angeles Basin local reliability area is more than 46 years old, and 4,900 MW of this capacity uses once-through cooling that must be eliminated before 2020. In addition, fuel use of aging units averages 12.3 million British thermal units per megawatt hour (MMBtu/MWh), compared with 8.1 MMBtu/MWh for newer, more efficient combustion turbines like those that WCEP will use, leading to 34 percent lower emissions of greenhouse gases per megawatt-hour of generation.

Table 1-3 summarizes the existing local capacity in CAISO’s Los Angeles Basin Local Reliability Area.

TABLE 1-3
Aging Power Plants in the Los Angeles Basin Local Reliability Area

Power Plant	Heat Rate*	Max Net MW	Year Built	Age	Once-through Cooling (OTC)
AES Alamitos 1	14.4	175	1956	54	Y
AES Alamitos 2	12.5	175	1957	53	Y
AES Alamitos 3	11.6	332	1961	49	Y
AES Alamitos 4	11.7	336	1962	48	Y
AES Alamitos 5	11.2	498	1969	41	Y
AES Alamitos 6	11.9	495	1966	44	Y

TABLE 1-3
Aging Power Plants in the Los Angeles Basin Local Reliability Area

Power Plant	Heat Rate*	Max Net MW	Year Built	Age	Once-through Cooling (OTC)
AES Huntington Beach 1	12.1	226	1958	52	Y
AES Huntington Beach 2	10.9	226	1958	52	Y
AES Huntington Beach 3	11.6	225	1961	49	Y
AES Huntington Beach 4	11.4	227	1961	49	Y
AES Redondo Beach 5	18.1	179	1954	56	Y
AES Redondo Beach 6	13.6	175	1957	53	Y
AES Redondo Beach 7	10.2	493	1967	43	Y
AES Redondo Beach 8	9.7	496	1967	43	Y
NRG El Segundo 3	28.4	321	1964	46	Y
NRG El Segundo 4	11.4	321	1965	45	Y
NRG Long Beach GT1	16.7	64	1976	34	N
NRG Long Beach GT2	16.1	64	1976	34	N
NRG Long Beach GT3	16.7	64	1976	34	N
NRG Long Beach GT4	17.1	64	1976	34	N
RRI Etiwanda 3	15.4	316	1963	47	N
RRI Etiwanda 4	14.1	316	1963	47	N
		5,786	Ave. 46		4,899 MW OTC

1.7 Consistency of Changes with Certification

The Siting Regulations also require a discussion of the consistency of the proposed project revision with the applicable laws, ordinances, regulations, and standards (LORS) and whether the modifications are based on new information that changes or undermines the assumptions, rationale, findings, or other basis of the final decision (Title 20, CCR Section 1769 [a][1][D]). If the project is no longer consistent with the certification, the Petition for Amendment must provide an explanation why the modification should be permitted.

The proposed project revisions are consistent with all applicable LORS. This Petition for Amendment is based on a change in SCAQMD rules and is not based on new information that changes or undermines any other basis for the final Decision. The findings and conclusions contained in the Commission Decision for WCEP (CEC, 2008) are still applicable to the project.

1.8 Summary of Environmental Impacts

The CEC Siting Regulations require that an analysis be conducted to address the potential impacts the proposed modifications may have on the environment, and proposed measures to mitigate any potentially significant adverse impacts (Title 20, CCR, Section 1769 [a][1][E]). The regulations also require a discussion of the impact of the modification on the facility's ability to comply with applicable LORS (Section 1769 [1][a][F]). Section 3.0 of this Petition for Amendment includes a discussion of the potential environmental impacts associated with the amendment, as well as a discussion of the consistency of the amendment with LORS. Because the changes to COCs requested are changes to the mitigation measures for air quality only, this petition does not include a discussion of other environmental disciplines. Section 3.0 concludes that no significant environmental impacts will be associated with implementing the actions specified in the Petition for Amendment and that the project as amended will comply with all applicable LORS.

1.9 Conditions of Certification

The amendments to certification identified in this petition would only involve changes to some of the air quality COCs. Specifically, it seeks to modify COCs related to mitigation of the project's emissions of particulate matter, SO₂, and VOC, and NO_x (AQSC-7, AQSC-8, and AQ-16) and to add a new condition also related to air emissions offsets (AQ-19). WCE also seeks to resolve an inconsistency between the Decision, SCAQMD's FDOC, and the requirements of WCE's PPA by increasing the number of startups (COC AQ-3), and to reduce the CO emission limit from 6 ppm to 4 ppm (COC AQ-4). The amendment does not involve changes to the WCEP equipment or project design.

1.10 References

California Energy Commission (CEC). 2008. Final Commission Decision on Walnut Creek Energy Park. California Energy Commission, Sacramento, California. February.

Walnut Creek Energy, LLC (WCE). 2005. Application for Certification for the Walnut Creek Energy Park. Submitted to the California Energy Commission. Submitted by Walnut Creek Energy, LLC.

SECTION 2.0

Description of Amendment

This section includes a description of the proposed project amendments, consistent with CEC Siting Regulations (Title 20, CCR, Section 1769 [a][1][A]). WCE proposes to change COCs related to air quality mitigation measures for PM₁₀, VOC, NO_x, and SO_x in the following ways:

- Add provisions under COCs AQSC-7 and AQSC-8, and add AQ-19 to recognize exemption of the WCEP's emissions from the requirement for offsets pursuant to SCAQMD Rule 1303(b)(2) through replacement of older existing utility steam boiler capacity with newer, cleaner, more efficient advanced gas turbine equipment, as allowed per Rule 1304(a)(2).
- Modify AQSC-7 to clarify the revised offset requirements.
- Modify AQ-16 to increase the project's NO_x RECLAIM Trading Credit obligations consistent with the increase in startups and add SO_x RECLAIM Credit obligations.

