



**Verified Carbon
Standard**

**MONITORING REPORT #2021-2/3/4 FOR THE
GREATER NEW BEDFORD LFG UTILIZATION
PROJECT, DARTMOUTH, MASSACHUSETTS**

**FOR VERIFICATION PERIOD
APRIL 1, 2021 THROUGH DECEMBER 31, 2021**

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CommonWealth
Resource Management Corporation

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The Project is a landfill methane (a.k.a., “landfill gas” or “LFG”) capture and utilization project located at a solid waste landfill (the “Landfill”) in Dartmouth, Massachusetts. The Landfill is owned by the Greater New Bedford Regional Refuse Management District (the “District”). The owner of the Project is Commonwealth New Bedford Energy, LLC (“CNBE”), a wholly-owned subsidiary of Commonwealth Resource Management Corporation (“CRMC”), a Massachusetts corporation based in Boston, Massachusetts, U.S.A. CNBE also owns the exclusive rights to all of the LFG at the Landfill, and all of the environmental attributes associated with the collection, destruction and use of all of the LFG at the Landfill.

The Project voluntarily captures and destroys LFG methane from the Crapo Hill Landfill located in Dartmouth, Massachusetts (latitude and longitude are 41° 43' 28.12" N and 70° 59' 04.82" W, respectively). The Project captures LFG from the expanded active collection system and destroys it either via four Caterpillar 3516 engine-generator sets or a back-up open flare. The Project achieves emissions reductions through the destruction of LFG that would otherwise have been released to the atmosphere. The back-up flare did not operate for any significant period of time during the current verification period; therefore, emission reductions are not claimed from flaring.

The Project was implemented according to the description provided in the revalidated PD. The Project became operational in January 2002 with the expansion of an existing active LFG collection and destruction system. Emission reductions from the current verification period were claimed for LFG collected from the expanded active LFG collection system and destroyed in the Caterpillar 3516 engine-generator sets. The back-up flare had limited operation during the current verification period and no emission reductions are claimed from flaring. CRMC claims GHG emission reductions eligible under VCS program of 78,585 metric tons of CO₂e for the verification period April 1, 2021 through December 31, 2021.

1.2 Sectoral Scope and Project Type

The sectoral scope is renewable energy industry. The Project is not a grouped project.

1.3 Project Proponent

Organization name	CommonWealth Resource Management Corporation For its wholly-owned subsidiary CommonWealth New Bedford Energy, LLC
Contact person	Thomas Yeransian
Title	Principal of CRMC
Address	One Bornheimer Place, Scarborough, Maine 04074
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1.4 Other Entities Involved in the Project

None

1.5 Project Start Date

January 1, 2002

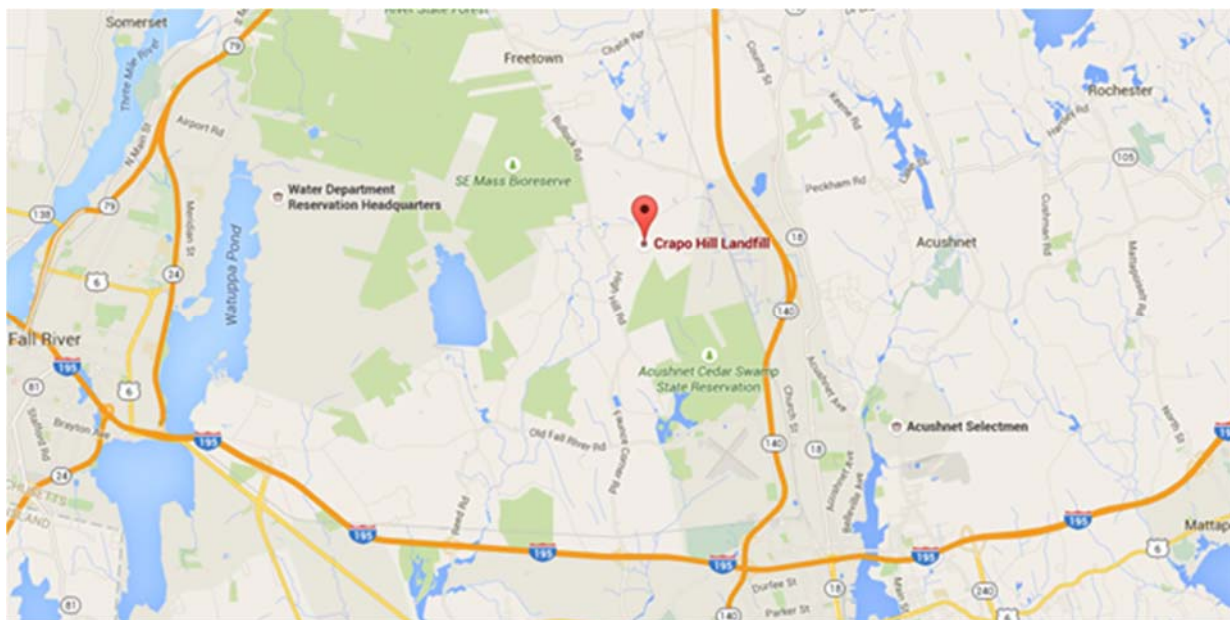
1.6 Project Crediting Period

The first Project Credit Period was a 10-year period starting March 28, 2006 and ending March 28, 2016.

The second Project Credit Period is a 10-year period starting March 29, 2016 and ending March 28, 2026.

1.7 Project Location

The Project is at the Crapo Hill Landfill located west of Samuel Barnet Boulevard in the northeast portion of the Town of Dartmouth, Massachusetts (latitude and longitude are 41° 43' 28.12" N and 70° 59' 04.82").



1.8 Title and Reference of Methodology

As outlined in the Project Description document, the VCS methodology applied to the Project was the approved consolidated baseline methodology UNFCCC's ACM0001, Version 16, "Large-scale Consolidated Methodology – Flaring or use of landfill gas".

1.9 Participation under other GHG Programs

- Emission Trading Programs and Other Binding Limits: The Project does not participate in emission trading programs and does not have other binding limits.
- Participation under Other GHG Programs: The Project is registered at the American Carbon Registry – Project ID of ACR 113. The emission reductions verified for this monitoring period will not be claimed under or registered on the ACR or any other registry. The last year that credits from this Project were registered under the ACR were for the full year of 2008 vintage.

1.10 Other Forms of Credit

- Other Forms of Environmental Credit: None. The Project has not sought or received another form of GHG-related environmental credit for the direct methane emissions reductions that result from the destruction of methane by the Project.

- Renewable Energy Portfolio Programs: The Project is qualified under the Massachusetts, Connecticut, Maine and New Hampshire Renewable Energy Portfolio Programs to produce Class 1 Renewable Energy Credits in Massachusetts, Connecticut, and Maine; and Class III Renewable Energy Credits in New Hampshire. These programs and the resulting Renewable Energy Credits do not include the GHG emission reduction attributes associated with the destruction of methane.

1.11 Sustainable Development

The project is a renewable energy project that supports sustainable development in the United States. The project specifically supports the United States Environmental Protection Agency Landfill Methane Outreach Program (LMOP), which is a voluntary program that works cooperatively with industry stakeholders and waste officials to reduce or avoid methane emissions from landfills. LMOP encourages the recovery and beneficial use of biogas generated from organic municipal solid waste. CRMC has been a member of LMOP since 1995. The project is listed on LMOP and CRMC reports performance of the project annually. The project helps LMOP to achieve its stated goals to reduce greenhouse gas emissions, reduction of air pollution by offsetting the use of non-renewable resources, create health and safety benefits, and benefit the community and economy.

CRMC also reports annual performance data to the US Energy Information Administration to support their requirements to track the performance of facilities that produce electricity nationally.

2 SAFEGUARDS

2.4 No Net Harm

None. The project is an environmental control project that is designed and operated to (1) control landfill gas emissions from a landfill that may otherwise be uncontrolled and (2) utilize an energy resource may be otherwise wasted.

Review of the EPA Enforcement and Compliance History Online (ECHO) shows that during this reporting period, a notice of non-compliance associated with the Crapo Hill Landfill from April 01 through September 30, 2021. This notice of non-compliance is specific to the landfill site which is not owned or operated by CNBE and therefore is not linked to the Project Activity. This notice of non-compliance was issued by EPA under the District's

permit titled “United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)” (hereafter the Permit). The notice of non-compliance was caused by an administrative error that erroneously was posted by EPA. The administrative error is explained below.

The Permit requires sampling of stormwater outfalls to compare with pollutant benchmarks. The Permit states at Section 6.2.1 - Benchmark Monitoring that Benchmark monitoring data is primarily for the Permittee’s use to determine the overall effectiveness of the Permittee’s control measures and to assist the Permittee in determining when additional corrective action(s) may be necessary to comply with the effluent limitations. The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. However, if corrective action is required because of a benchmark exceedance, failure to conduct required corrective action is a permit violation. Section 6.2.1 further states that

“Data not exceeding benchmarks: After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark, you have fulfilled your monitoring requirements for that parameter for the permit term.”

The District performed effluent testing for TSS over 4 consecutive quarters at Outfall 3 that resulted in meeting the benchmark requirements of the Permit. Therefore, the District no longer was required by Permit to test for TSS at Outfall 3. The EPA’s notice of non-compliance on ECHO is erroneous because although the District’s submittal of the Discharge Monitoring Reports (DMRs) for stormwater discharge did not include effluent data for total suspended solids (TSS) at Outfall 3 during this period, they were not required to do so by permit. Therefore, the District is fully in compliance with the Permit.

The EPA’s notice on non-compliance during this time is an administrative error that shall be corrected. The District shall be working with EPA to remove the erroneous EPA notices of non-compliance from the EPA ECHO website.

2.5 Local Stakeholder Consultation

Provide tours of the facility to interested parties including school groups, college students, environmental advocacy groups, political leaders, etc. The project has been typically used as an example by the State of Massachusetts Clean Energy Council and Department of Environmental Protection as an important environmental project that helps to achieve the environmental, renewable energy, GHG reduction and sustainability goals of Massachusetts. The Project was awarded the Silver Metal for Excellence in 2010 for landfill gas and biogas projects by the Solid Waste Association of North America (SWANA). Criteria used for this national award for excellence included Site Design & Construction, Environmental Controls, Regulatory Compliance, Planning, Operations & Financial

Management, Utilization of Equipment/Systems and Technologies, Public Acceptance, Appearance and Aesthetics, and Innovation and Creativity.

2.6 AFOLU-Specific Safeguards

The Project is not an Agriculture, Forestry and Other Land Use (AFOLU) project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project activity is in service.

