



State of Utah

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Governor

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Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-IN101200008-24

September 3, 2024

Allen Johnson
Bountiful City Light and Power
198 South 200 West
Bountiful, UT 84010
afarnes@bountiful.gov

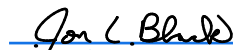
Dear Mr. Johnson:

Re: Intent to Approve: Modification to Approval Order DAQE-AN101200006-18 - Reduction in
Potential to Emit to Remain a Minor Source
Project Number: N101200008

The attached document is the Intent to Approve (ITA) for the above-referenced project. The ITA is subject to public review. Any comments received shall be considered before an Approval Order (AO) is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Future correspondence on this ITA should include the engineer's name, **John Jenks**, as well as the DAQE number as shown on the upper right-hand corner of this letter. John Jenks, can be reached at (385) 306-6510 or jjenks@utah.gov, if you have any questions.

Sincerely,


Jon Black (Aug 29, 2024 13:22 MDT)

Jon L. Black, Manager
New Source Review Section

JLB:JJ:jg

cc: Davis County Health Department
EPA Region 8

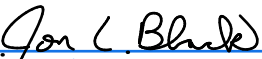
STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN101200008-24
Modification to Approval Order DAQE-AN101200006-18
Reduction in Potential to Emit to Remain a Minor Source

Prepared By
John Jenks, Engineer
(385) 306-6510
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Issued to
Bountiful City Light and Power - Power Plant

Issued On
September 3, 2024


[Jon Black \(Aug 29, 2024 13:22 MDT\)](#)

New Source Review Section Manager
Jon L. Black

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GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name

Bountiful City Light and Power

Source Name

Bountiful City Light and Power - Power Plant

Mailing Address198 South 200 West
Bountiful, UT 84010**Physical Address**253 South 200 West
Bountiful, UT 84010**Source Contact**Name: Alan Farnes
Phone: (801) 298-6072
Email: afarnes@bountiful.gov**UTM Coordinates**425450 m Easting
4526400 m Northing
Datum NAD27
UTM Zone 12**SIC code** 4911 (Electric Services)

SOURCE INFORMATION

General Description

Bountiful City Light and Power (BCLP) is a municipal power plant serving the City of Bountiful. The source consists of three natural gas-fired simple-cycle turbine generators and two emergency natural-gas fired engine generators for building backup power.

NSR Classification

Minor Modification at Minor Source

Source Classification

Located in Salt Lake County PM₁₀ Maint Area, Northern Wasatch Front O3 NAA, Salt Lake City UT PM_{2.5} NAA
Davis County
Airs Source Size: SM

Applicable Federal Standards

NSPS (Part 60), A: General Provisions
NSPS (Part 60), GG: Standards of Performance for Stationary Gas Turbines
NSPS (Part 60), JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
NSPS (Part 60), KKKK: Standards of Performance for Stationary Combustion Turbines
MACT (Part 63), A: General Provisions
MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
Title V (Part 70) Area Source

Project Description

BCLP has requested to reduce the PTE of its power plant to remain a minor source. Total emissions from the plant will be less than 50 TPY for any criteria pollutant. A slight increase in VOC emissions will be included for flexibility purposes. In addition, the testing frequency on two of the turbines will be reduced to every other year as per 40 CFR 60 Subpart KKKK.

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

Criteria Pollutant	Change (TPY)	Total (TPY)
CO ₂ Equivalent	-164254	503913.00
Carbon Monoxide	-16.21	48.00
Nitrogen Oxides	-17.01	48.00
Particulate Matter - PM ₁₀	1.09	7.38
Particulate Matter - PM _{2.5}	1.09	7.38
Sulfur Dioxide	1.37	4.42
Volatile Organic Compounds	1.86	35.00