In addition, WCE seeks a modification to the air quality conditions and permit that will resolve an inconsistency between the CEC Conditions, FDOC specifications, and WCE's PPA requirements, as follows:

- Modify AQ-3 to permit 480 startups and shutdowns per year and a maximum of two shutdowns per day

Finally, WCE seeks a modification to recognize a change in the BACT for CO.

- Modify AQ-4 to reduce the CO emission permit limit from 6 ppm to 4 ppm.

The requested changes to the license involve the offset program only and do not otherwise involve changes in project design or operation, or new emissions modeling. WCE requests this amendment to make the CEC license conditions of certification consistent with the Revised Determination of Compliance issued by SCAQMD on March 11, 2011.

2.1 Offset Exemption under SCAQMD Rule 1304

Because PRCs, the offset method stipulated in the WCEP Decision, are not currently available under Rule 1309.1 to offset WCEP's emissions of particulate matter and VOC, WCE proposes modifications to COCs AQSC-7 and AQSC-8 and the addition of AQ-19 designating that the project owner may mitigate facility emissions through the replacement of existing in-basin utility steam boilers with advanced gas turbine technology as is permitted under SCAQMD Rule 1304(a)(2). Per the provisions of Rule 1304(a)(2), WCE would be partially exempt from providing market-based ERCs and WCEP's emissions will be mitigated in compliance with the Clean Air Act through a debit to SCAQMD's internal credit bank, the same source that CEC has already reviewed and accepted in WCEP's license. In effect, the Rule 1304(a)(2) exemption results in retirement of the same or similar types of emission credits as would be the case using certified ERCs.

SCAQMD Rule 1304(a)(2) allows for replacement of older existing utility steam boiler capacity with new generation capacity as long as the new generation consists of intercooled or some other form of advanced gas turbine.

Upon approval by the Executive Officer or designee, an exemption from the modeling requirement of Rule 1303 (b)(1) and the offset requirement of Rule 1303 (b)(2) shall be allowed, for the following sources...

(2) Electric Utility Steam Boiler Replacement

The source is replacement of electric utility steam boiler(s) with... intercooled, chemically-recuperated gas turbines, other advanced gas turbines(s)...to the extent that such equipment will allow compliance with Rule 1135 or Regulation XX rules. The new equipment must have a maximum electrical power rating (in megawatts) that does not allow basin-wide electricity generating capacity on a per-utility basis to increase. If there is an increase in basin-wide capacity, only the increased capacity must be offset.

Rule 1304(a)(2) is an exemption to traditional offsetting requirements that applies when it can result in the retirement of older electric utility steam boilers without a net increase in basin-wide capacity. As described in the AFC and Commission Decision, the turbines proposed for WCEP, GE Energy's LMS-100 turbines, are intercooled and advanced gas turbines.

District Rule 1135 further provides a definition of "boiler":

...only units existing on July 19 1991, which are owned or operated by any one of the following: Southern California Edison, Los Angeles Department of Water and Power, City of Burbank, City of Glendale, and City of Pasadena, or any of their successors.

Subject to obtaining certain regulatory and other consents and receipt of related revisions to the SCAQMD FDOC for the WCEP, EMHB, an affiliate of WCE under common ownership, will purchase two electric utility steam boilers and their associated STGs from AESHB and will permanently retire these units per the requirements of SCAQMD's Rule 1304(a)(2) to qualify for a partial emissions offset exemption. The two boilers and steam turbines to be purchased are AESHB's Units 3 and 4, which are currently in operation at AESHB's Huntington Beach facility. EMHB will lease the two units (HB 3 and 4) back to AESHB, who will remain as the operator until the required permanent shutdown.

HB 3 and 4 were certified by the CEC (00-AFC-13C) in 2001 and this certification was extended in October of 2010 through December 31, 2020. If the CEC approves this amendment petition, EMHB will assume ownership of the HB 3 and 4's boilers and STGs and render the boilers permanently inoperable prior to fuel being consumed by the WCEP turbines.

The potential environmental effects of a future closure of these units and related equipment by AESHB have been considered and address by the CEC in the Commission Decision on the Huntington Beach Generating Station Retool Project (P800-01-016; AFC 00-AFC-13; May 2001 as modified by Commission Order dated September 27, 2006 [Docket No. 00-AFC-13C]

and Order No. 10-1020-1 [Docket No. 00-AFC-13C, Oct. 20, 2010]. This petition does not make any changes to that decision and related requirements.

In connection with this request and per applicable regulatory requirements, WCE will:

- Apply to the Federal Energy Regulatory Commission for approval of the change of ownership of HB 3 and 4's boilers and STGs
- Provide evidence to CEC and SCAQMD of common ownership of WCE and HB 3 and 4's boilers and STGs prior to SCAQMD's issuance of WCE's Permit to Construct (PTC)
- Demonstrate that EMHB holds sufficient RTCs for HB 3 and 4 for the compliance year in which the change of ownership occurs, consistent with SCAQMD requirements
- Cause EMHB to surrender the operating permits for HB 3 and 4 prior to startup (first fire) of the WCEP turbines in accordance with the SCAQMD PTC, draft Permit to Operate, and amended CEC License, at which time HB 3 and 4's boilers will be rendered permanently inoperable

HB boiler units 3 and 4 meet the SCAQMD's definition of boiler stated above. HB 3 and 4 were previously owned by Southern California Edison, and were in operation before July 19, 1991. They will be owned by EMHB, WCE's affiliate under common ownership, before issuance of a permit to construct the WCEP. WCEP's turbines would replace HB 3 and 4 with cleaner, more efficient WCEP generation. Under this circumstance, basin-wide electricity generating capacity on a per-utility basis would be replaced, meeting this requirement of Rule 1304(a)(2). HB 3 and 4 are rated by CAISO and the CPUC at a Net Qualifying Capacity of 225 MW and 227 MW, respectively (total of 452 MW). Nominal total net generating capacity is 450 MW. WCEP's maximum generation capacity is 500.5 MW. WCE proposes to provide ERCs to offset the emissions from the 50.5 MW increase in generation above the combined generating capacity of HB 3 and 4.

SCAQMD Rules 1309.1 and 1315, pertaining to the SCAQMD's Priority Reserve Account, were invalidated under a legal decision, *Natural Resources Defense Council v. South Coast Air Quality Management District* (Super. Ct. Los Angeles County, 2007, No. BS 110792). In 2009, the Legislature enacted Senate Bill 827 (SB 827), which allows the District to continue issuing permits:

...in reliance on, and in compliance with, South Coast District Rule 1304, as amended on June 14, 1996, and Rule 1309.1, as amended May 3, 2002, for essential public services, as defined in subdivision (m) of Rule 1302, as amended December 6, 2002.

Both SCAQMD and the CEC have experience using District Rule 1304(a)(2), having used this rule to satisfy the offset requirements of the El Segundo Power Redevelopment Project. (See Commission Decision to the Amendment, CEC-800-2010-015, at 14, [June 2010]; Second Addendum to the Determination of Compliance for El Segundo Power LLC, Application No. 470652, at 5 and 28 [May 14, 2010].)

Proposed new COC AQ-19 is based on a similar condition found in the Commission Decision for the El Segundo project, and states a requirement to document shutdown of

HB 3 and 4 and the replacement of its older utility steam boilers with clean and efficient natural-gas-fired generation units at WCEP.

As stated previously, Rule 1304(a)(2) requires the project owner to offset emissions for generation beyond the rated capacity of the older utility steam boiler generation that is replaced. In this case, HB 3 and 4 are rated at 450 MW (net), combined. The maximum power that WCEP can deliver to the grid, under the terms of WCE's Large Generator Interconnect Agreement with CAISO and SCE is 500.5 MW, leaving 50.5 MW of generation that need to be offset under Rule 1303(b)(2). The WCEP's offset obligation would therefore be proportional to the generation capacity increase. WCE would therefore provide traditional ERCs for 10.09 percent of its generation capacity. Offset obligations for WCEP would be as shown in Table 2-1. Calculations for emissions and offsets are provided in Attachment A.

TABLE 2-1
Required Offsets for Non-RECLAIM Pollutants (total for five turbines, lb/day)^a

	NO _x ^b	CO	VOC	SO _x ^b	PM10
Maximum 30-Day Emissions Ave.	—	—	173.82	—	432.00
Emissions not exempt from offsetting under Rule 1304(a)(2) (10.09%) ^c	—	—	17.54	—	43.59
ERC Offset Ratio	—	—	1.2	—	1.2
Required Offsets using ERCs	—	—	21	—	52

^a These emission calculations assume 480 starts per year, instead of 350, as currently stipulated in the FDOC and Decision, and for this reason are higher than stipulated in the FDOC and Decision. See discussion in Section 2.2.

^b NO_x and SO_x emissions would be offset at 1:1 using RECLAIM Trading Credits. See Tables 2-2 and 2-3.

^c The shortfall percentage is calculated as 50.5 MW divided by 500.5 MW = 10.09 percent.

2.2 Startups and Shutdowns

WCE proposes to change the maximum number startups/shutdowns stipulated in COC AQ-3 from 350 to 480 per year and the number of daily shutdowns allowed in that COC from one to two. This change would allow WCE to meet the startup and shutdown obligations of the project's PPA.

Additional modeling is not required to make this change for the following reasons. Two basic emissions scenarios were developed for the AFC and PTC application. The first scenario was based on the expected annual and monthly operating profiles for use in establishing emission limits for the SCAQMD NSR permit, for RECLAIM, and for the monthly ERC requirements. This scenario assumed 3,200 hours of base load with 350 startup/shutdowns for a total of 3,468 hours on an annual basis. For the calculation of monthly ERCs, however, the worst-case month was assumed to be based on 432 hours with 40 startup/shutdowns (480 per year) for a total of 463 hours per month (30-day average).

The second scenario was used as a hypothetical worst-case assessment for the air quality and health risk modeling analysis. This scenario was based on a worst-case estimate of

potential emissions that assumed extended hours of operation and included the use of an emergency generator. This scenario was used for the air quality/toxics modeling impact assessments because it represented a maximum envelope for which the facility could be expected to operate. This emissions/modeling scenario assumed worst-case, short-term, and annual emissions based on 4,838 hours of operation including startup/shutdown, which is greater than the 4,000-hour permit limit, and monthly emissions based on 463 hours of operation, which is greater than the 432-hour limit in the revised FDOC. Modeling a much higher emissions case than what is proposed to be permitted provides a worst-case impact assessment.