The project activity operated normally during the monitoring period subject to this verification. The four engines destroyed landfill gas during the period. The back-up flare had limited operation during the current verification period and no emission reductions are claimed from flaring.

3.2 Deviations

Methodology Deviations

The following methodology deviations were previously validated and approved for the Project:

- The SCADA system was programmed to calculate the methane gas flow in units of million British thermal units (MMBtu) using standardized gas flow (at 68°F and one atmosphere of pressure), methane concentration, the gross heat content (higher heating value) of methane, and the actual temperature and pressure. CNBE determined the volume of methane destroyed by converting the MMBtu values to total methane gas flow in standard cubic feet. This deviation from the monitoring methodology was previously approved by independent verifiers and had a conservative impact on the quantification of GHG emissions reductions during the verification period.
- The Project reference conditions are 20 degrees Centigrade and 1 atmosphere rather than ACM0001 reference conditions of 0 degrees Centigrade and 1 atmosphere.

Additional deviations from the latest methodology are:

1. A separate LFG meter is not present on each of the four combustion engines. A single meter is used immediately before the piping splits to each engine. This meter is continuously recording data. Operating data is tracked for each engine, so it is possible to calculate the flow destroyed by each engine and to ensure that LFG is

- destroyed. Flow controls are in place to ensure no LFG is sent to an engine that is not operating. This does not affect the conservativeness of the emissions reductions claimed.
2. Ex-ante emissions reductions calculations use historic Project specific data as the basis for projecting future emissions rather than the required CDM estimation tools. Using real data allows the estimations to be more accurate and reflect actual Project operating conditions. This does not affect the conservativeness of the emissions reductions claimed but increases the accuracy of the ex-ante projections ensuring the project is forecasting obtainable, appropriate emissions reductions.
 3. There is no flow meter installed on the collection pipe from the District Initial System to separately monitor the contribution of the original baseline system. Given the collection system design and meter requirements, installing a meter at this location would not produce reliable, meaningful results. Instead, well-head flow measurements are collected manually. These results are used to calculate the relative contribution of the District Initial System to the overall flow of LFG destroyed by the engines. This portion of the total flow represents FCH₄,BL,y and will be calculated on a monthly basis and subtracted from the total flow to account for the amount of methane destroyed in the baseline scenario. This approach represents an accurate measurement of the flow because (a) the portion of the landfill that includes the District Initial System (Phase 1) is capped so no landfill gas can be passively emitted to the atmosphere, and (b) the remaining active wells from the District Initial System are located in such a way as to enable capture of all LFG generated within the sphere of influence of the District Initial System. This deviation decreases the conservativeness of the emissions reductions claimed but significantly increases the accuracy of the calculations as is allowable under VCS Standard v4.1, Section 3.17.1 and 2.
 4. The Project uses the eGrid electricity emissions factor rather than the default emissions factor provided in the CDM tool as explained in the project emissions section. This deviation decreases the conservativeness of the emissions reductions claimed but significantly increases the accuracy of the calculations as is allowable under VCS Standard v4.1, Section 3.17.1 and 2.

These deviations only apply to the monitoring and measurement portions of the Project.

Project Description Deviations

No project description deviations applied during this monitoring period.

3.3 Grouped Projects

The project is not a grouped project.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	OXtop_layer
Data unit	Dimensionless
Description	Fraction of methane that would be oxidized in the top layer of the SWDS in the baseline
Source of data	Consistent with how oxidation is accounted for in the methodological tool "Emissions from solid waste disposal"
Value applied:	0.1
Justification of choice of data or description of measurement methods and procedures applied	In accordance with requirements of ACM0001
Purpose of Data	Calculation of baseline emissions
Comments	No comments

Data / Parameter	GWPOCH4
Data unit	T CO ₂ e / t CH ₄
Description	Global warming potential of methane
Source of data	IPCC – Fourth Assessment Report
Value applied:	28
Justification of choice of data or description of measurement	Updated from 25 to 28 pursuant to (1) the re-validation report dated May 16, 2016, and (2) the VCS approval (in its VCS Standard v.4.1 issued April 22, 2021) of updated global

methods and procedures applied	warming potentials provided in the IPCC's Fifth Assessment Report (Table 8.A.1) (2014).
Purpose of Data	Calculation of baseline emissions
Comments	No comments

Data / Parameter	Regulatory requirements
Data unit	Not applicable
Description	Regulatory requirements applicable to the Project Activity
Source of data	Publicly available information on local, regional and national regulations
Value applied:	Not applicable
Justification of choice of data or description of measurement methods and procedures applied	Not applicable
Purpose of Data	To ensure continued compliance and regulatory additionality
Comments	This information is summarized in the PDD and will be monitored during the crediting period for any applicable changes.

Data / Parameter	Methane oxidation efficiency for electricity generation
Data unit	Percent
Description	Quantity of methane oxidized during combustion for electricity generation
Source of data	CDM Methodologies and Tools
Value applied:	100
Purpose of the data	Calculation of baseline and emissions reductions
Comments	None

Data Unit / Parameter:	Methane oxidation efficiency for flare
Data unit:	Percent
Description:	Quantity of methane oxidized during combustion using flare
Source of data:	40 CFR § 63.670 Requirements for flare control devices

Value applied:	98
Purpose of the data:	Baseline and emissions reductions
Any comment:	None

Data / Parameter	Fuel Use by the Emergency Generator
Data unit	Gallons/hour
Description	Average consumption of a 150kW generator operating at ¾ load to be used to calculate fuel consumed annually
Source of data	Diesel Service and Supply Company
Value applied:	8.4 gallons/hour
Justification of choice of data or description of measurement methods and procedures applied	Conservative for this piece of equipment given output needed vs total capacity
Purpose of the data	Calculation of project emissions
Comments	None

4.2 Data and Parameters Monitored

Data Unit / Parameter:	Methane content of gas (LFG and biogas)
Data unit:	Percent methane content of gas (LFG and biogas)
Description:	Methane content of gas (LFG and biogas)
Source of data:	SCADA System at Facility
Description of measurement methods and procedures to be applied:	Non-dispersive infrared
Frequency of monitoring/recording:	Continuous, hourly, daily
Value monitored:	Methane concentration, %
Monitoring equipment:	California Analytical 602P, Serial # S07002
QA/QC procedures to be applied:	Field calibrated once per week. A zero check and value check is performed by comparison with standard certified gas.

Data Unit / Parameter:	Methane content of gas (LFG and biogas)
Purpose of the data	Calculate baseline and emissions reductions.
Calculation method:	Used in calculation to obtain heat value of gas (LFG and biogas) in Btu per scf of gas (LFG and biogas)
Any comment:	CO2 and O2 are also continuously monitored using the same instrument.

Data Unit / Parameter:	Volume of gas (LFG and biogas) to engines
Data unit:	Actual cubic feet per minute
Description:	Quantity of gas (LFG and biogas) used to fuel engines
Source of data:	SCADA System at Facility
Description of measurement methods and procedures to be applied:	Differential pressure measured across orifice plate
Frequency of monitoring/recording:	Continuous, hourly, daily
Value monitored:	Differential pressure
Monitoring equipment:	Oripac Model 4150, Serial #30154
QA/QC procedures to be applied:	Field calibrated once per month.
Purpose of the data	Calculate baseline and emissions reductions.
Calculation method:	Fluid flow equation (Bernoulli) calculates actual cubic feet per minute of gas (LFG and biogas).
Any comment:	None

Data Unit / Parameter:	Temperature of gas (LFG and biogas) to engines
Data unit:	Degrees Fahrenheit
Description:	Temperature of gas (LFG and biogas)
Source of data:	SCADA System at Facility
Description of measurement methods and procedures to be applied:	Thermocouple

Data Unit / Parameter:	Temperature of gas (LFG and biogas) to engines
Frequency of monitoring/recording:	Continuous
Value monitored:	Temperature
Monitoring equipment:	Thermocouple, Omega or equivalent
QA/QC procedures to be applied:	Field calibrated using thermometer.
Purpose of the data	Calculate baseline and emissions reductions.
Calculation method:	Used in fluid flow equation (Bernoulli) to calculate standard cubic feet per minute from actual cubic feet per minute of gas (LFG and biogas).
Any comment:	None

Data Unit / Parameter:	Pressure of gas (LFG and biogas) to engines
Data unit:	PSIG
Description:	Pressure of gas (LFG and biogas)
Source of data:	SCADA System at Facility
Description of measurement methods and procedures to be applied:	Pressure transducer
Frequency of monitoring/recording:	Continuous
Value monitored:	Static pressure
Monitoring equipment:	Pressure transducer, Omega or equivalent
QA/QC procedures to be applied:	Field calibrated using pressure gauge.
Purpose of the data	Calculate baseline and emissions reductions.
Calculation method:	Used in fluid flow equation (Bernoulli) to calculate standard cubic feet per minute from actual cubic feet per minute of gas (LFG and biogas).
Any comment:	None

Data Unit / Parameter:	Pressure of gas (LFG and biogas) to engines
Data unit:	PSIG
Description:	Pressure of gas (LFG and biogas)

Source of data:	SCADA System at Facility
Description of measurement methods and procedures to be applied:	Pressure transducer
Frequency of monitoring/recording:	Continuous
Value monitored:	Static pressure
Monitoring equipment:	Pressure transducer, Omega or equivalent
QA/QC procedures to be applied:	Field calibrated using pressure gauge.
Purpose of the data	Calculate baseline and emissions reductions.
Calculation method:	Used in fluid flow equation (Bernoulli) to calculate standard cubic feet per minute from actual cubic feet per minute of gas (LFG and biogas).
Any comment:	None

Data Unit / Parameter:	Methane content of biogas
Data unit:	Percent methane content of biogas
Description:	Methane content of biogas
Source of data:	CRMC Bioenergy Facility (anaerobic digester system) tied to SCADA System at Facility
Description of measurement methods and procedures to be applied:	Non-dispersive infrared
Frequency of monitoring/recording:	Continuous and a totalization of biogas volume
Value monitored:	Methane concentration, %
Monitoring equipment:	Hitech Model: IR600 Infra-Red Gas Analyzer, Serial #1-09916
QA/QC procedures to be applied:	Field calibrated periodically. A value check is performed by comparison with standard certified gas.
Purpose of the data	Calculate emissions reductions.
Calculation method:	Used in calculation to obtain heat value of biogas in Btu per scf of biogas
Any comment:	None

Data Unit / Parameter:	Volume of biogas
Data unit:	Standard cubic feet per minute
Description:	Quantity of biogas added to LFG, both used to fuel engines
Source of data:	CRMC Bioenergy Facility (anaerobic digester system) tied to SCADA System at Facility
Description of measurement methods and procedures to be applied:	Differential pressure measured across a pitot tube
Frequency of monitoring/recording:	Continuous and at totalization of biogas volume
Value monitored:	Differential pressure
Monitoring equipment:	Dwyer Series DS-300 Flow Sensor, which is an averaging pitot tube
QA/QC procedures to be applied:	Field calibrated once per month.
Purpose of the data	Calculate emissions reductions.
Calculation method:	Fluid flow equation (Bernoulli) calculates actual cubic feet per minute of gas.
Any comment:	None

Data Unit / Parameter:	Temperature of biogas
Data unit:	Degrees Fahrenheit
Description:	Temperature of gas
Source of data:	CRMC Bioenergy Facility (anaerobic digester system) tied to SCADA System at Facility
Description of measurement methods and procedures to be applied:	Thermocouple
Frequency of monitoring/recording:	Continuous monitoring
Value monitored:	Temperature
Monitoring equipment:	Thermocouple, Omega or equivalent
QA/QC procedures to be applied:	Field calibrated using thermometer.
Purpose of the data	Calculate emissions reductions.