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
1,3-Butadiene (CAS #106990)	-2	1
Acetaldehyde (CAS #75070)	-38	68
Acrolein (CAS #107028)	-9	10
Benzene (Including Benzene From Gasoline) (CAS #71432)	7	39
Ethyl Benzene (CAS #100414)	-29	53
Formaldehyde (CAS #50000)	-620	1216
Naphthalene (CAS #91203)	-2	1
PAH, Total (CAS #234)	3	9
Propylene[1-Propene] (CAS #115071)	-21	53
Toluene (CAS #108883)	-313	21
Xylenes (Isomers And Mixture) (CAS #1330207)	-82	111
	Change (TPY)	Total (TPY)
Total HAPs	-0.55	0.79

PUBLIC NOTICE STATEMENT

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Director.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in the Ogden Standard Examiner on September 5, 2024. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing within 15 days of publication, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as

practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

SECTION I: GENERAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

I.1	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.2	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.3	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two years. [R307-415-6a]
I.4	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.5	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.6	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
I.7	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

SECTION II: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.A THE APPROVED EQUIPMENT

II.A.1	Power Generation Facility
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II.A.2	GT #1: Gas Turbine 5.3 MW gas turbine fired on natural gas only, low NO _x technology equipped
II.A.3	GT #2: Gas Turbine SOLAR TITAN 130 - 13.5 MW (nameplate rating) natural gas-fired turbine/generator set with oxidation catalyst
II.A.4	GT #3: Gas Turbine SOLAR TITAN 130 - 13.5 MW (nameplate rating) natural gas-fired turbine/generator set with oxidation catalyst
II.A.5	Emergency Generator #1 Olympian G250LG GenSet natural gas-fired IC engine
II.A.6	Emergency Generator #2 Kohler 150REZGC GenSet natural gas-fired IC engine

SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	Conditions on Permitted Source
II.B.1.a	<p>All turbine stacks shall be vented vertically without any obstruction to upward momentum during operation. Each turbine shall be equipped with a kWh meter.</p> <p>Total monthly hours of operation (including days/hours in operation and start/stop times for each turbine) and total kW of electricity produced shall be recorded for each hour the turbines are in operation. Operating information for each turbine shall be recorded in an operators log, which shall be maintained each day. [R307-401-8]</p>
II.B.1.b	<p>Visible emissions shall be no greater than 10 percent opacity except for 15 minutes at start-up and 15 minutes at shutdown.</p> <p>Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-401-8]</p>

II.B.1.c NEW	<p>Emissions of NO_x from the entire plant shall not exceed 48 tons per rolling 12-month period.</p> <p>Compliance shall be determined as follows:</p> <p>Combined emissions shall be the sum of emissions from each natural gas fired turbine. To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the tenth day of each month using data from the previous 12 months. Power production shall be determined by examination of monthly power production records.</p> <p>Total NO_x emissions from the turbines shall be determined by recording the amount of kWh generated by each turbine on a monthly basis. The kWh produced by the natural gas-fired turbines shall be multiplied by the appropriate emission factors using the following equation to calculate monthly emissions from each turbine:</p> $(kW\text{-hrs/month})(g/kW\text{-hr})(1\text{ lb}/453.59\text{ g})(1\text{ ton}/2000\text{ lbs}) = \text{tons/month turbine NO}_x\text{ emissions}$ <p>The NO_x emission factor for each turbine shall be derived from the most recent emission test results for that turbine. [R307-401]</p>
II.B.1.d	<p>At least 30 days prior to conducting any emission testing required under any part of this AO, the owner or operator shall notify the Director of the date, time, and place of such testing, and, if determined necessary by the Director, the owner or operator shall attend a pretest conference. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director. The source test protocol shall be approved by the Director prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Director. The pretest conference shall include representation from the owner/operator, the tester, and the Director. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location. [R307-165]</p>
II.B.1.e NEW	<p>The owner/operator shall not operate each emergency generator engine on site for more than 100 hours per calendar year for maintenance checks and readiness testing. Each emergency generator engine on site may be operated for up to 50 hours per calendar year in non-emergency situations. Any operation in non-emergency situations shall be counted as part of the 100 hours per calendar year for maintenance and testing. There is no time limit on the use of the engines during emergencies. [40 CFR 63 Subpart ZZZZ]</p>
II.B.1.e.1 NEW	<p>To determine compliance with the annual operation limitation, records documenting the operation of each emergency engine shall be kept in a log and shall include the following:</p> <ul style="list-style-type: none"> A. The date the emergency engine was used. B. The duration of operation in hours. C. The reason for the emergency engine usage. <p>[40 CFR 63 Subpart ZZZZ]</p>
II.B.2	<p>Conditions on Natural Gas-Fired Turbines</p>
II.B.2.a	<p>The owner/operator shall use only natural gas in each turbine. [R307-401-8(1)(a)]</p>
II.B.2.b	<p>GT #2 and GT #3 shall each be equipped with an oxidation catalyst. [R307-401-8(1)(a)]</p>