In both scenarios, the maximum short-term emission rates are the same. Specifically, the maximum 1-hour, 3-hour, 8-hour, and 24-hour emissions assume 20 hours of base load with 4 hours in startup/shutdown for a total of 24 hours of daily (short-term) operation.

Although WCE still expects that the WCEP will be dispatched by CAISO to operate in accordance with the first scenario during typical years, contractual obligations require that the project be permitted to operate up to the proposed permit/emission limits to allow for the possibility of extreme hot weather and low hydroelectric production or availability of electricity imports that would increase the need for project operation.

Increasing the number of starts would not increase the required offsets for VOC, PM, and SO_x because offsets for these pollutants are based on monthly peak emissions and the existing monthly peaks were already calculated assuming 40 starts per months (480 per year). Increasing the number of starts would increase the RECLAIM trading credits required for NO_x, however, because offsets for this pollutant are calculated on an annual basis at a 1:1 ratio. The annual, first year (commissioning) NO_x emissions for maximum permitted operation of the project with 480 starts would 109.31 tons, or 218,627.60 pounds per year. Table 2-2 shows how this amount is calculated.

TABLE 2-2
Calculation of NO_x RECLAIM Trading Credits

Operating Condition	Hours per Year	NO _x (lb/hr)	NO _x (lb/year) per device	NO _x (lb/year) cumulative
CTGs				
Startup	480	10.42	5,001.60	25,008.00
Shutdown	480	11.00	5,280.80	26,400.00
Normal Operation	2,906	8.21	23,858.26	119,291.30
Commissioning	134	71.21	9,542.14	47,710.70
CTG Totals	4,000		43,682.00	218,410.00
Emergency Fire Pump:	199.9	1.09	217.60	217.6
Total 1st Year Emissions (lb/year)			43,899.60	218,627.60
Offset Ratio			1.00	1.00
1st year NO _x RTCs (lb/year)			43,900	218,627.60
2nd year NO _x RTCs (lb/year)			35,458	176,417.60

TABLE 2-2
Calculation of NO_x RECLAIM Trading Credits

Operating Condition	Hours per Year	NO _x (lb/hr)	NO _x (lb/year) per device	NO _x (lb/year) cumulative
---------------------	----------------	-------------------------	--------------------------------------	--------------------------------------

Condition AQ-3’s daily limit of one shutdown appears to be an oversight. The SCAQMD engineering analysis that supports the DOC indicates that SCAQMD considered maximums of two starts per day and 40 starts per month.

2.3 SO_x RECLAIM Trading Credits

Because HB 3 and 4 are currently in RECLAIM program for SO_x, the WCEP will also elect to be in the RECLAIM program for SO_x. The table below summarizes the requirements.

TABLE 2-3
Calculation of SO_x RECLAIM Trading Credits

Operating Condition	Hours per Year	SO _x (lb/hr)	SO _x (lb/year) per device	SO _x (lb/year) cumulative
CTGs				
				–
				–
Normal Operation	4,000	0.57	2,280.00	11,400.00
Commissioning				
CTG Totals	4,000		2,280.00	11,400.00
Emergency Fire Pump:	199.9	0.0017	0.33	
Total 1st Year Emissions (lb/year)			2,280.00	11,400.33
Offset Ratio			1.00	
1st year SO _x RTCs (lb/year)			2,280	11,400
2nd year SO _x RTCs (lb/year)			2,280	11,400

2.4 CO Emission Limit

WCE proposes to change the CO emission limit from 6.0 ppm to 4.0 ppm. The latter CO emission level has been proven achievable in practice and has been established as BACT for simple-cycle, natural-gas-fired power plants in the South Coast Air Basin.

SECTION 3.0

Environmental Analysis

The proposed amendments to the WCEP’s certification would be limited to proposed changes to the COCs for air quality. There are no proposed changes to the project design or to project equipment. The discussion that follows is, therefore, restricted to the discipline of air quality. There would be no changes to the environmental baseline or to the environmental effects of the WCEP as pertains to the other disciplines.

3.1 Air Quality

The Commission Decision determined that the WCEP would not have significant impacts on air quality. This Petition for Amendment proposes changes in the COCs related to air quality mitigation measures for PM₁₀, SO_x, and VOC. These changes are necessary because credits from the SCAQMD’s PRA are no longer available to the WCEP for these pollutants under the portion of Rule 1309.1 that was rescinded subsequent to CEC certification of the WCEP. This Petition for Amendment also proposes to reduce the CO emission limit in the COCs to comply with current South Coast Air Basin BACT limits, and increase the annual and daily startup limits (and make a corresponding increase in RECLAIM Trading Credits required). The revised mitigation measures requested in this Petition for Amendment are as or more effective than those originally proposed, and would not result in significant impacts on air quality.

3.1.1 Environmental Baseline Information

This Petition for Amendment does not require changes to the Environmental Baseline Information as described in the AFC. The changes requested are only related to air quality mitigation measures.

As background, however, the following is a summary of the current status of air quality standards attainment in the South Coast Air Basin.

As background to the later discussion of proposed changes to the Conditions of Certification, however, the attainment status of criteria pollutants in the South Coast Air Basin is shown in Table 3-1.