Data Unit / Parameter:	Temperature of biogas
Calculation method:	Used in fluid flow equation (Bernoulli) to calculate standard cubic feet per minute from actual cubic feet per minute of gas.
Any comment:	None

Data Unit / Parameter:	Pressure of biogas
Data unit:	PSIG
Description:	Pressure of gas
Source of data:	SCADA System at Facility
Description of measurement methods and procedures to be applied:	Pressure transducer
Frequency of monitoring/recording:	Continuous
Value monitored:	Static pressure
Monitoring equipment:	Pressure transducer, Omega or equivalent
QA/QC procedures to be applied:	Field calibrated using pressure gauge.
Purpose of the data	Calculate baseline and emissions reductions.
Calculation method:	Used in fluid flow equation (Bernoulli) to calculate standard cubic feet per minute from actual cubic feet per minute of gas.
Any comment:	None

Data Unit / Parameter:	Volume of LFG to the flare
Data unit:	Standard cubic feet per minute
Description:	Quantity of landfill gas combusted in flare
Source of data:	Flare station
Description of measurement methods and procedures to be applied:	Differential pressure measured across orifice plate
Frequency of monitoring/recording:	Continuous, hourly, daily

Data Unit / Parameter:	Volume of LFG to the flare
Value monitored:	Standard cubic feet per minute
Monitoring equipment:	Omega PDF65 sqrt, Serial #57493
QA/QC procedures to be applied:	Field calibrated as required when operating.
Purpose of the data	Calculate baseline and emissions reductions.
Calculation method:	Fluid flow equation (Bernoulli) calculates standard cubic feet per minute of LFG.
Any comment:	None

Data / Parameter	Fraction of total LFG collected attributable to District Initial System
Data unit	Percentage
Description	Amount of LFG collected from the District Initial System that would have been destroyed in the baseline scenario
Source of data	Well-head measurements
Description of measurement methods and procedures to be applied	Measurements at each well-head using a hand-held instrument
Frequency of monitoring/recording	Once per month
Value applied:	5.4% was used in the ex-ante calculation based on data April 1, 2021 through December 31, 2021. See Exhibit 4.
Monitoring equipment	Elkin Earthworks Model 1104M64-06
QA/QC procedures to be applied	Calibrations are conducted prior to each set of measurements and documented.
Purpose of data	Calculation of the baseline emissions
Calculation method	LFG flows from District Initial System/Total LFG flow from all wells
Comments	None

Data Unit / Parameter	EF EL,Grid,y
Data unit	tonnes CO2/MWh
Description	Emission factor for electricity generation in year y
Source of data	US EPA eGRID data
Description of measurement methods and procedures to be applied	This value converted from the pounds CO2/MWh provided by the US EPA.
Frequency of monitoring/recording	The eGRID data will be reviewed each year to ensure that the most current value is used. See Exhibit 4
Value applied	0.24 tonnes CO2/MWh
Monitoring equipment	None
QA/QC procedures to be applied	None
Purpose of data	Calculation of project emissions
Calculation method	$528.238 \text{ lbs CO}_2/\text{MWh} \times 0.454545455 \text{ kg/lbs} \times 0.001 \text{ tonnes/kg} = 0.24 \text{ tonnes CO}_2/\text{MWh}$
Any comment:	None

Data Unit / Parameter	TDL Grid,y
Data unit	--
Description	Average technical transmission and distribution losses for grid in year y
Source of data	Energy Information Administration (EIA) Department of Energy (DOE) Annual Energy Review 2011: Chapter 2 Energy Consumption by Sector. P. 66
Description of measurement methods and procedures to be applied	None
Frequency of monitoring/recording	This data will be reviewed each year to ensure that the most current value is used.

Value applied	0.07 See Exhibit 4.
Monitoring equipment	None
QA/QC procedures to be applied	None
Purpose of data	Calculation of project emissions
Calculation method	None
Any comment	None

Data Unit / Parameter	EC Grid,y
Data unit	MWh
Description	Amount of grid electricity consumed by the project
Source of data	Bills as shown in Exhibit 5
Description of measurement methods and procedures to be applied	CNBE staff will compile the data.
Frequency of monitoring/recording	Data will be compiled annually.
Value applied	Ex Ante Calculation: 0 MWh/year based on April 1 through December 31, 2021 usage
Monitoring equipment	None
QA/QC procedures to be applied	None
Purpose of data	Calculation of project emissions
Calculation method	None
Any comment	None.

Data Unit / Parameter:	FCDiesel,y
Data unit:	Gallons/year
Description:	Amount of diesel consumed by the emergency generator
Source of data:	Run time log as shown in Exhibit 5

Description of measurement methods and procedures to be applied:	Plant operator will log the run time of the engine each time it is used
Frequency of monitoring/recording:	Data will be compiled annually.
Value applied:	Ex Ante Calculation: Based on April 1 – December 31, 2021 usage, the engine ran for 87.6 hours. Using a conservative assumption that the engine operated at $\frac{3}{4}$ load, it was assumed that the engine uses 8.4 gallons of diesel per hour run. (Technical specifications provided to validator. See Parameter in Section 5.1 of PD)
Monitoring equipment:	None
QA/QC procedures to be applied:	None
Purpose of data:	Calculation of project emissions
Calculation method:	The total run time will be multiplied by 8.4 gallons/hour to determine the total amount of diesel consumed in the year.
Any comment:	None.

Data Unit / Parameter:	NCVdiesel
Data unit:	MMBtu/ gallon
Description:	Energy content of the diesel
Source of data:	Draft 2011 US Greenhouse Gas Inventory Report
Description of measurement methods and procedures to be applied:	This was converted from the MMBtu/barrel data provided by the USEPA. 5.809 MMBtu/barrel
Frequency of monitoring/recording:	Annual
Value applied:	0.13831 MMBtu/ gallon See ExAnteEstimate or Annual Calculation Workbooks for conversion
Monitoring equipment:	None
QA/QC procedures to be applied:	None
Calculation method:	None

Any comment:	Values provided by the EPA will be reviewed annually to ensure this value is the most up to date value available. This value is higher than the range provided by the IPCC in its 2006 Guidelines for National Greenhouse Gas Inventories and is therefore conservative.
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Data Unit / Parameter:	EF CO ₂ ,Diesel,y
Data unit:	t CO ₂ /MMBtu
Description:	CO ₂ emissions factor for diesel
Source of data:	Draft 2011 US Greenhouse Gas Inventory Report
Description of measurement methods and procedures to be applied:	This was converted from the Tg C/Qbtu data provided by the US EPA. See ExAnteEstimate or Annual Calculation Workbooks for conversion
Frequency of monitoring/recording:	Annual
Value applied:	0.073957 t CO ₂ /MMBtu
Monitoring equipment:	N/A
QA/QC procedures to be applied:	N/A
Calculation method:	N/A
Any comment:	Values provided by the EPA will be reviewed annually to ensure this value is the most up to date value available.

4.3 Monitoring Plan

Critical for the accuracy and transparency of the calculation is that:

1. Measurements of gas flows are undertaken with reliable equipment that is regularly calibrated;

2. Sampling of Methane concentration in gas is undertaken with reliable equipment that is regularly calibrated;
3. Sampling of Methane concentration in gas takes place with a frequency that is sufficient to calculate average concentration factors that are statistically unbiased (i.e. they reflect the actual methane concentration of the gas);
4. Measurements of gas flows are undertaken at least on a monthly basis and are as frequent as necessary to apply statistically valid methane concentration factors (as described in (3), above);
5. Measurement and calibration equipment and processes and changes thereof are clearly described as part of the GHG emissions reporting process.

Unless otherwise specified through the GHG emissions reporting process, the following system is assumed to be in place.

4.3.1 Data Collection

At the Facility, the Supervisory Control and Data Acquisition (SCADA) system measures and records methane content and gas (LFG and biogas) volume to the engines and flare once per minute, and then calculates methane quantities each minute. The results are then accumulated to provide hourly and daily totals in units of million British thermal units on a higher heating value basis [MMBtu (HHV)] and thousand standard cubic feet (KSCF) of LFG. This data point provides information regarding the mixed landfill gas and biogas from the CRMC Bioenergy Facility (anaerobic digester system).

The same calculation is made using data from the biogas feed pipe. The difference between the total Btus entering the engines and the total Btus received from the biogas facility is the quantity attributed to the LFG collected and is used in the calculations described previously in the PDD. Because the calculations for this project are based on the use of Btus rather than metric tonnes of methane as discussed in the deviation section, the value obtained by this approach is not skewed by the mixing of the gases prior to the measurement of the gas entering the engines.

Flow Measurements

The flow meters are located directly upstream of the destruction devices. One flow meter serves as the unit for flow meter measurements to the four engines, one unit for flow measurement of the biogas, and one unit for flow meter measurements to the flare. Each flow meter is equipped with a totalizer that indicates the cumulative actual cubic feet of gas that have passed through that flow meter.

The Project uses an orifice plate flow meter purchased directly from its manufacturer, Lambda Square Inc for the engine measurements. The orifice plate flow meter is an Oripac® Model 5300

that determines flow based on pressure differentials measured across a 5-inch diameter bore pressure differential plate installed in the Project's 8-inch diameter LFG pipe. The design data for the instrument specifies an accuracy of ± 0.6 percent of full scale and the capability of measuring flows from 0 to 1,600 actual cubic feet per minute. The performance of the instrument in the field is assured by the manufacturer based on bench scale testing in accordance with applicable design and methodologies prescribed by the International Standards Organization (ISO) and the American Society of Mechanical Engineers (ASME).

The Project uses an Omega PDF65 flow meter for measuring flow to the flare and a Dwyer Series DS-300 Flow Sensor, which is an averaging pitot tube, for measuring flow of the biogas.

Methane Measurements

The methane content of the gas (LFG and biogas), on a percent volume basis, is measured at a sampling port in the main header pipe near the flow meter with the use of a California Analytical Instrument Non-dispersive infrared (NDIR) analyzer. The readings are also logged by the SCADA system once per minute.

The methane content of the biogas is measured using a Hitech Model: IR600 Infra-Red Gas Analyzer.

Wellfield Measurements

The landfill gas collection system is balance in two ways including (1) high quantity LFG producing wells incorporate automated landfill gas collection technology and (2) low quantity LFG producing wells incorporate manual landfill gas collection technology.

The automated landfill gas collection was installed and is operated by Loci Controls Inc. The Loci system allows for near continuous gas collection well measurements and valve adjustments using cellular connections to cloud based computing and data storage systems to improve gas collection system efficiency. These automated systems deploy collection well mounted hardware that provides continuous gas collection system measurement, data storage, control, and optimization. Algorithms are used to automate the valve adjustments to maximize collection efficiency, and reduce GHG emissions, based on individual collection well measurements and operating thresholds, along with aggregate gas composition thresholds for the entire collection system. The Loci automated technology transforms the high quantity LFG collection wells from periodic manual to continuous automated operation that increases landfill gas collection efficiency beyond regulatory requirements.

The manual technology requires a technician to monitor the landfill gas at each wellhead with a handheld gas analyzer and based on the data the technician adjusts a mechanical valve located

on the wellhead above ground. The data is recorded by the technician and then moves on to the next wellheads to perform this same task repeatedly until all collection wells are monitored and adjusted. The technician measures LFG pressures, LFG flow rate, methane, carbon dioxide, oxygen and balance gas content of the LFG and based on these measurements adjusts the mechanical valve to control vacuum and flow from the collection well. Opening of the manual valve will increase the vacuum applied to the collection well. Closing the valve, will reduce the vacuum applied to the collection well. These results are logged in an electronic file to document system performance as well as to determine the percent contribution of LFG from the District Initial System.

Meter Calibrations

On installation, CNBE performed initial calibrations of the instruments, under actual field conditions using the USEPA Protocols described below. As a back-up to the flowmeter measurements, actual quantities of LFG destroyed in the Project engine-generators can be accurately calculated based on (a) the known engine heat rate (the number of British Thermal Units (Btus) required to produce a kilowatt hour electric power, (b) the measured heat content of the LFG fuel, and the metered electric power output of the Project.

CNBE performs calibration of the orifice plate flow meter at least quarterly and often monthly. CNBE follows the USEPA-promulgated test methods (USEPA Protocols) for determining flow rates of gas through pipes at 40 CFR 60 Appendix A, including (a) Method 1a - sample and velocity traverses for stationary sources with small stacks or ducts, and (b) Method 2c - determination of gas velocity and volumetric flow rate in small stacks or ducts (standard pitot tube). The USEPA Protocols were established by the USEPA to accurately determine the volumetric flow rates of gases through pipes at industrial facilities to determine compliance with permit limitations on process and exhaust gases.

The calibration is performed by measuring the flow at a point near the orifice flow meters. A pitot tube attached to a manometer measures the flow. The pitot tube is inserted into the pipe and several points are measured across the full diameter of the pipe. The measurements taken by the pitot tube and manometer include velocity pressure and static pressure. Other measurements taken during calibration include gas temperature and barometric pressure.

Each week or more frequently as necessary, CNBE calibrates methane concentration measured on an automated basis by a California Instruments NDIR Analyzer installed at the Project, and any hand-held instrument that may be used in addition to the NDIR Analyzer is calibrated prior to its use. CNBE has found that weekly calibrations are sufficient to provide accurate measurements because of the reliable performance of the instrument, and the stringent dependence of engine operations on the accuracy of the methane measurements. CNBE typically experiences a weekly variance in the accuracy of methane content readings of one percent or less, which readings are measured by the California Instruments NDIR Analyzer and compared to readings from a certified standard gas containing a known methane concentration.

Another performance measure that is a further check and balance of methane content is the calculation of efficiency of the operating engine-generator sets, which is calculated daily and does not vary by more than approximately five percent during normal operations.

Biogas meters are calibrated as outlined in the relevant parameters.

4.3.2 Organizational structure, responsibilities, and competencies

CNBE owns and manages the operations of the Facility and is responsible for oversight of operations and data collection, calculating emissions reductions and ensuring proper Project documentation. CNBE personnel have extensive experience in these areas. They have successfully implemented the Project over many years and have had no employee turnover.

CNBE contracts an operating company to conduct the operations and maintenance of the Facility. The operating company employs a full-time operator to conduct operations, maintenance, inspections, calibrations, monitoring and record-keeping at the facility. The operator receives training on the necessary tasks and has a task reminder calendar to ensure duties are performed at the appropriate time.

4.3.3 Recordkeeping

The SCADA system creates a Microsoft Excel file that contains the hourly and daily totals of landfill gas flow, landfill gas heat value, landfill gas methane content, operating hours of each engine, gross power output of each engine, gross and net power output of the facility. This file is created each day at mid-night for the prior 24-hour period. The file is automatically stored on the SCADA system computer. This file can be accessed remotely or at the facility. The file is manually copied from its entirety and pasted into the monthly quantification excel spreadsheet. No individual pieces of data are manually entered. The files are backed up at the Facility and off-site.

The SCADA systems also records all biogas data which is also transferred in its entirety and used in calculating the landfill gas values for determining Project emissions reductions.

Operator records including the Facility operation logs, maintenance logs and manually recorded data logs are maintained at the Facility. Operator records also include the log noting the run time of the emergency generator.

4.3.4 Internal Review

The Project uses several layers of review to ensure proper operations, data collection and quantification of emissions reductions.

The monthly quantification spreadsheet calculates several key performance parameters each day that are compared a few times per week to the expected performance range of each parameter. If the calculations show a significant deviation, corrective actions are taken. Corrective actions involve repairing equipment that is performing outside its normal range or correcting data that may have been reported in error. Equipment problems and corrective actions are noted in the “Service Section” of the monthly reports. CNBE includes notes to fully explain the problem and corrective action to the extent necessary. This information also identifies any deviations from this monitoring plan which can then be recorded in the verified Monitoring Report.

CNBE has established monthly operations meetings at the Facility between CNBE’s contract operator and the owners of CNBE. During each monthly meeting CNBE and the operator review the prior month operations performance including the production reports, work order list, unscheduled repairs and maintenance, and routine maintenance; the current month’s additions to the work orders that would prevent and correct deficiencies discovered and make overall improvements in performance of the Facility; review reports including monthly outage report, methane calibration logs, exhaust gas oxygen logs, lubricating oil logs, spare parts inventory report and others that may be relevant. In addition, CNBE meets with the District and Loci Control Inc. to review the status of the LFG collection system performance and work required to prevent and correct deficiencies discovered and make overall improvements in performance of the system.

CNBE annually calculates the project emissions from electricity use and emergency generator use as outlined in the PD.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

See attached Exhibits 1 through 4.

5.2 Project Emissions Leakage

See attached Exhibits 1 through 4.

5.3 Leakage

See attached Exhibits 1 through 4.

5.4 Net GHG Emission Reductions and Removals

See attached Exhibits 1 through 4.

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
Year 2021 Partial (April 1, 2021 – December 31, 2021)	78,585	0	0	78,585
Total	78,585	0	0	78,585

APPENDIX A: EXHIBITS 1 – 9

- Exhibit 1: The emission reductions credits in CO2 equivalent tons in accordance with Project Methodology from April 1, 2021 through December 31, 2021.
- Exhibit 2: Gas totalizer readings, and methane content readings for the period April 1, 2021 through December 31, 2021, and calculations using the verification protocols under the VCS to obtain emission reductions from methane oxidation during energy generation.
- Exhibit 3: LFG totalizer readings, and methane content readings for the periods from April 1, 2021 through December 31, 2021, and calculations using the verification protocols under the VCS to obtain emission reductions from methane oxidation during flaring.
- Exhibit 4: The key factors, equations, and calculation of VCUs in accordance with the approved consolidated baseline methodology ACM0001, Version 16.0 Large-scale Consolidated Methodology – Flaring or use of landfill gas" dated 16 October 2015 as promulgated by the United Nations Framework Convention of Climate Change (UNFCCC) under the Clean Development Mechanism (CDM).
- Exhibit 5: Compilation of the field data logs recording the total gas volumes and methane content readings for the identified reporting period. Comment section includes information on Planned and Unplanned Outages. Emergency Generator Operating Hours during period. Eversource Meter Photo and Data
- Exhibit 6: Calibration of the LFG and biogas flow rates, composition meters, other instrumentation for the periods.
- Exhibit 7: Attestation Statement
- Exhibit 8: Permits and Other Regulatory Documentation
1. Final Air Quality Operation Permit (Renewal) Issued July 23, 2020. March 26, 2019
 2. NMOC Emission Rate Report, May 3, 2021. The NMOC Emission Report demonstrates that the NMOCs emissions continue to be below the NSPS applicability threshold and therefore the Crapo Hill Landfill is not subject to the requirements of NSPS.
- Exhibit 9: RECs Agreements

Exhibit 1

The emission reductions credits in CO2 equivalent tons in accordance with Project Methodology from April 1, 2021 through December 31, 2021.

EXHIBIT 1**CommonWealth New Bedford Energy LLC****Greater New Bedford LFG Utilization Project****Dartmouth, Massachusetts****Calculation of Verified Emission Reduction Credits in CO2 equivalent tons
in accordance with the Project Methodology*****Key parameters used in calculations***

Parameter	VCS
Methane oxidation efficiency electricity generation	100.0%
Methane oxidation efficiency LFG flaring	98.0%
Methane, molecular weight	16.04
Pounds per metric ton	2,204.62
Gas constant (scf per lb-mole)	385.32
Global Warming Potential (GWP) methane	28

Summary results

	Unit	
Electricity generation		
Start date		31-Mar-21
End date		31-Dec-21
Methane delivered	scf	165,343,250
Emission Reductions	metric tons CO2e	87,430
Flaring		
Start date		31-Mar-21
End date		31-Dec-21
Methane delivered	scf	-
Emission Reductions	metric tons CO2e	-
Subtotal		
Methane delivered	scf	165,343,250
Emission Reductions	metric tons CO2e	87,430
Deductions		
Oxidation potential	metric tons CO2e	8,743
District Initial System	metric tons CO2e	95
Electricity use utility and diesel backup	metric tons CO2e	8
Total		
Emission Reductions eligible under VCS program	metric tons CO2e	78,585

Exhibit 2

Gas totalizer readings, and methane content readings for the period April 1, 2021 through December 31, 2021, and calculations using the verification protocols under the VCS to obtain emission reductions from methane oxidation during energy generation.