II.B.2.c	<p>Each turbine shall comply with the monitoring and testing requirements of 40 CFR 60.</p> <p>Subpart GG, §§60.334, and 60.335 apply to GT#1. Subpart KKKK, §§60.4335-4370, and §§60.4400-4415 apply to GT #2 and #3.</p> <p>For all emissions testing, the following shall apply:</p> <p>The sample location shall conform to 40 CFR 60. Appendix A, Method 20. The volumetric flow rate and NO_x emission rate shall be determined by 40 CFR 60, Appendix A, Method 20. The CO emission rate shall be determined by 40 CFR 60, Appendix A, Method 10. The production rate during all compliance testing shall be no less than 90% of the maximum production rate achieved in the previous three years.</p> <p>[40 CFR 60 Subpart GG, 40 CFR 60 Subpart KKKK]</p>									
II.B.2.d	<p>Emissions to the atmosphere from the GT #1 (5.3 MW Turbine) Exhaust Stack shall not exceed the following rates and concentrations:</p> <table><tr><td>Pollutant</td><td>g/kW-hr</td></tr><tr><td>NO_x</td><td>0.6</td></tr><tr><td>CO</td><td>0.6</td></tr></table> <p>Emissions testing to demonstrate compliance with these limits shall be performed annually. [40 CFR 60 Subpart GG, R307-165]</p>	Pollutant	g/kW-hr	NO _x	0.6	CO	0.6			
Pollutant	g/kW-hr									
NO _x	0.6									
CO	0.6									
II.B.2.e	<p>Emissions to the atmosphere from the GT #2 and GT #3 (each TITAN Turbine) Exhaust Stacks shall not exceed the following rates and concentrations:</p> <table><tr><td>Pollutant</td><td>Concentration at 15% O₂</td><td>lb/hr (at 64 F reference temp)</td></tr><tr><td>NO_x</td><td>15 ppm</td><td>7.5</td></tr><tr><td>CO</td><td>15 ppm</td><td>7.5</td></tr></table> <p>Emission testing to demonstrate compliance with these limits shall be performed at least once every two years, not to exceed 26 months between tests.</p> <p>[40 CFR 60 Subpart KKKK, R307-165]</p>	Pollutant	Concentration at 15% O₂	lb/hr (at 64 F reference temp)	NO _x	15 ppm	7.5	CO	15 ppm	7.5
Pollutant	Concentration at 15% O₂	lb/hr (at 64 F reference temp)								
NO _x	15 ppm	7.5								
CO	15 ppm	7.5								

PERMIT HISTORY

This Approval Order shall supersede (if a modification) or will be based on the following documents:

Supersedes
Is Derived From
Incorporates
Incorporates

AO DAQE-AN101200006-18 dated July 16, 2018
Source submitted NOI dated October 13, 2023
Additional Information Received dated April 11, 2024
Additional Information Received dated April 12, 2024

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by Environmental Protection Agency to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds