

State Registration Number  
N6767

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N6767-  
2020a

**Consumers Energy Company  
Covert Generating Station**

State Registration Number (SRN): N6767

Located at

26000 77<sup>th</sup> Street, Covert, Van Buren County, Michigan 49043

Permit Number: MI-ROP-N6767-2020a

Staff Report Date: June 15, 2020

Amended Date: June 12, 2023

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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State Registration Number

N6767

**RENEWABLE OPERATING PERMIT**

**June 15, 2020 STAFF REPORT**

ROP Number

MI-ROP-N6767-2020

**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:	New Covert Generating Company, LLC 26000 77 <sup>th</sup> Street Covert, Michigan 49043
Source Registration Number (SRN):	N6767
North American Industry Classification System (NAICS) Code:	221112
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201900069
Responsible Official:	John P. Reese, Senior Vice President 212-792-0897
AQD Contact:	Rachel Benaway, Environmental Quality Analyst 269-370-2170
Date Application Received:	April 9, 2019
Date Application Was Administratively Complete:	June 11, 2019
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	June 15, 2020
Deadline for Public Comment:	July 15, 2020

## Source Description

New Covert Generating Company, LLC (facility) consists of three natural gas-fired turbines with heat recovery steam generators (HRSG) that generate electrical energy to be sold on the public utility grid system. Each HRSG contains a duct burner to provide additional steam generating capability and increase the maximum power generating capacity of the HRSG. Each turbine and duct burner set are equipped with a dry low-NOx combustor, a selective catalytic reduction system for post-combustion NOx control, and an oxidation catalyst for carbon monoxide (CO) control. Each turbine is equipped with a continuous emissions monitoring system (CEMS) which monitors NOx and CO emissions. The CEMS accuracy is tested yearly.

All three turbines were upgraded in 2019 and 2020 under PTI No. 186-17. The upgrade to the turbines included an increase in the gross nominal output of the plant to 1,230 MW total. The gross nominal output of the CTs will increase from 245 MW each pre-project to 260 MW each post-project, and the HRSGs will increase from 125 MW each pre-project to 150 MW each post-project. Because of this upgrade, the turbines are now subject to compliance assurance monitoring (CAM) for volatile organic compounds (VOCs).

The facility also includes a diesel-fired emergency generator to provide general site power in emergency situations, a diesel-fired water pump that operates in the event of a plant fire and for readiness testing, and a natural gas-fired auxiliary boiler to facilitate the start-up of the combustion and steam turbines. Three mechanical drift evaporative cooling towers are utilized to cool the steam exhausting from each steam turbine generator. The facility also has a gas-fired gas heater that has not been operated since 2001.

The facility is located to the east of I-196. It is surrounded entirely by agricultural or forested land. It is approximately 1 mile east of Lake Michigan. The closest house is about 0.5 miles to the east of the facility.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2018**.

### **TOTAL STATIONARY SOURCE EMISSIONS**

<b>Pollutant</b>	<b>Tons per Year</b>
Carbon Monoxide (CO)	109.3
Nitrogen Oxides (NO <sub>x</sub> )	179.8
Particulate Matter (PM)	52.6
Sulfur Dioxide (SO <sub>2</sub> )	14.3
Volatile Organic Compounds (VOCs)	42.2

The following table lists Hazardous Air Pollutant emissions as calculated for the year            by            :

<b>Individual Hazardous Air Pollutants (HAPs) **</b>	<b>Tons per Year</b>
Formaldehyde (HCOH)	<b>6.1</b>
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>6.1</b>

\*\*As listed pursuant to Section 112(b) of the federal Clean Air Act.

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 Van Buren 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 carbon monoxide (CO), nitrogen oxide (NO<sub>x</sub>), and particulate matter less than 10 microns in diameter (PM<sub>10</sub>) exceeds 100 tons per year and the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

All emission units, except EU-COLDCLEAN at the stationary source were subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21, because at the time of New Source Review permitting the potential to emit of carbon monoxide, nitrogen oxide, and PM<sub>10</sub> was greater than 100 tons per year.