TABLE 3-1
South Coast Air Basin Attainment Status

Pollutant	Averaging Time	Federal Status	State Status
Ozone	8-hour	Severe NA	Extreme NA
NO ₂	All	UNC/ATT	UNC/ATT
CO	All	ATT	ATT
SO ₂	All	ATT	ATT
PM ₁₀	All	Attainment redesignation approved by SCAQMD and California Air Resources	NA

TABLE 3-1
South Coast Air Basin Attainment Status

Pollutant	Averaging Time	Federal Status	State Status
		Board. Pending U.S. Environmental Protection Agency (EPA) approval	
PM _{2.5}	All	NA	NA

Source: SCAQMD Website, 2010.

ATT= attainment
NA= nonattainment
UNC = unclassified

Under SCAQMD's NSR provisions (Regulation XIII), nonattainment pollutants also include precursor pollutants, per Rule 1301. Table 3-2 shows the precursor relationships established by the SCAQMD rules.

TABLE 3-2
Criteria Pollutant Precursor Relationships, per SCAQMD Rules

Precursor	Secondary Pollutants In Nonattainment Classification		
VOC	—	Ozone	Organic, nitrate, and sulfate fractions of PM
NO _x	NO ₂		
SO _x	SO ₄	—	

Note: Federal NSR precursor delineations are different than those presented above, but for purposes of ERCs and offsets within the SCAQMD, the delineations above are to be implemented and followed.

SCAQMD NSR rules require offsets for all emission increases (Rule 1303) for criteria pollutants and their precursors. Based on the above tables, the nonattainment pollutants subject to offsets are VOCs, NO_x, PM₁₀, and SO_x, as considered in the AFC, FDOC, and Commission Decision.

SCAQMD's adoption of controls in the South Coast Air Basin has resulted in attainment of the federal 24-hour PM standard. The SCAQMD's Governing Board requested EPA to consider SCAQMD's petition to redesignate the Basin as in attainment for this standard. CARB's Executive Officer requested that EPA Region IX redesignate the Basin from nonattainment to attainment for PM₁₀. Upon issuance of the attainment redesignation, new emission sources entering commercial operation will no longer be required by federal law to purchase PM₁₀ ERCs, but EPA is not expected to approve SCAQMD's redesignation petition prior to the date that construction of the WCEP must begin.

The emission sources at WCEP include five gas turbines, a diesel-fired fire pump, and a mechanical-draft wet cooling tower. The actual operation of the turbines will be for peaking service. An evaporative cooling inlet air system will be used to increase power output under certain conditions. Emission control systems will be fully operational during all operations except during brief periods upon startup and shutdown. Maximum annual emissions are based on operation of the WCEP at maximum firing rates and include the expected maximum number of startups that may occur in a year. Each turbine startup will result in

transient emission rates until steady-state operation for the gas turbine and emission control systems is achieved.

Ambient air quality impact analyses for the project were conducted to satisfy the SCAQMD and CEC requirements for assessing criteria pollutants (NO₂, CO, PM10, and SO₂), non-criteria pollutants, and construction impacts. Potential impacts on air quality resulting from construction of the WCEP were addressed on a pollutant-specific basis.

3.1.1.1 PM2.5

PM2.5 is a new Federal New Source Review (NSR) pollutant that was not applicable at the time that the CEC issued the WCEP Decision. In 2010, EPA included PM2.5 as a pollutant regulated under the Federal NSR regulations. A major PM2.5 NSR source that has the potential to emit more than 100 tons per year (tpy) of PM2.5 would be subject to the rule. The WCEP FDOC as issued by SCAQMD include a federally enforceable annual fuel use limit that limits the WCEP project's PM10 emissions to approximately 60.89 tpy. Because PM2.5 is a fraction of PM10, the WCEP PM2.5 emissions are limited via a federally enforceable limit to less than federal major source threshold of 100 tpy and would therefore not trigger a NSR analysis for PM2.5.

3.1.1.2 1-hour NO₂

Since the time that the CEC issued the WCEP Decision, the EPA has promulgated a standard for 1-hour NO₂ emissions. Although SCAQMD does not require 1-hour federal NO₂ modeling for non-PSD sources, and WCEP is a non-PSD source, WCE completed a modeling analysis that indicates that WCEP would meet the 1-hour NO₂ standard for operations and startups, as described below (see also Attachment B).

The new federal 1-hour NO₂ standard is 188 micrograms per cubic meter (µg/m³) (98th percentile 1-hour). Based on SCAQMD Guidelines, the 98th percentile background NO₂ concentration is 138 µg/m³ and is based on data from the La Habra monitoring station. 1-hour NO₂ emissions under normal WCEP baseload operation would be as follows:

Normal Baseload Operations:

98th percentile impact = 22.42 µg/m³

Adding the modeling results to background produces 160.42 µg/m³

Startup Operations:

98th percentile impact = 5.47 µg/m³

Adding the modeling results to background produces 143.47 µg/m³

These emissions are less than the federal 1-hour average NO₂ standard of 188 µg/m³ and the California ambient air quality standard of 339 µg/m³. Although SCAQMD does not require modeling to demonstrate compliance with the standard for commissioning, modeling for the WCEP indicates that the WCEP would meet the standard for commissioning as well (see Attachment B).

3.1.2 Conditions of Certification

WCE requests the following changes to the COCs. In the following, suggested deletions are indicated in strikethrough text and suggested insertions are indicated in bold face and underlined type.

California Energy Commission Staff Conditions:

AQ-SC7 To comply with offset requirements an affiliate of WCE, under common ownership of EME, has been created to purchase two electric utility steam boilers from AES Huntington Beach, LLC, and will permanently retire these units to qualify for a partial offset exemption on a net megawatt to net megawatt basis (450 MWs). See Condition of Certification AQ-19. The project owner shall also provide emission reduction credits (**ERCs**) to offset turbine exhaust and emergency equipment for VOC, ~~SO_x~~, PM10 and PM2.5 emissions associated with the increased generating capacity of 50.5 MWs in the form and amount required by the District. RECLAIM Trading Credits (RTCs) shall be provided for NO_x **and SO_x** as is necessary to demonstrate compliance with Condition of Certification **AQ-16**.

The project shall be exempt under District Rule 1304(a)(2) from providing ERCs emission reduction credits (ERCs) or SCAQMD Priority Reserve Credits (PRCs) shall be provided for SO_x (44 and PM10 (463 lb/day or under Rule 1304(a)(2) exemption, 42 lb/day). Emission reduction credits only shall be provided for VOC (220 lb/day, includes an offset ratio of 1.2) for VOC, and PM10 for 89.91 percent of the full amount required by the District for these pollutants and shall provide ERCs at an offset ratio of 1.2:1.0 for the remaining 10.09 percent in accordance with the following:

<u>Pollutant (lb/day)</u>	<u>VOC</u>	<u>PM₁₀</u>
<u>1. Total emissions to be offset</u>	<u>173.82</u>	<u>432.00</u>
<u>2. Emissions not exempt from offsetting under Rule 1304(a)(2) (10.09%)</u>	<u>17.54</u>	<u>43.59</u>
<u>3. ERCs required to offset non-exempt emissions at a ratio of 1.2 lb/day offsets to 1 lb/day non-exempt emissions</u>	<u>21</u>	<u>52</u>

The project owner shall surrender the ERCs for VOC and PM10 from among those that are listed in the table below or a modified list, as allowed by this condition. If additional ERCs are submitted, the project owner shall submit an updated table including the additional ERCs to the CPM. The project owner shall request CPM approval for any substitutions, modifications, or additions of credits listed.

The CPM, in consultation with the District, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards, the requested change(s) will not cause the project to result in a significant environmental impact, and the District confirms that each requested change is consistent with applicable federal and state laws and regulations.

This report is to specifically identify the ERCs and PRCs used to offset the project emissions.

Certificate Number	Amount (lb/day)	Pollutant
AQ003679	8	VOC
AQ002683	1	VOC
Former AQ004209	117	VOC
Former AQ006303	100	VOC

Verification: Prior to start of construction, the project owner shall submit to the CPM Permit to Construct to showing that the project's offset requirements have been met, **by actual offset or exemption under Rule 1304(a)(2)** and 30 days prior to turbine first fire for traditional ERCs. If the CPM approves a substitution or modification to the list of ERCs, the CPM shall file a statement of the approval with the project owner and

commission docket. The CPM shall maintain an updated list of approved ERCs for the project.

AQ-SC8

-

Project owner shall not start operation of any equipment until both boiler units 3 and 4 currently located at AES Huntington Beach Generating Station have been retired and permits for boilers 3 and 4 surrendered.

- ~~Demonstrate Compliance with Rule 1309.1 Section d(12), by either:~~
 1. ~~Providing a letter from the Executive Officer of the South Coast Air Quality Management District stating that the project capacity is within the first 2,700 MW of capacity requested pursuant to Rule 1309.1 Section d (12).~~

~~Or~~

 2. ~~Providing a letter from the Governing Board of the South Coast Air Quality Management District granting a specific waiver to the AQMD Rule 1309.1 section d(12). This letter must be on the Governing Board letterhead and signed by the appropriate members of the Governing Board.~~
- ~~Demonstrate Compliance with Rule 1309.1 Section d(14), by either:~~
 1. ~~Providing non-confidential evidence that the project owner/operator has entered into a long-term power purchase agreement contract as required by AQMD Rule 1309.1 with Southern California Edison Company, San Diego Gas and Electric Company or the State of California.~~

~~Or~~

 2. ~~Providing a letter from the Governing Board of the South Coast Air Quality Management District granting a specific waiver to the long term contract requirement of AQMD Rule 1309.1 section d (14). This letter must be on the Governing Board letterhead and signed by the appropriate members of the Governing Board.~~

Verification: The project owner shall provide written evidence demonstrating that they have surrendered the permits to operate for Huntington Beach boilers 3 and 4 (10) day prior to start of operation of any emissions source.

SCAQMD Conditions:

AQ-1 The project owner shall limit the emissions from **each** gas fired combustion turbine train exhaust stacks as follows:

Contaminant Emissions Limit

PM10 2,592 lbs in any one month
VOC 1035 lbs in any one month

For the purpose of this condition, the limit(s) shall be based on the emissions from a single exhaust stack. During commissioning, the VOC emissions shall not exceed 1,043 lbs in any one month.

The project owner shall calculate the emission limit(s) by using the monthly fuel use data and the following emission factors: PM10: 7.04 lb/mmscf and VOC: 2.73 lb/mmscf.

Verification: The project owner shall submit all emission calculations, fuel use, CEM records and a summary demonstrating compliance of all emission limits stated in this Condition for approval to the CPM on a quarterly basis in the quarterly emissions report (**AQ-SC10**).

AQ-3 The 2.5 ppm NOx emission limit, 2.0 ppm VOC emission limit and the ~~6.0~~ **4.0** ppm CO emission limit shall not apply during turbine commissioning, start-up and shutdown. The commissioning period shall not exceed 134 operating hours per turbine from the initial start-up. Following commissioning, start-ups shall not exceed 60 minutes for each startup and the number of start-ups shall not exceed ~~350~~ **480** per year. Following commissioning, shutdowns shall not exceed 10 minutes for each shutdown. The number of startups shall not exceed ~~one~~ **two** per day per turbine. Written records of commissioning, start-ups and shutdowns shall be kept and made available to District and submitted to the CPM for approval. The 123.46 lb/mmscf NOx emission limit(s) shall only apply during interim reporting period during initial turbine commissioning and the 10.29 lbs/mmscf shall apply only during the interim reporting period after the initial turbine commissioning period, to report RECLAIM emissions. The interim period shall not exceed 12 months from the initial start-up date.

Verification: The project owner shall provide the District and the CPM with the written notification of the initial start-up date no later than 60 days prior to the startup date. The project owner shall submit, commencing one month from the time of gas turbine first fire, a monthly commissioning status report throughout the duration of the commissioning phase that demonstrates compliance with this condition and the emission limits of Condition **AQ-13**. The monthly commissioning status report shall include criteria pollutant emission estimates for each commissioning activity and total commissioning emission estimates. The monthly commissioning status report shall be submitted to the CPM until the report includes the completion of the initial commissioning activities. The project owner shall provide start-up and shutdown occurrence and duration data as part as part of the Quarterly Operation Report **AQSC-10**). The project owner shall make the site available for inspection of the commissioning and startup/shutdown records by representatives of the District, CARB and the Commission.

AQ-4 The 2.5 ppm NOx emissions limit(s) are averaged over 60 minutes at 15 percent oxygen, dry basis.

The ~~6.0~~ **4.0** ppm CO emission limit(s) are averaged over 60 minutes at 15 percent oxygen, dry basis.

The 2.0 ppm VOC emission limit(s) are averaged over 60 minutes at 15 percent oxygen, dry basis.

The 5.0 ppm NH3 emission limit(s) are averaged over 60 minutes at 15 percent oxygen, dry basis.

Verification: The project owner shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report of Condition of Certification **AQSC-10**.

AQ-6 The project owner shall limit the fuel usage from each turbine to no more than 367 mmscf of pipeline quality natural gas in any one month. The operator shall install and maintain a fuel flow meter and recorder to accurately indicate and record the fuel usage being supplied to each turbine.

Verification: The project owner shall submit to the CPM for approval all fuel usage records on a quarterly basis as part of the quarterly emissions report of Condition of Certification **AQ-SC10**.

AQ-16 The project equipment shall not be operated unless the project owner demonstrates to the SCAQMD Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the project owner demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility hold sufficient RTCs in an amount equal to the annual emission increase. The project owner shall submit all such information to the CPM for approval. To comply with this condition, the project owner shall hold a minimum of 40,764 ~~43,900~~ lbs/year of NO_x RTCs and 2,280 lbs/year of SO_x RTCs for the first year of operation and ~~32,349~~ 35,458 lbs/year of NO_x RTCs and 2,280lbs/year of SO_x RTCs thereafter.

Verification: The project owner shall submit all identified evidence demonstrating compliance to the CPM on an annual basis as part of the annual compliance report.

AQ-19 The project owner elects to partially comply with the emission offset requirements through District Rule 1304(a)(2) boiler replacement offset exemption, the project owner shall on completion of construction shall not start operation of any equipment until both boiler units 3 and 4 currently located at AES Huntington Beach Generating Station have been retired and permits for boilers 3 and 4 have been surrendered to the SCAQMD.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission. In addition, the project owner shall make Huntington Beach boiler units 3 and 4 available for inspection to confirm shutdown of these boilers by representatives of the District, CARB, EPA and the Commission.

3.2 LORS

The Commission Decision certifying the WCEP concluded that the project is in compliance with all applicable LORS. The project, as modified, will comply with all applicable LORS shown in Table 3-3.

TABLE 3-3
Compliance with Laws, Ordinances, Regulations, and Standards

Rule/Regulation/Requirement	Compliance
Federal Standards under the Clean Air Act	
Federal PM10	WCEP will offset PM10 emissions either under the Rule 1304(a)(2) exemption by replacing an existing utility steam boiler with newer generation or by a combination of steam boiler replacement, ERCs, and interpollutant trades.*
Federal SO _x	Not applicable. The South Coast Air Basin is in attainment for SO _x .

