

DOCKETED

Docket Number:	99-AFC-03C
Project Title:	METCALF Energy Center Compliance
TN #:	254434
Document Title:	Post-Certification Petition to Amend (PTA) the Commission Decision
Description:	PTA - Proposed Change of Definition of "Cold Start-Up Period"
Filer:	Anwar Ali
Organization:	Metcalf Energy Center, LLC
Submitter Role:	Commission Staff
Submission Date:	2/13/2024 11:44:10 AM
Docketed Date:	2/13/2024

**METCALF ENERGY CENTER
(99-AFC-03C)
PETITION FOR MODIFICATION
GAS TURBINE COLD START-UP PERIOD DEFINITION**

Pursuant to Section 1769(a)(3)(B) of the California Energy Commission’s (“CEC’s”) Regulations, Metcalf Energy Center, LLC (“Project Owner”) hereby submits this petition for Staff approval of a clarification to the term, “Gas Turbine Cold Start-Up Period”, contained in the Air Quality section of the Final Decision for the Metcalf Energy Center (“MEC”).¹ Staff approval of this Petition is appropriate as there is no possibility that the clarification definition will result in a significant environmental impact, the MEC will remain in compliance with all applicable laws, ordinances, regulations, and standards, and no emissions limits will be increased as a result of the clarification. Further, the Project Owner has already sought and received concurrence from the Bay Area Air Quality Management District for the clarification to the definition of “Gas Turbine Cold Start-Up Period”. Therefore, the Project Owner requests the CEC Staff expeditiously review and approve this Petition.

1. Section 1769 (a)(1)(A): Description of the proposed change, including new language for any conditions of certification that will be affected.

In September 2023, the Metcalf Energy Center, LLC (“Project Owner”) requested a clarification from the Bay Area Air Quality Management (“BAAQMD”) of the definition for “Gas Turbine Cold Start-Up Period” contained in the Permit to Operate. Specifically, the Project Owner proposed that the definition for “Gas Turbine Cold Start-Up Period” be clarified as follows:

The lesser of the first 360 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of part 20(b) and 20(d), following a ~~shutdown~~ period of at least 72 hours since the last turbine shutdown. Notwithstanding this definition of a Cold Start-Up Period, any startup that occurs more than 72 hours since the last turbine shutdown that does not exceed 180 minutes in duration and does not exceed the Start-Up (lb./start-up) emissions limits in Part 21 of this permit condition, shall not be considered a Cold Start-Up.

The BAAQMD has reviewed and approved the proposed clarification, subject to final confirmation from the California Energy Commission (“CEC”) Staff.

¹ Because clarification of the definition, “Gas Turbine Cold Startup Period”, does not affect or change the MEC’s design, operation, performance criteria, or conditions of certification, the Project Owner does not believe that Section 1769 petition is required, but is submitting this Petition pursuant to a request from CEC Staff.

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2. Section 1769 (a)(1)(B): Discussion of the necessity for the proposed change and an explanation of why the change should be permitted.

Clarification of the definition of “Gas Turbine Cold Startup Period” is necessary for operational purposes. Currently, the total number of cold startup hours for each gas turbine is limited to 30 hours per year, where cold starts are defined as any gas turbine startup that occurs following a gas turbine shutdown of at least 72 hours. The purpose of allowing gas turbines a longer startup period and higher emissions during cold starts is to allow the steam turbine to be warmed slowly. However, in certain situations, the gas turbines can be started within the normal startup emissions limits even after a shutdown of more than 72 hours, such as when transitioning from a 1x1 configuration to a 2x1 configuration. The clarification was requested from the BAAQMD to confirm that the startup time for any gas turbine startup that meets the more stringent normal startup conditions not be counted toward the 30 hour per year limit regardless of the number of hours since the most recent gas turbine shutdown.

3. Section 1769(a)(1)(C): Description of any new information or change in circumstances that necessitated the change.

Please see Section 2 above.

4. Section 1769(a)(1)(D): An analysis of the effects that the proposed change may have on the environment and proposed measures to mitigate any significant environmental effects.