EXHIBIT 2
CommonWealth New Bedford Energy LLC
Emission Reductions from methane oxidation during energy generation

Physical constants:	
Methane, molecular weight (lb per lb-mole)	16.04
Pounds to metric ton	2,204.62
Gas constant, scf per lb-mole	385.32

Calculation of Verified Emission Reduction in CO2 equivalent tons per the following:
 Verification Process: UNFCCC's CDM methodology ACM0001 (Version 16)
 Standard of Verification: Verified Carbon Standard Version 4.1 April 22, 2021, v4.1

Begin period - date	End period - date	Totalizer reading end period	Totalizer reading start period	Total in period	Methane delivered to engines	Methane delivered cumulative	Methane delivered in the period	Methane delivered in the period cumulative	Methane oxidation efficiency	MD electricity, Mass methane destroyed in the period	MD electricity, Mass methane destroyed cumulative	Global warming potential methane	Emission reduction	Emission reduction cumulative
mm/dd/yy	mm/dd/yy	MMBtu HHV	MMBtu HHV	MMBtu HHV	scf	scf	metric tons	metric tons	%	metric tons	metric tons	tons CO2 equivalent per ton methane	CO2 equivalent metric tons	CO2 equivalent metric tons
	31-Mar-21													
31-Mar-21	30-Apr-21	18,620	-	18,620	18,399,315	18,399,315	347	347	100.0%	347	347	28	9,729	9,729
30-Apr-21	31-May-21	37,532	18,620	18,912	18,687,609	37,086,924	353	700	100.0%	353	700	28	9,882	19,611
31-May-21	30-Jun-21	55,461	37,532	17,929	17,716,796	54,803,720	335	1,035	100.0%	335	1,035	28	9,368	28,979
30-Jun-21	31-Jul-21	73,154	55,461	17,693	17,482,943	72,286,663	330	1,365	100.0%	330	1,365	28	9,245	38,224
31-Jul-21	31-Aug-21	91,093	73,154	17,939	17,726,391	90,013,054	335	1,700	100.0%	335	1,700	28	9,373	47,597
31-Aug-21	30-Sep-21	107,225	91,093	16,131	15,940,156	105,953,210	301	2,001	100.0%	301	2,001	28	8,429	56,026
30-Sep-21	31-Oct-21	125,908	107,225	18,683	18,461,324	124,414,534	349	2,350	100.0%	349	2,350	28	9,762	65,788
31-Oct-21	30-Nov-21	145,028	125,908	19,121	18,894,158	143,308,692	357	2,706	100.0%	357	2,706	28	9,991	75,778
30-Nov-21	31-Dec-21	167,327	145,028	22,299	22,034,559	165,343,250	416	3,122	100.0%	416	3,122	28	11,651	87,430

Exhibit 3

LFG totalizer readings, and methane content readings for the periods from April 1, 2021 through December 31, 2021, and calculations using the verification protocols under the VCS to obtain emission reductions from methane oxidation during flaring.

EXHIBIT 3
CommonWealth New Bedford Energy LLC
Calculation of Verified Emission Reduction in CO2 equivalent tons per the Project Methodology
Emission Reductions from methane oxidation from **LFG flaring**

Physical constants:	
Methane, molecular weight (lb per lb-mole)	16.04
Pounds to metric ton	2,204.62
Gas constant, scf per lb-mole	385.32

Calculation of Verified Emission Reduction in CO2 equivalent tons per the following:
Verification Process: UNFCCC's CDM methodology ACM0001 (Version 16)
Standard of Verification: Verified Carbon Standard Version 4.1 April 22, 2021, v4.1

Begin period - date	End period - date	Totalizer reading end period	Totalizer reading start period	Total in period	Methane delivered to flare	Methane delivered cumulative	Methane delivered in the period	Methane delivered cumulative	Methane oxidation efficiency	MD flare, Mass methane destroyed in the period	MD flare, Mass methane destroyed cumulative	Global warming potential methane	Emission reduction	Emission reduction cumulative	PE flare, Project emissions (uncontrolled emissions to atmosphere from flare)	PE flare, Project emissions cumulative (uncontrolled emissions to atmosphere from flare)
mm/dd/yy	mm/dd/yy	MMBtu HHV	MMBtu HHV	MMBtu HHV	scf	scf	metric tons	metric tons	%	metric tons	metric tons	tons CO2 equivalent per ton methane	CO2 equivalent metric tons	CO2 equivalent metric tons	CO2 equivalent metric tons	CO2 equivalent metric tons
	31-Mar-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
31-Mar-21	30-Apr-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
30-Apr-21	31-May-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
31-May-21	30-Jun-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
30-Jun-21	31-Jul-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
31-Jul-21	31-Aug-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
31-Aug-21	30-Sep-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
30-Sep-21	31-Oct-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
31-Oct-21	30-Nov-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
30-Nov-21	31-Dec-21	-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-
		-	-	-	-	-	0	0	98%	-	-	28	-	-	-	-

Exhibit 4

The key factors, equations, and calculation of VCUs in accordance with the approved consolidated baseline methodology ACM0001, Version 16.0 "Large-scale Consolidated Methodology – Flaring or use of landfill gas" dated 16 October 2015 as promulgated by the United Nations Framework Convention of Climate Change (UNFCCC) under the Clean Development Mechanism (CDM).

EXHIBIT 4**EX Ante Estimates of Annual Emissions Reductions**

	Formula variables	Value used	Units	Source if appropriate
$ER_y = BE_y - PE_y$				
78,585	BE_y	see below	tCO ₂ e/period	
	PE_y	7.53	tCO ₂ e/period	See Electricity Tab + Emergency Generator Tab
$BE_y = BE_{CH_4,y}$				
78,592	$BE_{CH_4,y}$	see below	tCO ₂ e/period	
$BE_{CH_4,y} = ((1 - OX_{top_layer}) \times F_{CH_4,PJ,y} - F_{CH,BL,y}) \times GWP_{CH_4}$				
78,592	OX_{top_layer}	0.1		ACM001 Methodology value
	GWP_{CH_4}	28	tCO ₂ e / tCH ₄	IPCC Value - 5th assessment report (2013)
	$F_{CH_4,PJ,y}$	see below	t CH ₄ /period	
	$F_{CH,BL,y}$	see below	t CH ₄ /period	
$F_{CH_4,PJ,y} = F_{CH_4,flared,y} + F_{CH_4,EL,y}$				
3,122	$F_{CH_4,flared,y}$	0	t CH ₄ /period	See Exhibit 3 tab
	$F_{CH_4,EL,y}$	3,122	t CH ₄ /period	See Exhibit 2 tab
$F_{CH_4,BL,y} = F_{CH_4,BL,sys,y}$				
$F_{CH_4,BL,sys,y} = \%DistrictInitialSystem \times F_{CH_4,PJ,y}$				
3.4	%DistrictInitialSystem	5.42		See DistrictInitialSystemTab
	$F_{CH_4,PJ,y}$	see above	t CH ₄ /period	
		98%	Methane oxidation efficiency for flare	

Supporting Information for Exhibit 4

Electricity Consumption Project Emissions

$PE_{EC,y} = EC_{PJ,Grid,y} * FE_{EL,Grid,y} * (1 + TDL_{Grid,y})$

0.00 tCO2

Variable	Value	Units	Data Source
ECPJ,Grid, y	0	MW hr	See Eversource bill
FEEL,Grid,y	0.24	tonnes CO2/MW hr	USEPA Conversions tableGrid data
TDLGrid,y	0.07	None	EIA Annual Energy Report 2011

Supporting Information for Exhibit 4

Fossil Fuel Project Emissions

Emergency Generator - Diesel Use

Gallons of Diesel Consumed (April 1 - December 31, 2021)

$$736 \quad FC_{\text{Diesel}} = \text{Number of hours run} * \text{Gallons used/hour}$$

$$COEF_{\text{Diesel},2015} = NCV_{\text{Diesel},2015} * EF_{\text{CO}_2,\text{Diesel},2015}$$

$$COEF_{\text{Diesel},2015} \quad 0.010229 \quad \text{See inputs on USEPA Data Conversions Tab}$$

$$PE_{\text{FC},2015} = FC_{\text{Diesel},2015} * COEF_{\text{Diesel},2015}$$

$$PE_{\text{FC},2010} \quad \boxed{7.53} \text{ tonnes CO}_2$$

Assumptions Used

Generator runs at 3/4 load during testing and operation

(This is conservative as the plant requires 75-90kW/hr to operate
and the generator can produce up to 150kW/hr)

The generator requires 8.4 gallons/hour running at 3/4 Load (see estimate fuel consumption)

Run time from April 1, 2021 to December 31, 2021

87.6 hours* 8.4 gallons/hour

735.84 gallons

Supporting Information for Exhibit 4

Gas extraction from District Initial System versus Phase 1 Area and District Total System

		LFG flow rate from District Initial System contained in Phase 1 area		LFG flow rate from District Total System,	District Initial System/Total
Month	Days	cfm @50% methane	cfm @50% methane		
Apr-21	30	45	852	5.3%	
May-21	31	45	837	5.4%	
Jun-21	30	45	820	5.5%	
Jul-21	31	45	783	5.7%	
Aug-21	31	45	794	5.7%	
Sep-21	30	45	738	6.1%	
Oct-21	31	45	827	5.4%	
Nov-21	30	45	875	5.1%	
Dec-21	31	45	987	4.6%	

Weighted Average based on days				5.4%
Weighted Average based on LFG flow				5.4%
Average		45	835	5.4%

