

State Registration Number
B2795

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B2795-2023

DTE Electric Company - Colfax Peaking Facility

State Registration Number (SRN): B2795

Located at

4025 Gregory Road, Fowlerville, Livingston County, Michigan 48836

Permit Number: MI-ROP-B2795-2023

Staff Report Date: December 5, 2022

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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DECEMBER 5, 2022 - STAFF REPORT

ROP Number

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Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan’s Administrative Rules for Air Pollution Control promulgated under Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source’s applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	DTE Electric Company Attention: Plant Manager - Peakers 4695 West Jefferson Avenue Trenton, Michigan 48183
Source Registration Number (SRN):	B2795
North American Industry Classification System (NAICS) Code:	221112 - Fossil Fuel Electric Power Generation
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202100002
Responsible Official – 1:	Biljana Pecov, Plant Manager, Fossil Generation-Peakers 248-342-3621
Responsible Official – 2:	Justin Morren, Plant Director, Fossil Generation-Peakers 810-599-9223
AQD Contact:	Matt Karl, Senior Environmental Quality Analyst 517-282-2126
Date Application Received:	December 28, 2020
Date Application Was Administratively Complete:	December 28, 2020
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	December 5, 2022
Deadline for Public Comment:	January 4, 2023

Source Description

DTE Energy Company – Colfax Peaking Facility is a power plant that consists of five (5) diesel fuel-fired engines that provide electric power to the transmission grid during peak electrical demand periods or when required for load stability. The engines were installed in 1969. The five (5) engines are identical GM Power, EMD MP45 diesel fuel-fired compression ignition (CI) reciprocating internal combustion engines (RICE), non-emergency, non-black start. The engines are 20 cylinders each rated at 2.75 megawatts (MW) or about 3600 horsepower (hp). The engines are electric start and are capable of being remotely started from DTE headquarters. An on-site operator is not required.

Catalytic converter carbon monoxide (CO) emission controls were installed on the engines in 2012. The catalytic converters were installed to comply with the requirements of 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary RICE. The applicable requirements of 40 CFR 63 Subpart ZZZZ were incorporated into this renewable operating permit (ROP). These requirements include testing and recordkeeping requirements to demonstrate proper operation of the engines and the catalytic converter controls.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2021**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	0.65
Nitrogen Oxides (NO _x)	12.29
PM10*	0.43
Sulfur Dioxide (SO ₂)	0.006
Volatile Organic Compounds (VOCs)	0.38

*PM10: Particulate matter that has an aerodynamic diameter less than or equal to a nominal 10 micrometers.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is in Livingston County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of CO and NO_x exceeds 100 tons per year.

The stationary source is a minor source of HAP emissions because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

Although EUDG11-1, EUDG11-2, EUDG11-3, EUDG11-4, EUDG11-5 were installed after August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. The equipment was constructed/installed prior to June 19, 1978, the promulgation

date of the Prevention of Significant Deterioration (PSD) regulations, and therefore the equipment has not undergone PSD review.

EUDG11-1, EUDG11-2, EUDG11-3, EUDG11-4, EUDG11-5 at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

The emission limitation(s) or standard(s) for CO at the stationary source with the underlying applicable requirement(s) of 40 CFR PART 63, Subpart ZZZZ, from EUDG11-1, EUDG11-2, EUDG11-3, EUDG11-4, EUDG11-5 are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because the CO emission limitation of 23 ppmvd at 15% O₂ or a CO reduction of 70% or more from the oxidation catalyst control meet(s) the CAM exemption for NSPS or MACT proposed after November 15, 1990.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-Wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-Wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

Streamlined/Subsumed Requirements

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Non-applicable Requirements

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

There were no processes listed in the ROP Application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action taken by EGLE, AQD

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Bob Byrnes, Acting Lansing District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

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RENEWABLE OPERATING PERMIT
JANUARY 18, 2023 – STAFF REPORT ADDENDUM

ROP Number
MI-ROP-B2795-2023

Purpose

A Staff Report dated December 5, 2022 was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official – 1:	Biljana Pecov, Plant Manager, Fossil Generation - Peakers 248-342-3621
Responsible Official – 2:	Justin Morren, Plant Director, Fossil Generation – Peakers 810-599-9223
AQD Contact:	Matt Karl, Senior Environmental Quality Analyst 517-282-2126

Summary of Pertinent Comments

The following pertinent comments were received from DTE during the 30-day public comment period.

Regarding FGPEAKERS description, DTE suggests including “compression ignition (CI)” instead of just “CI,” and additionally noting that the engines are electricity generating, peaking units.

Regarding FGPEAKERS pollution control equipment, DTE requests to include “open crankcase filtration emission control system.”

Regarding FGPEAKERS SC V.1, DTE requests to add 40 CFR Part 63, Subpart ZZZZ, Table 4.1 to the underlying applicable requirement (UAR) list. Table 4.1 describes the testing procedures for demonstrating compliance with the carbon monoxide (CO) percent reduction requirement.

Changes to the December 5, 2022 Draft ROP

The following changes were made to the draft ROP.

Updated the FGPEAKERS description to read: “Five (5) 3600 hp, 20-cylinder, 2-stroke cycle diesel fuel-fired non-emergency, non-black start, existing stationary compression ignition (CI) reciprocating internal combustion engines (RICE) that are electricity generating, peaking units subject to 40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary RICE, located at an area source of HAP emissions, existing non-emergency, non-black start CI RICE greater than 500 bhp equipped with an oxidation catalyst and do not meet the criteria of 40 CFR 63.6603(b)-(e). A RICE is existing if the date of installation is before June 12, 2006.”

Updated the FGPEAKERS pollution control equipment to include: "Open crankcase filtration emission control system."

Updated FGPEAKERS SC V.1 UAR list to include "40 CFR Part 63, Subpart ZZZZ, Table 4.1"