The proposed change will not result in an adverse change to the environment. No physical modifications to either the MEC or the MEC site are necessary to effectuate the updated definition. The BAAQMD also confirmed that the proposed clarification will not result in increased daily, quarterly, annual, or other emission limits, and that the proposed clarification will not result in any significant adverse air quality impacts.

5. Section 1769(a)(1)(E): Analysis of how the proposed change would affect the project’s compliance with applicable laws, ordinances, regulations, and standards.

The proposed change will not impact MEC’s ability to comply with applicable laws, ordinances, regulations, and standards.

6. Section 1769(a)(1)(F): Discussion of how the proposed change would affect the public.

The proposed change will not adversely affect the public. The proposed change does not result in significant impacts to the environment and does not negatively impact air quality or public health.

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- 7. Section 1769(a)(1)(G): provide a list of current assessor's parcel numbers and owners' names and addresses for all parcels within 500 feet of any affected project linears and 1000 feet of the project site.**

The Project Owner can provide a list of property owners upon request.

- 8. Section 1769(a)(1)(H): discussion of the potential effect on nearby property owners, residents, and the public.**

The proposed change will have no significant environmental effects and will be in compliance with applicable LORS. Therefore, the proposed change will have no impact on property owners, residents, or the public.

- 9. Section 1769(a)(1)(I): discussion of exemptions from the California Environmental Quality Act that may apply to approval of the proposed change.**

The proposed change is categorically exempt pursuant to the “common sense” exemption set forth Title 14, Section 15061 of the California Code of Regulations as there is no possibility of a significant impact to the environment as a result of the updated definition.

**METCALF ENERGY CENTER
(99-AFC-03C)
PETITION FOR MODIFICATION
GAS TURBINE COLD START-UP PERIOD DEFINITION**

ATTACHMENT A

Application to Bay Area Air Quality Management District

Metcalf Energy Center, LLC

1 Blanchard Rd.
Coyote, CA 95013

September 19, 2023

Ms. Xuna Cai
Permit Services Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Re: Metcalf Energy Center
Facility #B2183
Major Facility Review Permit – Title V Permit Modification

Dear Ms. Cai:

Metcalf Energy Center, LLC (MEC) is submitting the enclosed application forms to revise the permit to operate and Title V permits. Specifically, MEC is requesting a modification to the permits' definition of Gas Turbine Cold Start-up Period.

The permit conditions that reference startups include the Definitions:

Gas Turbine Start-up Mode: The lesser of the first 180 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of conditions 20(b) and 20(d).

Gas Turbine Cold Start-Up Period: The lesser of the first 360 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of part 20(b) and 20(d), following a shutdown of at least 72 hours.

Additionally, Condition 21 limits startup emissions for units S-1 through S-4 (turbines and HRSG's):

Condition 21. The regulated air pollutant mass emission rates from each of the Gas Turbines (S-1 and S-3) during a start-up, combustor tuning period, or a shutdown shall not exceed the limits established below. (PSD)

	<i>Startup (lb/start-up)</i>	<i>Cold Start/Combustor Tuning (lb/event)</i>	<i>Shutdown (lb/shutdown)</i>
<i>Oxides of Nitrogen (as NO₂)</i>	240	480	80
<i>Carbon Monoxide (CO)</i>	2,514	5,028	902
<i>Precursor Organic Compounds (POC) (as CH₄)</i>	48	96	16

The proposed change to the Gas Turbine Cold Start-Up Period definition is:

Gas Turbine Cold Start-Up Period: The lesser of the first 360 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of part 20(b) and 20(d), following a

shutdown period of at least 72 hours since the last turbine shutdown. Notwithstanding this definition of a Cold Start-up Period, any startup that occurs more than 72 hours since the last turbine shutdown that does not exceed 180 minutes in duration or the Start-up (lb/start-up) emissions limits in Condition 21 shall not be considered a Cold Start-up.

The basis for the proposed condition modification relies on the fact the facility operates to support a flexible market demand where the plant typically cycles on and off depending on the requirements of the California Independent Systems Operators (Cal ISO) demand.