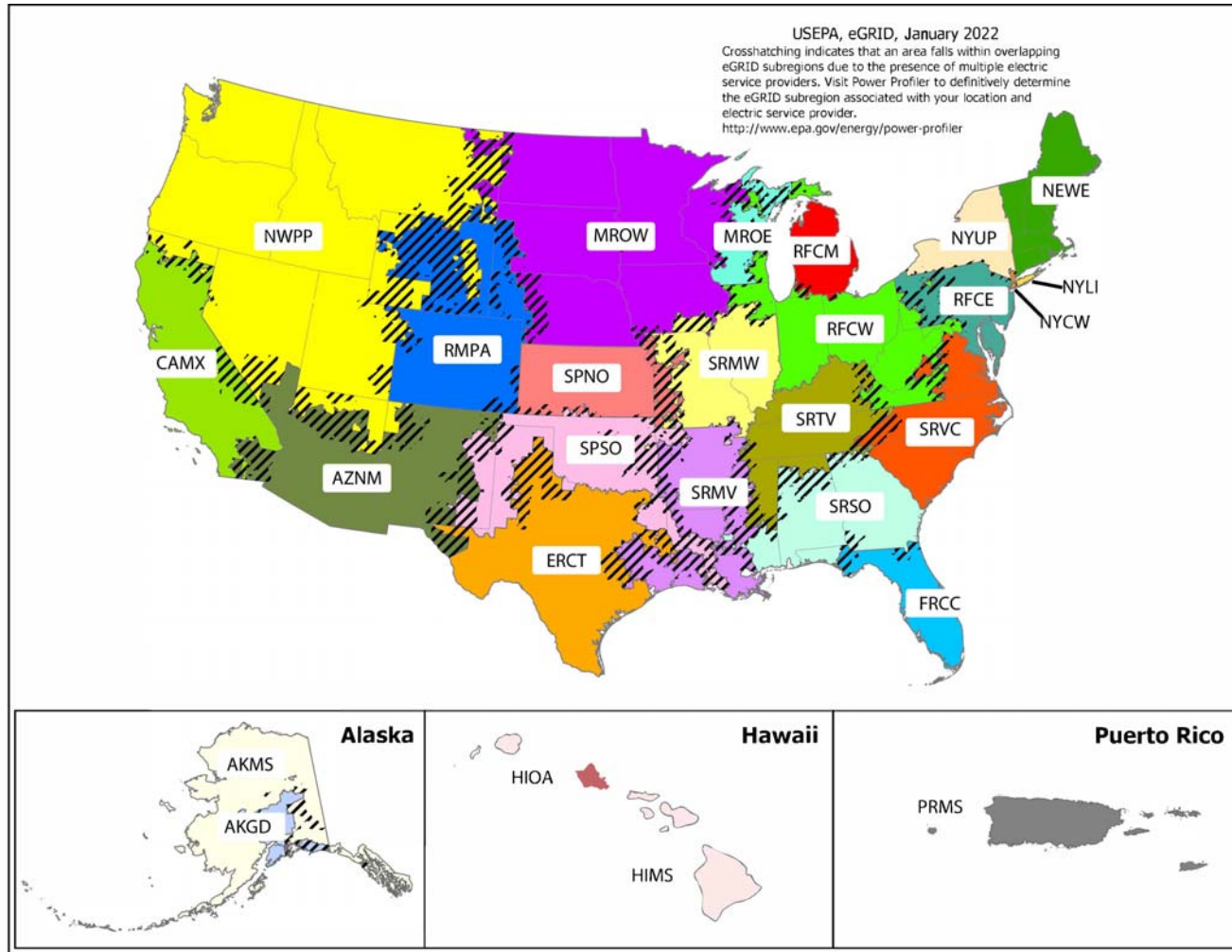
Note: During April 1, 2021 through December 31, 2021, the Initial District System consists of 9 remaining active wells measuring less than 5 cfm lower detection limit of each well. Assume worst conservative case of 5 cfm from each remaining well.

Fossil Fuel Consumption

NCV Conversion							NCV Comparison to IPCC Values							
5.809	42	0.1383095					0.13831	1000000	1.05506E-06	0.001	0.26417	1.176471	1000000	45.35173
mmBtu/barrel	gallons/barrel	mmBtu/gallon					MMBtu/gall	Btu/MMBtu	GJ/Btu	TJ/GJ	gallons/liter	liter/kg	kg/Gg	TJ/Gg
Emissions Factor							IPCC Values state 41.4-43.3 TJ/Gg This value is higher and therefore conservative.							
20.17	1E-15	1000000	3.666667	1E+12	0.000001	0.073957								
Tg C/Qbtu	Qbtu/btu	btu/Mmbtu	g C02/g C	g/Tg	Tonnes/g	Tonnes CO2/Mmbtu	Data obtained from the Draft 2011 US Greenhouse Gas Report: US EPA Inventory of US Greenhouse Gas Emissions and Sinks to provide a national factor. Results were compared to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories							

Electricity Consumption

eGRID Emissions Factor					eGRID Factor taken from NEWE region of eGRID2020 data
528.238	0.454545455	0.001	0.24		
lbs CO2/MWh	kg/lbs	tonnes/kg	tonnes CO2/MWh		



Region	CO2 total output emission rate (lb/MWh) by eGRID subregion 2020
US	818.289
AKGD	1097.63
AKMS	534.073
AZNM	846.616
CAMX	513.455
ERCT	818.6
FRCC	835.079
HIMS	1143.23
HIOA	1652.95
MROE	1526.37
MROW	979.536
NEWE	528.238
NWPP	599.967
NYCW	634.612
NYLI	1203.93
NYUP	233.512
PRMS	1602.18
RFCE	652.458
RFCM	1153.06
RFCW	984.977
RMPA	1144.8
SPNO	954.032
SPSO	931.756
SRMV	740.359
SRMW	1480.7
SRSO	860.179
SRTV	834.182
SRVC	623.111

Exhibit 5

Compilation of the field data logs recording the total gas volumes and methane content readings for the identified reporting period. Comment section includes information on Planned and Unplanned Outages.

Emergency Generator Operating Hours during period.

Eversource Meter Photo and Data

April 2021																	
		Thursday 4/1/2021	Friday 4/2/2021	Saturday 4/3/2021	Sunday 4/4/2021	Monday 4/5/2021	Tuesday 4/6/2021	Wednesday 4/7/2021	Thursday 4/8/2021	Friday 4/9/2021	Saturday 4/10/2021	Sunday 4/11/2021	Monday 4/12/2021	Tuesday 4/13/2021	Wednesday 4/14/2021	Thursday 4/15/2021	Friday 4/16/2021
LFG and Biogas Flow to the Engines (KSCF)		1,165	1,138	1,142	1,166	1,185	1,183	1,195	1,200	1,168	1,164	1,137	1,131	1,152	1,131	1,149	1,136
LFG and Biogas Flow to the Engines (MMBTU HHV)		653	625	630	655	665	653	654	657	644	651	635	624	629	622	643	645
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and BiogasFlow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,165	1,138	1,142	1,166	1,185	1,183	1,195	1,200	1,168	1,164	1,137	1,131	1,152	1,131	1,149	1,136
LFG and Biogas Total Flow (MMBTU HHV)		653	625	630	655	665	653	654	657	644	651	635	624	629	622	643	645
Average Methane Content (%)		55.3	54.2	54.5	55.6	55.5	54.6	54.1	54.2	54.4	55.2	55.1	54.5	54.0	54.3	55.4	56.1
Engine 1 Hours		-	-	-	-	-	-	14	11	-	-	-	-	-	-	-	-
Engine 2 Hours		23	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Engine 3 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Engine 4 Hours		24	24	24	24	24	23	11	14	24	24	24	24	24	24	24	24
Generator 1 Power Output (kWhr)		-	-	-	-	-	-	9,200	7,420	-	-	-	-	-	-	-	-
Generator 2 Power Output (kWhr)		15,584	15,932	16,272	15,904	16,336	16,248	15,484	16,044	16,528	16,900	16,736	15,608	15,608	16,472	17,012	17,048
Generator 3 Power Output (kWhr)		17,456	16,172	16,188	17,864	16,804	17,260	16,872	16,420	15,948	16,616	16,732	16,384	15,560	15,560	15,616	16,992
Generator 4 Power Output (kWhr)		17,924	16,744	16,164	16,664	17,684	16,784	7,768	9,204	17,336	17,332	17,340	17,340	16,492	16,492	16,824	17,760
Gross Power Output (kWhr)		50,988	48,818	48,612	50,387	50,812	50,243	49,337	49,131	49,781	50,844	50,826	49,330	48,518	48,481	49,440	51,793
Net Power Output (kWhr)		49,128	46,824	46,704	48,512	48,944	48,352	47,392	47,264	47,944	49,064	49,016	47,424	46,632	46,632	47,568	49,784
Power Sold as metered by NStar, (kWhr)		49,028	46,747	46,628	48,434	48,805	48,243	47,235	47,162	47,845	48,947	48,924	47,332	46,521	46,536	47,483	49,681
Offgrid RECs (kWhr)		1,862	1,994	1,906	1,875	1,869	1,891	1,944	1,867	1,836	1,780	1,811	1,907	1,886	1,849	1,871	2,009
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		-	-	-	-	-	-	657	675	-	-	-	-	-	-	-	-
Generator 2		678	664	678	663	681	677	645	669	689	704	697	650	650	686	709	710
Generator 3		727	674	675	744	700	719	703	684	665	692	697	683	648	648	651	708
Generator 4		747	698	674	694	737	730	706	657	722	722	723	723	723	687	701	740
Power output (kW average over 24-hrs)																	
Facility Gross		2,125	2,034	2,026	2,099	2,117	2,093	2,056	2,047	2,074	2,119	2,118	2,055	2,022	2,020	2,060	2,158
Facility Net		2,047	1,951	1,946	2,021	2,039	2,015	1,975	1,969	1,998	2,044	2,042	1,976	1,943	1,943	1,982	2,074
In-plant load		78	83	80	78	78	79	81	78	77	74	75	79	79	77	78	84
Daily availability factor																	
Facility		74%	75%	75%	75%	75%	74%	76%	76%	75%	75%	75%	75%	75%	75%	75%	75%
Engine 1		0%	0%	0%	0%	0%	0%	58%	46%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 2		96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 4		100%	100%	100%	100%	100%	96%	46%	58%	100%	100%	100%	100%	100%	100%	100%	100%
Daily capacity factor																	
Facility		64%	62%	61%	64%	64%	63%	62%	62%	63%	64%	64%	62%	61%	61%	62%	65%
Engine 1		0%	0%	0%	0%	0%	0%	80%	82%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 2		82%	80%	82%	80%	83%	82%	78%	81%	83%	85%	85%	79%	79%	83%	86%	86%
Engine 3		88%	82%	82%	90%	85%	87%	85%	83%	81%	84%	85%	83%	79%	79%	79%	86%
Engine 4		91%	85%	82%	84%	89%	88%	86%	80%	88%	88%	88%	88%	88%	83%	85%	90%
Cumulative by engine																	
Engine operating run hours in the month																	
Max Cumulative Available, hours		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 1		0	0	0	0	0	14	25	25	25	25	25	25	25	25	25	25
Engine 2		23	47	71	95	119	143	167	191	215	239	263	287	311	335	359	383
Engine 3		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 4		24	48	72	96	120	143	154	168	192	216	240	264	288	312	336	360
Engine operating run hours total from 0 hours																	
Engine 1		117,455	117,455	117,455	117,455	117,455	117,455	117,469	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480
Engine 2		106,079	106,102	106,126	106,150	106,174	106,198	106,222	106,246	106,270	106,294	106,318	106,342	106,366	106,390	106,414	106,438
Engine 3		116,048	116,072	116,096	116,120	116,144	116,168	116,192	116,216	116,240	116,264	116,288	116,312	116,336	116,360	116,384	116,408
Engine 4		114,625	114,649	114,673	114,697	114,721	114,745	114,768	114,779	114,793	114,817	114,841	114,865	114,889	114,913	114,937	114,961
Cumulative availability, %		April 1, 2021 @ 00:00 hours															
Engine 1		0%	0%	0%	0%	0%	0%	8%	13%	12%	10%	9%	9%	8%	7%	7%	7%
Engine 2		96%	98%	99%	99%	99%	99%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 4		100%	100%	100%	100%	100%	99%	92%	88%	89%	90%	91%	92%	92%	93%	93%	94%
Engine cumulative gross output, kWhr																	
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200
Engine 1		-	-	-	-	-	-	657	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332
Engine 2		678	1,341	2,019	2,682	3,363	4,040	4,685	5,353	6,042	6,746	7,444	8,094	8,744	9,431	10,139	10,850
Engine 3		727	1,401	2,076	2,820	3,520	4,239	4,942	5,627	6,291	6,983	7,681	8,363	9,012	9,660	10,311	11,019
Engine 4		747	1,445	2,118	2,812	3,549	4,279	4,985	5,643	6,365	7,087	7,810	8,532	9,255	9,942	10,643	11,383
Cumulative capacity factor, %																	
Engine 1		0%	0%	0%	0%	0%	0%	11%	20%	18%	16%	15%	13%	12%	12%	11%	10%
Engine 2		82%	81%	82%	81%	82%	82%	81%	81%	81%	82%	82%	82%	82%	82%	82%	82%
Engine 3		88%	85%	84%	85%	85%	86%	86%	85%	85%	85%	85%	84%	84%	84%	83%	83%
Engine 4		91%	88%	86%	85%	86%	86%	86%	85%	86%	86%	86%	86%	86%	86%	86%	86%

		Thursday 4/1/2021	Friday 4/2/2021	Saturday 4/3/2021	Sunday 4/4/2021	Monday 4/5/2021	Tuesday 4/6/2021	Wednesday 4/7/2021	Thursday 4/8/2021	Friday 4/9/2021	Saturday 4/10/2021	Sunday 4/11/2021	Monday 4/12/2021	Tuesday 4/13/2021	Wednesday 4/14/2021	Thursday 4/15/2021	Friday 4/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		71	143	215	287	359	430	503	576	648	720	792	864	936	1,008	1,080	1,152
Cumulative Availability, %		74.0%	74.5%	74.7%	74.7%	74.8%	74.7%	74.9%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		50,988	99,806	148,418	198,805	249,617	299,860	349,197	398,328	448,109	498,953	549,779	599,109	647,627	696,108	745,548	797,341
Cumulative Capacity Factor		64.4%	63.0%	62.5%	62.8%	63.0%	63.1%	63.0%	62.9%	62.9%	63.0%	63.1%	63.0%	62.9%	62.8%	62.8%	62.9%
Cumulative fuel input, MMBtu HHV		653	1,277	1,908	2,563	3,228	3,881	4,535	5,193	5,836	6,487	7,122	7,745	8,375	8,996	9,640	10,284
Cumulative gross output, kWhr		50,988	99,806	148,418	198,805	249,617	299,860	349,197	398,328	448,109	498,953	549,779	599,109	647,627	696,108	745,548	797,341
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,522	11,519	11,674	11,709	11,781	11,705	11,931	12,045	11,640	11,521	11,241	11,380	11,674	11,546	11,715	11,202
Daily heat rate, Btu/kWe gross HHV		12,799	12,797	12,968	13,007	13,087	13,003	13,254	13,381	12,931	12,798	12,488	12,641	12,968	12,826	13,014	12,444
Cumulative heat rate, Btu/kWe gross LHV		11,522	11,521	11,571	11,606	11,642	11,652	11,692	11,735	11,725	11,704	11,661	11,638	11,641	11,634	11,639	11,611
Cumulative heat rate, Btu/kWe gross HHV		12,799	12,798	12,854	12,893	12,932	12,944	12,988	13,036	13,025	13,001	12,954	12,928	12,931	12,924	12,930	12,898
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		8,732	8,828	8,924	9,020	9,116	9,212	9,308	9,404	9,500	9,596	9,692	9,788	9,884	9,980	10,076	10,172
Actual cumulative engine run hours		6,472	6,544	6,616	6,688	6,760	6,831	6,904	6,977	7,049	7,121	7,193	7,265	7,337	7,409	7,481	7,553
Cumulative Availability, %		74.1%	74.1%	74.1%	74.1%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.3%
Max cumulative gross output, kWhr		7,207,200	7,286,400	7,365,600	7,444,800	7,524,000	7,603,200	7,682,400	7,761,600	7,840,800	7,920,000	7,999,200	8,078,400	8,157,600	8,236,800	8,316,000	8,395,200
Actual cumulative gross output, kWhr		4,636,097	4,684,915	4,733,527	4,783,914	4,834,726	4,884,969	4,934,306	4,983,437	5,033,218	5,084,062	5,134,888	5,184,218	5,232,736	5,281,217	5,330,657	5,382,450
Cumulative Capacity Factor		64.3%	64.3%	64.3%	64.3%	64.3%	64.2%	64.2%	64.2%	64.2%	64.2%	64.2%	64.2%	64.1%	64.1%	64.1%	64.1%
Cumulative fuel input, MMBtu HHV		60,374	60,999	61,629	62,285	62,950	63,603	64,257	64,914	65,558	66,209	66,843	67,467	68,096	68,718	69,361	70,006
Cumulative gross output, kWhr		4,636,097	4,684,915	4,733,527	4,783,914	4,834,726	4,884,969	4,934,306	4,983,437	5,033,218	5,084,062	5,134,888	5,184,218	5,232,736	5,281,217	5,330,657	5,382,450
Cumulative heat rate, Btu/kWe gross LHV		11,723	11,721	11,720	11,720	11,721	11,721	11,723	11,726	11,725	11,723	11,718	11,715	11,715	11,713	11,713	11,708
Cumulative heat rate, Btu/kWe gross HHV		13,023	13,020	13,020	13,020	13,020	13,020	13,022	13,026	13,025	13,023	13,017	13,014	13,013	13,012	13,012	13,006
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports		Thursday 4/1/2021	Friday 4/2/2021	Saturday 4/3/2021	Sunday 4/4/2021	Monday 4/5/2021	Tuesday 4/6/2021	Wednesday 4/7/2021	Thursday 4/8/2021	Friday 4/9/2021	Saturday 4/10/2021	Sunday 4/11/2021	Monday 4/12/2021	Tuesday 4/13/2021	Wednesday 4/14/2021	Thursday 4/15/2021	Friday 4/16/2021
Date																	
Hour																	
1		2,070	1,962	1,961	2,031	1,967	2,030	2,004	1,949	1,992	2,007	2,060	1,991	1,939	1,940	1,954	2,030
2		2,070	1,962	1,905	2,004	1,968	2,031	2,005	1,947	1,991	2,005	2,059	1,990	1,937	1,939	2,000	2,030
3		2,071	1,962	1,929	1,958	1,991	2,029	2,002	1,946	1,990	2,029	2,059	1,991	1,942	1,940	2,005	2,030
4		2,072	1,959	1,958	1,959	2,037	2,030	2,004	1,983	1,994	2,055	2,059	1,991	1,938	1,937	2,005	2,032
5		2,072	1,960	1,887	1,959	2,032	2,028	2,003	1,995	1,992	2,056	2,059	1,988	1,943	1,939	2,005	2,029
6		2,068	1,956	1,885	2,031	2,034	2,026	2,002	1,945	1,986	2,054	2,059	1,987	1,939	1,932	2,002	2,031
7		2,060	1,953	1,886	2,030	2,033	2,023	2,001	1,945	1,989	2,053	2,058	1,979	1,934	1,927	1,983	2,024
8		2,103	1,950	1,885	1,963	2,007	1,996	1,996	1,944	1,979	2,058	2,058	1,976	1,938	1,887	1,931	2,083
9		2,128	1,883	1,894	1,972	1,754	1,881	1,962	1,940	1,933	2,026	2,059	1,976	1,936	1,887	1,936	2,106
10		2,129	1,921	1,898	1,972	2,006	1,605	1,957	1,939	1,953	1,991	2,058	1,977	1,936	1,889	1,998	2,104
11		2,127	1,958	1,966	1,988	2,033	1,979	1,885	1,887	1,999	1,990	2,058	1,990	1,936	1,913	1,613	2,103
12		2,094	1,957	1,966	2,031	2,061	2,052	1,911	1,935	1,996	1,985	2,054	1,988	1,938	1,948	1,731	2,105
13		2,036	1,959	1,967	2,030	2,084	2,050	1,783	1,975	1,997	2,026	2,054	1,988	1,938	1,949	1,988	2,106
14		1,726	1,954	1,967	2,030	2,095	2,067	2,050	1,949	1,997	2,050	2,054	1,988	1,936	1,948	2,026	2,106
15		1,921	1,964	1,969	2,031	2,100	2,074	2,017	1,791	1,996	2,050	2,053	1,988	1,936	1,947	2,028	2,104
16		2,100	1,960	1,967	2,032	2,097	2,054	1,992	2,052	2,000	2,052	2,053	1,986	1,939	1,947	2,037	2,101
17		2,096	1,970	1,972	2,038	2,103	2,079	1,994	2,057	2,009	2,059	2,053	1,979	1,946	1,962	2,036	2,105
18		2,105	1,966	1,974	2,104	2,104	2,077	1,993	2,045	2,010	2,059	2,032	1,938	1,945	1,960	2,034	2,105
19		2,045	1,964	1,962	2,114	2,103	2,073	1,955	1,991	2,008	2,056	1,983	1,944	1,945	1,960	2,026	2,104
20		2,040	1,959	1,967	2,044	2,059	2,013	1,944	1,989	2,006	2,056	1,988	1,939	1,942	1,959	2,028	2,101
21		2,004	1,929	1,964	2,036	2,039	2,012	1,935	1,989	2,005	2,057	1,987	1,940	1,927	1,959	2,028	2,050
22		1,964	1,886	1,964	2,038	2,033	2,002	1,947	1,991	2,008	2,057	1,988	1,939	1,936	1,951	2,000	2,031
23		1,964	1,897	1,959	2,037	2,033	2,006	1,946	1,990	2,008	2,057	1,989	1,941	1,937	1,959	2,028	2,031
24		1,963	1,956	1,976	2,002	2,032	2,006	1,947	1,988	2,007	2,056	1,990	1,938	1,938	1,957	2,031	2,030
TOTAL		49,028	46,747	46,628	48,434	48,805	48,243	47,235	47,162	47,845	48,947	48,924	47,332	46,521	46,536	47,483	49,681
Cumulative Output Sold, kWhr		49,028	95,775	142,403	190,837	239,642	287,885	335,120	382,282	430,127	479,074	527,998	575,330	621,851	668,387	715,870	765,551
Transformer and line efficiency		99.8%	99.8%	99.8%	99.8%	99.7%	99.8%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%
Hourly average		2,043	1,948	1,943	2,018	2,034	2,010	1,968	1,965	1,994	2,039	2,039	1,972	1,938	1,939	1,978	2,070