The source has applicable requirements for GHG as a result of review under the Prevention of Significant Deterioration regulations. These Best Available Control Technology (BACT) requirements for GHG are included in the ROP. The mandatory Greenhouse Gas Reporting Rule under 40 CFR Part 98 is not an ROP applicable requirement and is not referenced in the ROP.

Although EU-GASHEATER was installed after August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. However, future modifications of this equipment may be subject to NSR.

EU-TURBINE1, EU-DB1, EU-TURBINE2, EU-DB2, EU-TURBINE3, and EU-DB3 at the stationary source are subject to the Standards of Performance for Stationary Combustion Turbines promulgated in 40 CFR Part 60, Subparts A and KKKK. This subpart applies to stationary combustion turbines with heat input at peak load of >10 MMBTU/hr, that were constructed or modified, or reconstructed after February 18, 2005. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of Subparts Da and Subpart GG of this part.

EU-TURBINE1, EU-TURBINE2, and EU-TURBINE3 at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines promulgated in 40 CFR Part 63, Subparts A and YYYY. The turbines have not been reconstructed at the source and are existing. Existing stationary combustion turbines in all subcategories do not have to meet the requirements of this subpart and subpart A of this part. There are no applicable requirements for this subpart.

EU-AUXBOIL at the stationary source is subject to the Standards of Performance for Electric Utility Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc.

EU-EMERGEN and EU-EMERGFIRE at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ. EU-AUXBOIL and EU-GASHEATER are subject to the NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD.

EU-TEMPBOILER at the stationary source is not subject to NSPS for Industrial-Commercial-Institutional Steam Generating Units promulgated under 40 CFR Part 60, Subpart Db because 40 CFR 60.41b exempts temporary boilers which are defined as one capable of and designed to be moved which does not remain at a location for more than 180 consecutive days. The boiler is not subject to the NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subpart DDDDD because this subpart also exempts temporary boilers. If the boiler remains on site for more than 180 days, it will need to comply with 40 CFR Part 63, Subpart DDDDD.

FG-TURB/DB1-3 at the stationary source is subject to the federal Acid Rain program promulgated in 40 CFR Part 72.

FG-TURB/DB1-3 at the stationary source is subject to the Cross-State Air Pollution Rule NO<sub>x</sub> Annual Trading Program pursuant to 40 CFR Part 97, Subpart AAAAA; the Cross-State Air Pollution Rule NO<sub>x</sub> Ozone Season Group 2 Trading Program pursuant to 40 CFR Part 97, Subpart EEEEE; and the Cross-State Air Pollution Rule SO<sub>2</sub> Group 1 Trading Program pursuant to 40 CFR Part 97, Subpart CCCCC.

There have been no significant Violation Notices issued to the facility or escalated enforcement action taken against the facility since the issuance of the last ROP.

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 PPM @15% O<sub>2</sub>, parts per million by volume at 15% oxygen on a dry gas basis (ppmvd), pound per hour (pph), and tons per year (TPY) emission limitations for nitrogen oxides (NO<sub>x</sub>) and the ppmvd, pph, and TPY emission limitations for carbon monoxide (CO) from FG-TURB/DB1-3 (EU-TURBINE1, EU-DB1, EU-TURBINE2, EU-DB2, EU-TURBINE3, and EU-DB3) at the stationary source are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(vi), because these emission limits are monitored continuously, meeting the CAM exemption for a continuous compliance determination method. Carbon monoxide and nitrogen oxides are directly measured in parts per million (ppm) measured on a dry gas basis (ppmvd) and corrected for 15% O<sub>2</sub> from the continuous emissions monitoring system (CEMS) and the pound per hour and tons per year emission rate for carbon monoxide and nitrogen oxides are calculated using the ppm emissions from the CEMS for each unit and the gas flow rate, thus meeting the continuous compliance determination method.