For example, the plant is often taken offline (non-operational) for a few days at a time. Pursuant to the existing definition, any start-up will qualify as a Gas Turbine Cold Start-Up Period when the unit was shut down for greater than 72 hours. However, during these situations, it is not uncommon that a unit is able to meet the non-cold start-up limits of 180 minutes and the associated Condition emission limits. Furthermore, on occasions when the facility is operating in 1x1 (1 gas turbine and steam turbine) mode, when the second gas turbine starts up, it can be classified as a cold start based on the existing permit definition, even though the second turbine typically will meet the non-cold start-up limits (time and mass emissions).

MEC is requesting that the BAAQMD revise the condition as proposed above to ensure that only cold start-up periods that require additional time or have excessive emissions are accumulated against the existing cold start-up limit of 30 hours/turbine/year.

This proposed change to the definition of Gas Turbine Cold Start-up Period does not affect any of the following:

- It does not result in an increase in emissions of any pollutant,
- It does not affect or change any testing, continuous monitoring, recordkeeping, or reporting requirements in the current permit,
- It does not affect BACT for the current facility processes,
- It does not create a need for further mitigations of emissions (such as offsets),
- It does not create the need for an ambient air quality impact analysis or revised health risk evaluation.

If you have any questions regarding these comments, or wish to discuss them further, please do not hesitate to contact Rosemary Silva, EHS Specialist, at (408) 361-4954.

Sincerely,



Kevin Karwick
Designated Representative and General Manager
Metcalf Energy Center, LLC

cc: David Williams Calpine Corp.
Jessica Grossman Calpine Corp.

Enclosures: Form p101b and Permit Condition Change Request Form



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT CONDITION CHANGE REQUEST FORM
To request a change of current permit conditions

All fields are required unless otherwise noted. Please type or print.

Mail to:
BAAQMD
Engineering Division
375 Beale St., Suite 600
San Francisco, CA 94105

Tel: (415) 749-4990

1. Facility Identification

Facility Name	BAAQMD Facility ID
Metcalf Energy Center, LLC	B2183

2. Permit Condition Identification – Attach a separate sheet for additional space

As identified on the permit, provide the Permit Condition ID that you are requesting the change.

Permit Condition ID
18310 (Definitions)

3. Description of the Requested Permit Condition Change – Attach a separate sheet for additional space

I have: (Select one)

- Attached proposed language to this form Described my request in the space below

Describe the permit condition change being requested. Include BAAQMD device IDs, if necessary.

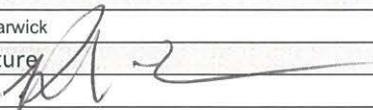
S-1 & S-3 Gas Turbines
S-2 & S-4 HRSG's

Proposed language in red line/strikeout is provided in the cover letter.

4. Certification/Signature of person responsible for the information on this form.

This form contains confidential information. No Yes (If Yes, see instructions.)

I hereby certify that I am authorized to complete this form for the facility and that all information contained herein is true and correct.

Name	Title	
Kevin Karwick	General Manager	
Signature 	Date	Phone (xxx-xxx-xxxx)
	09/11/2023	408-635-1324



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Application Cover Form – “P-101B form”

All fields are required unless otherwise noted. Please type or print. No information provided on this form can be marked trade secret.

Send to: BAAQMD Engineering Division 375 Beale St., Suite 600 San Francisco, CA 94105 Email: permits@baaqmd.gov

Phone: (415) 749-4990

1. Facility and Project Information

- If this facility does not have a current BAAQMD permit or active permit application (new facility), fill out the Facility Creation and Contacts Form part of this form.
If this application is in response to a Notice of Violation from BAAQMD Compliance & Enforcement Division, please enter the NOV number here N/A

Facility Name: Metcalf Energy Center, LLC
Facility ID (except new facilities):
Application Title/ Project or Equipment Description: Modification of Facility B2183 PTO and Title V Permit
Equipment/Project Location in relation to facility location (e.g., NW corner of facility OR 338 Washington Dr.) (Optional): 1 Blanchard Road, San Jose, CA. 95013

2. Application Contact

First Name: Kevin Last Name: Karwick
Business Name of Contact (If different from facility): Same as facility name Contact Title: General Manager
Address Line 1: P.O. Box 13190 Address Line 2 (Optional):
City: Coyote State: CA Zip Code: 95103
E-mail Address: kevin.karwick@calpine.com
Primary Phone (xxx-xxx-xxxx): 408-635-1324 Alternate Phone (Optional): Fax Number (Optional):

3. Proximity to a School (K-12)

Is the equipment/project located within 1,000 ft of the outer boundary of the nearest school? [] Yes [x] No

4. Additional Information: The following additional information is required to complete all permit applications and should be included with your submittal. Failure to provide this information may delay the review of your application.