TABLE 3-3
Compliance with Laws, Ordinances, Regulations, and Standards

Rule/Regulation/Requirement	Compliance
Federal PM2.5	<p>Appendix S to Title 40, Part 51 of the Code of Federal Regulations (aka the "Emission Offset Interpretative Ruling") sets an offset requirement for PM2.5 emissions only for major sources greater than 100 tpy. WCEP emissions will be capped per an enforceable permit limit to below 100 tpy.</p> <p>On November 13, 2009, EPA designated the South Coast Air Basin as nonattainment for the 2006 24-hour PM2.5 National Ambient Air Quality Standards (NAAQS) (35 µg/m³); the designation became effective on December 14, 2009. See 74 FR 58688 (11/13/2009). Appendix S essentially functions as a regulatory bridge allowing NSR permits to be issued before a necessary State Implementation Plan revision (e.g., drafted in response to the strengthened PM2.5 New Source Review [NSR] requirements) has been approved by EPA.</p>
Federal Ozone	<p>WCEP will provide VOC ERCs through exemption under Rule 1304(a)(2) and by providing ERCs.</p> <p>WCEP will provide NO_x RTCs, per the AFC, DOC, and Commission Decision.</p>
Federal NO ₂	<p>The Basin currently is not classified as nonattainment for either the daily or annual NAAQS; EPA is not expected to designate areas as attaining or not attaining the new standard until January 2012. Accordingly, WCEP will not be required to offset NO₂ emissions except to the extent provided by its NO_x RTC obligation, per the AFC, DOC, and Commission Decision.</p>

EPA Rules and Regulations

Greenhouse Gas (GHG) Emissions per EPA's Final Tailoring Rule	WCEP will begin construction prior to the July 1, 2011 deadline and will not be subject to EPA's Final Tailoring Rule for GHG emissions.
---	--

State Law

California Environmental Quality Act	The CEC's power plant certification program under Pub. Res. Code §§25500-25543 is a certified regulatory program that is exempt from CEQA. 14 CCR §15251(j). The CEC completed CEQA review of WCEP during its licensing process and approved WCEP on 2/27/2008, finding no significant unmitigated air quality impacts.
--------------------------------------	---

State Standards under the California Clean Air Act

State PM10 & PM2.5	<p>The Health and Safety Code requires each air district with moderate, serious, severe, or extreme air pollution to include in its attainment plan a "stationary source control program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from new or modified stationary sources" which emit pollutants above certain thresholds. Health and Safety Code §§ 40918(a)(1), 40919(a)(2), 40920(b), 40920.5(a).</p> <p>For purposes of classifying areas as nonattainment for purposes of Sections 40918, 40919, 40920, 40920.5, the Health and Safety Code defines standards for only ozone and carbon monoxide. See Health and Safety Code § 40921.5.</p> <p>WCEP will offset PM2.5 emissions using PM10 and SO_x equivalent offsets either under the Rule 1304(a)(2) exemption by replacing an existing utility steam boiler with newer generation or by some combination of steam boiler replacement, and interpollutant trades.</p>
State SO _x	SO _x offsets will be required as a precursor for PM2.5. WCEP will offset SO _x emissions with SO _x RECLAIM Trading Credits per the SCAQMD DOC and Commission Decision.

TABLE 3-3
Compliance with Laws, Ordinances, Regulations, and Standards

Rule/Regulation/Requirement	Compliance
State Ozone	WCEP will provide VOC ERCs through exemption under Rule 1304(a)(2) and by providing ERCs. WCEP will provide NO _x RTCs, per the AFC, DOC, and Commission Decision. Modeling demonstrates insignificant increase to existing ambient concentration.
State NO ₂	WCEP's provision of NO _x RTCs to offset its NO _x emissions also will offset NO ₂ emissions (per the AFC, DOC, and Commission Decision).
SCAQMD Rules	
SCAQMD Rule 1303(b) (offset timing)	The Basin likely will be redesignated as attainment for PM ₁₀ before project operation begins in early 2013, potentially obviating the need to offset PM ₁₀ emissions. Nevertheless, WCEP will provide the boiler shutdowns required under the Rule 1304(a)(2) exemption and any required ERCs.
SCAQMD Rule 1303(b)(2a) (offset multiplier)	To the extent that the WCEP is not exempt under Rule 1304(a)(2), WCE will surrender ERCs for VOC, and PM ₁₀ , at a 1:2 ratio, either through certified ERCs or interpollutant trade.
SCAQMD Rule 1304(a)(2) (offset exemption)	WCEP will retire HB units 3 and 4 and seek exemption for 450 megawatts and provide offsets as required for the megawatt increase in accordance with SCAQMD Rule 1303(b)(2a).

*The South Coast Air Basin is expected to be redesignated to attainment in the near future. When this redesignation takes effect, federal law will no longer require that WCEP's PM₁₀ emissions be offset.

SECTION 4.0

Potential Effects on the Public

This section discusses the potential effects on the public that may result from the modifications proposed in this Petition for Amendment application, pursuant to CEC Siting Regulations (Title 20, CCR, Section 1769[a][1][G]).

No adverse effects on the public will occur because of the changes to the project as proposed in this Petition for Amendment.

SECTION 5.0

List of Property Owners

This section lists the property owners in accordance with the CEC Siting Regulations (Title 20, CCR, Section 1769[a][1][H]). A list of property owners whose property is located within 1,000 feet of the proposed facility is included as Attachment C. The list is provided in a format suitable for copying to mailing labels.

SECTION 6.0

Potential Effects on Property Owners

This section addresses potential effects of the project changes proposed in this Petition for Amendment on nearby property owners, the public, and parties in the application proceeding, pursuant to CEC Siting Regulations (Title 20, CCR, Section 1769 [a][1][I]).

The project, as modified, will not differ significantly in potential effects on adjacent land owners, compared with the project as previously proposed. The project, therefore, would have no adverse effects on nearby property owners, the public, or other parties in the application proceeding.