The emission limitation for Volatile Organic Compounds (VOC) from FG-TURB/DB1-3 at the stationary source is subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64. This emission unit has a control device and potential pre-control emissions of Volatile Organic Compounds is greater than major source threshold level.

The following Emission Units/Flexible Groups are subject to CAM:

Emission Unit/Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	Emission Unit/Flexible Group for CAM	PAM? *
EU-TURBINE1	VOC/1 ppmvd	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No
EU-TURBINE1	VOC/48 tpy	R 336.1205(1)(a) &(b),	Oxidation Catalyst	CO CEMS	FG-TURB/DB1-3	No

Emission Unit/Flexible group ID	Pollutant/Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	Emission Unit/Flexible Group for CAM	PAM? *
		R 336.1702(a), R 336.2810		(CO emissions exceed 2 ppmvd)		
EU-DB1	VOC/1 ppmvd	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No
EU-TURBINE2	VOC/1 ppmvd	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No
EU-TURBINE2	VOC/48 tpy	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No
EU-DB2	VOC/1 ppmvd	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No
EU-TURBINE3	VOC/1 ppmvd	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No
EU-TURBINE3	VOC/48 tpy	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No
EU-DB3	VOC/1 ppmvd	R 336.1205(1)(a) &(b), R 336.1702(a), R 336.2810	Oxidation Catalyst	CO CEMS  (CO emissions exceed 2 ppmvd)	FG-TURB/DB1-3	No

\*Presumptively Acceptable Monitoring (PAM)

Carbon monoxide emissions are measured by the CEMS. The CO concentration is used as a surrogate for VOC emissions because CO and VOC emissions are formed as a result of incomplete combustion. Increased CO emissions typically occur in conjunction with increased VOC emissions. Monitoring CO verifies the catalytic oxidizer is working properly. When the control meets the CO limits, it indicates the oxidizer is working properly. Therefore, the CO emissions are used as an indicator of the oxidation catalyst performance for reasonable assurance of compliance with the VOC limit. Facility will conduct annual stack testing for VOC using approved methods to verify that the catalyst is still efficient.

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.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-N6767-2014c are identified in Appendix 6 of the ROP.

PTI Number			
325-00A	325-00B	325-00C	

**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 Rex Lane, Kalamazoo 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**

ROP Number  
MI-ROP-N6767-  
20XX

**July 27, 2020 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated June 15, 2020, 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:	John P. Reese, Senior Vice President 212-792-0897
AQD Contact:	Rachel Benaway, Environmental Quality Analyst 269-370-2170

**Summary of Pertinent Comments**

No pertinent comments were received during the 30-day public comment period.

**Changes to the June 15, 2020 Draft ROP**

No changes were made to the draft ROP.

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## RENEWABLE OPERATING PERMIT

ROP Number  
MI-ROP-N6767-2020a

### June 12, 2023 - STAFF REPORT FOR RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE AMENDMENT

#### Purpose

On September 21, 2020, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N6767-2020 to New Covert Generating Company, LLC pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(1)(a)(i-iv).

#### General Information

Responsible Official:	Norman J. Kapala, Vice President, General Operations 616-738-3200
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202300078
Date Application for Administrative Amendment was Submitted:	April 24, 2023

#### Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for an Administrative Amendment pursuant to Rule 216(1)(a)(iv).

#### Description of Changes to the ROP

Administrative Amendment Number 202300078 was for a Company name change from New Covert Generating Company, LLC to Consumers Energy Company - Covert Generating Station. The change of ownership took place May 31, 2023.

#### Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Administrative Amendment to the ROP.

#### Action Taken by EGLE

The AQD approved an Administrative Amendment to ROP No. MI-ROP-N6767-2020, as requested by the stationary source. The delegated decision maker for the AQD is the District Supervisor.