- [x] A facility map with street address or location and the property boundary, drawn roughly to scale, that locates the equipment and its emission points, completed data form(s), and a pollutant flow diagram for each piece of equipment. (See www.baaqmd.gov/forms/permits)
[x] Equipment/project description, manufacturer’s data See District files for this information.
[x] Discussion and/or calculations of air pollutant emissions from the equipment

5. Small Business Certification (optional): If the facility identified in Part 1 qualifies as a small business as defined in Regulation 3, certify by checking boxes that your business meets all the following criteria. You may qualify for an application fee reduction.

- [] The business does not employ more than 10 persons and its gross annual income does not exceed \$750,000.
[] And the business is not an affiliate of a non-small business. (Note: a non-small business employs more than 10 persons and/or its gross income exceeds \$750,000.)

6. Green Business Certification (optional): If the facility identified in Part 1 has been certified as a Green Business by the Association of Bay Area Governments and implemented by participating counties, check the box & include your documentation. You may qualify for an application fee reduction.

[] Green Business certificate included

An electronic version of this form and instructions can be found at www.baaqmd.gov.



Application Cover Form – "P-101B form"

All fields are required unless otherwise noted. Please type or print. No information provided on this form can be marked trade secret.

Send to: BAAQMD Engineering Division 375 Beale St., Suite 600 San Francisco, CA 94105 Email: permits@baaqmd.gov

Phone: (415) 749-4990

7. Accelerated Permitting (optional): The Accelerated Permitting Program entitles you to install and operate qualifying sources of air pollution and abatement equipment while your permit application is being processed. To qualify for this program, you must certify that your project will meet all of the following criteria. Please acknowledge each item by checking each box.

- Uncontrolled emissions of any single pollutant are each less than 10 lbs/highest day, or the equipment has been pre-certified by the BAAQMD.
Uncontrolled emissions of toxic compounds do not exceed the trigger levels identified in Table 2-5-1 (see Regulation 2, Rule 5).
The source is not a diesel engine.
The project is not subject to public notice requirements (the source is either more than 1000 ft. from the nearest school, or the source does not emit any toxic compound in Table 2-5-1 of BAAQMD Regulation 2, Rule 5).
For replacement of abatement equipment, the new equipment must have an equal or greater overall abatement efficiency for all pollutants than the equipment being replaced.
For alterations of existing sources, the requested change does not result in an increase in emissions for all pollutants.
Payment of all applicable permit application fees (the minimum permit fee to install and operate each source). See Regulation 3 or contact the Engineering Division for help in determining your fees.

8. CEQA Please answer the following questions pertaining to CEQA (California Environmental Quality Act).

A Has another public agency prepared, required preparation of, or issued a notice regarding preparation of a California Environmental Quality Act (CEQA) document (initial study, negative declaration, environmental impact report, or other CEQA document) that analyzes impacts of this project or another project of which it is a part or to which it is related? If no, go to section 8B. Describe the document or notice, preparer, and date of document or expected date of completion:

California Energy Commission, 99-AFC-03, certified on 9/24/2001.

B List and describe any other permits or agency approvals required for this project by city, regional, state or federal agencies

State of California Energy Commission, License No. 99-AFC-03 will require submittal of a request to amend.

C List and describe all other prior or current projects for which either of the following statements is true: (1) the project that is the subject of this application could not be undertaken without the project listed below, (2) the project listed below could not be undertaken without the project that is the subject of this application:

N/A, MEC is an existing facility.

9. Trade Secret Information: Under the California Public Records Act, all information in your permit application will be considered a matter of public record and may be disclosed to the public, unless you have asked BAAQMD to treat certain items as trade secret as specified in Regulation 2, Rule 1, Section 402.7.

Does this application contain Trade Secret information? Yes No

- Each page containing trade secret information must be labeled "trade secret" with the trade secret information clearly marked and you must provide a "public copy" with the information redacted.
For each item asserted to be trade secret, you must provide a statement which provides the basis for your claim.

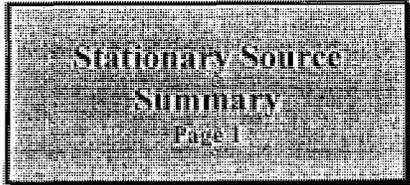
10. Certification/Signature

I hereby certify that I am authorized to complete this form for the facility and that all information contained herein is true and correct. I acknowledge that all documentation in this application submittal is a matter of public record unless otherwise indicated per Section 9 of this form.

Table with 3 columns: Name, Title, Signature, Date, Phone. Kevin Karwick, General Manager, [Signature], 9/19/2023, 408-635-1324

An electronic version of this form and instructions can be found at www.baaqmd.gov.

Engineering Division
Bay Area Air Quality Management District
375 Beale Street, Ste# 600, San Francisco, CA 94105
415-749-4990



FACILITY NAME: Metcalf Energy Center, LLC	FACILITY ID: B2183
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◆ DISTRICT USE ONLY ◆

Application #: _____ Application Received: _____

Application Filing Fee: _____ Application Deemed Complete: _____

I. FACILITY IDENTIFICATION

1. Facility Name: Metcalf Energy Center, LLC	
2. Four digit SIC: 4911	EPA Plant ID: 55393
3. Parent Company (if different than Facility Name): Calpine Corporation	
4. Mailing Address: P.O. Box 13190, Coyote, CA 95013	
5. Street Address or Source Location: 1 Blanchard Road, Coyote, CA 95013	
6. UTM C coordinates (if required):	
7. Source Located within 50 miles of the state line: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8. Source Located within 1000 feet of a school: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
9. Type of Orginzation: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility Company	
10. Legal Owner's Name: Metcalf Energy Center, LLC	
11. Owner's Agent name (if any):	
12. Responsible Official: Kevin Karwick	
13. Plant Site Manager/Contact: Rosemary Silva	Telephone #: (408) 361 - 4954
14. Type of Facility: Natural gas fired power plant	
15. General description of processes/products: Electric power generation utilizing natural gas.	
16. Is a Federal Risk Management Plan pursuant to Section 112(r) required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If application is submitted after Risk Management Plan due date, attach verification that the plan is registered with the appropriate agency.)	

FACILITY NAME: Metcalf Energy Center, LLC	FACILITY ID: B2183
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II. TYPE OF PERMIT ACTION

	CURRENT PERMIT (permit number)	EXPIRATION (date)
<input type="checkbox"/> Initial Title V Application		
<input type="checkbox"/> Permit Renewal		
<input type="checkbox"/> Significant Permit Modification		
<input checked="" type="checkbox"/> Minor Permit Modification	B2183	June 27, 2023
<input type="checkbox"/> Administrative Amendment		

III. DESCRIPTION OF PERMIT ACTION

1. Does the permit action requested involve: <input type="checkbox"/> Temporary Source <input type="checkbox"/> Voluntary Emissions Caps <input type="checkbox"/> Acid Rain Source <input checked="" type="checkbox"/> Alternative Operating Scenarios <input type="checkbox"/> CEM's <input type="checkbox"/> Abatement Devices <input type="checkbox"/> Source Subject to MACT Requirements [Section 112] <input type="checkbox"/> Source Subject to Enhanced Monitoring
2. Is source operating under a Compliance Schedule? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. For permit modification, provide a general description of the proposed permit modification: The requested minor permit amendment is detailed in the attached cover letter. _____ _____ _____

Kevin Karwick
Digitally signed by Kevin Karwick
 DN: cn=Kevin Karwick, o=Calpine,
 email=kkarwick@calpine.com, c=US
 Date: 2023.09.22 13:02:24 -07'00'

Signature of Responsible Official

General Manager

Title of Responsible Official and Company Name

Kevin Karwick

Print Name of Responsible Official

Date: **9/22/2023**