April 2021																		
		Saturday 4/17/2021	Sunday 4/18/2021	Monday 4/19/2021	Tuesday 4/20/2021	Wednesday 4/21/2021	Thursday 4/22/2021	Friday 4/23/2021	Saturday 4/24/2021	Sunday 4/25/2021	Monday 4/26/2021	Tuesday 4/27/2021	Wednesday 4/28/2021	Thursday 4/29/2021	Friday 4/30/2021	TOTAL	Biogas	LFG
LFG and Biogas Flow to the Engine	1,115	1,116	1,119	1,132	1,138	1,095	1,133	1,121	1,143	1,149	1,153	1,151	1,135	1,151	34,391	847	33,544	
LFG and Biogas Flow to the Engine	622	623	625	632	648	617	631	626	645	640	641	651	641	652	19,179	559	18,620	
LFG and Biogas Flow to the Flare (	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9%	97%	
LFG and BiogasFlow to the Flare (†	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Total Flow (KSCF	1,115	1,116	1,119	1,132	1,138	1,095	1,133	1,121	1,143	1,149	1,153	1,151	1,135	1,151	34,391			
LFG and Biogas Total Flow (MMBT	622	623	625	632	648	617	631	626	645	640	641	651	641	652	19,179			
Average Methane Content (%)	55.1	55.2	55.2	55.2	56.3	55.7	55.0	55.2	55.8	55.0	54.9	55.9	55.8	56.0	55.1			
Engine 1 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25			
Engine 2 Hours	24	24	24	24	24	24	24	24	22	24	24	24	24	24	717			
Engine 3 Hours	24	24	24	24	24	24	24	24	24	24	24	24	24	24	720			
Engine 4 Hours	24	24	24	24	24	24	24	24	24	24	24	23	24	24	695			
Generator 1 Power Output (kWhr)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,620			
Generator 2 Power Output (kWhr)	15,608	16,344	16,404	15,928	15,824	16,196	16,196	14,260	16,192	16,196	16,200	16,196	16,196	16,516	483,972			
Generator 3 Power Output (kWhr)	15,596	15,548	15,564	15,876	17,092	16,428	16,452	16,408	17,300	16,444	16,496	16,940	17,556	16,904	495,048			
Generator 4 Power Output (kWhr)	16,948	16,152	16,148	16,776	17,204	16,688	16,152	16,696	17,932	16,672	16,844	16,720	17,440	18,404	493,480			
Gross Power Output (kWhr)	48,122	47,980	48,039	48,558	50,115	49,313	48,788	47,345	51,410	49,238	49,497	49,836	51,180	51,795	1,488,557			
Net Power Output (kWhr)	46,240	46,168	46,216	46,744	48,296	47,352	46,992	45,680	49,640	47,432	47,704	48,080	49,304	50,000	1,433,032			
Power Sold as metered by NStar, (	46,143	46,054	46,082	46,618	48,152	47,234	46,891	45,603	49,564	47,350	47,602	47,946	49,157	49,875	1,429,822	CRMCB inplant		
Offgrid RECs (kWhr)	1,881	1,812	1,825	1,814	1,819	1,961	1,796	1,663	1,770	1,806	1,793	1,756	1,876	1,795	55,524	13,873		
Calculated Performance Results																	25%	
Daily																	of total in-plant power	
Power output (kW average whe																		
Generator 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Generator 2	650	681	684	664	659	675	675	648	675	675	675	675	675	688				
Generator 3	650	648	649	662	712	685	686	684	721	685	687	706	732	704				
Generator 4	706	673	673	699	717	695	673	696	747	695	732	697	727	767				
Power output (kW average ove																		
Facility Gross	2,005	1,999	2,002	2,023	2,088	2,055	2,033	1,973	2,142	2,052	2,062	2,077	2,133	2,158				
Facility Net	1,927	1,924	1,926	1,948	2,012	1,973	1,958	1,903	2,068	1,976	1,988	2,003	2,054	2,083				
In-plant load	78	76	76	76	76	82	75	69	74	75	75	73	78	75				
Daily availability factor																		
Facility	75%	75%	75%	75%	75%	75%	75%	73%	75%	75%	74%	75%	75%	75%				
Engine 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Engine 2	100%	100%	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%	100%	100%				
Engine 3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Engine 4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%				
Daily capacity factor																		
Facility	61%	61%	61%	61%	63%	62%	62%	60%	65%	62%	62%	63%	65%	65%				
Engine 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Engine 2	79%	83%	83%	80%	80%	82%	82%	79%	82%	82%	82%	82%	82%	83%				
Engine 3	79%	79%	79%	80%	86%	83%	83%	83%	87%	83%	83%	86%	89%	85%				
Engine 4	86%	82%	82%	85%	87%	84%	82%	84%	91%	84%	89%	84%	88%	93%				
Cumulative by engine																		
Engine operating run hours in t																		
Max Cumulative Available,	408	432	456	480	504	528	552	576	600	624	648	672	696	720				
Engine 1	25	25	25	25	25	25	25	25	25	25	25	25	25	25				
Engine 2	407	431	455	479	503	527	551	573	597	621	645	669	693	717				
Engine 3	408	432	456	480	504	528	552	576	600	624	648	672	696	720				
Engine 4	384	408	432	456	480	504	528	552	576	600	623	647	671	695				
Engine operating run hours tota																		
Engine 1	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480	117,480				
Engine 2	106,486	106,510	106,534	106,558	106,582	106,606	106,630	106,652	106,676	106,700	106,724	106,748	106,772	106,796				
Engine 3	116,456	116,480	116,504	116,528	116,552	116,576	116,600	116,624	116,648	116,672	116,696	116,720	116,744	116,768				
Engine 4	115,009	115,033	115,057	115,081	115,105	115,129	115,153	115,177	115,201	115,225	115,248	115,272	115,296	115,320				
Cumulative availability, %																		
Engine 1	6%	6%	5%	5%	5%	5%	5%	4%	4%	4%	4%	4%	4%	3%				
Engine 2	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	100%	100%	100%	100%				
Engine 3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Engine 4	94%	94%	95%	95%	95%	95%	96%	96%	96%	96%	96%	96%	96%	97%				
Engine cumulative gross output																		
Max cumulative capacity or	14,025	14,850	15,675	16,500	17,325	18,150	18,975	19,800	20,625	21,450	22,275	23,100	23,925	24,750				
Engine 1	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332				
Engine 2	11,500	12,181	12,865	13,528	14,188	14,862	15,537	16,185	16,860	17,535	18,210	18,885	19,560	20,248				
Engine 3	11,668	12,316	12,965	13,626	14,338	15,023	15,708	16,392	17,113	17,798	18,485	19,191	19,923	20,627				
Engine 4	12,089	12,762	13,435	14,134	14,851	15,546	16,219	16,915	17,662	18,357	19,089	19,786	20,512	21,279				
Cumulative capacity factor, %																		
Engine 1	9%	9%	8%	8%	8%	7%	7%	7%	6%	6%	6%	6%	6%	5%				
Engine 2	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%				
Engine 3	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%				
Engine 4	86%	86%	86%	86%	86%	86%	85%	85%	86%	86%	86%	86%	86%	86%				

	Saturday 4/17/2021	Sunday 4/18/2021	Monday 4/19/2021	Tuesday 4/20/2021	Wednesday 4/21/2021	Thursday 4/22/2021	Friday 4/23/2021	Saturday 4/24/2021	Sunday 4/25/2021	Monday 4/26/2021	Tuesday 4/27/2021	Wednesday 4/28/2021	Thursday 4/29/2021	Friday 4/30/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																	
Max cumulative available engine run time, hours	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880			
Actual cumulative engine run time, hours	1,224	1,296	1,368	1,440	1,512	1,584	1,656	1,728	1,798	1,870	1,941	2,013	2,085	2,157			
Cumulative Availability, %	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%			
Max cumulative gross output, kWh	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000			
Actual cumulative gross output, kWh	845,463	893,443	941,482	990,040	1,040,155	1,089,468	1,138,256	1,185,601	1,237,011	1,286,249	1,335,746	1,385,582	1,436,762	1,488,557			
Cumulative Capacity Factor	62.8%	62.7%	62.6%	62.5%	62.5%	62.5%	62.5%	62.4%	62.5%	62.5%	62.5%	62.5%	62.6%	62.6%			
Cumulative fuel input, MMBtu	10,906	11,529	12,154	12,787	13,435	14,052	14,682	15,309	15,954	16,594	17,235	17,885	18,527	19,179			
Cumulative gross output, kWh	845,463	893,443	941,482	990,040	1,040,155	1,089,468	1,138,256	1,185,601	1,237,011	1,286,249	1,335,746	1,385,582	1,436,762	1,488,557			
Heat Rate																	
Daily heat rate, Btu/kWe gross	11,628	11,691	11,719	11,720	11,642	11,265	11,635	11,906	11,301	11,699	11,654	11,752	11,278	11,335			
Daily heat rate, Btu/kWe gross	12,917	12,987	13,019	13,019	12,932	12,514	12,925	13,226	12,554	12,996	12,946	13,055	12,528	12,592			
Cumulative heat rate, Btu/kWe	11,612	11,616	11,621	11,626	11,627	11,611	11,612	11,623	11,610	11,613	11,615	11,620	11,608	11,598			
Cumulative heat rate, Btu/kWe	12,899	12,904	12,910	12,915	12,916	12,898	12,899	12,912	12,897	12,901	12,903	12,908	12,895	12,884			
Cumulative by Facility starting C																	
Max cumulative available engine run time, hours	10,268	10,364	10,460	10,556	10,652	10,748	10,844	10,940	11,036	11,132	11,228	11,324	11,420	11,516			
Actual cumulative engine run time, hours	7,625	7,697	7,769	7,841	7,913	7,985	8,057	8,127	8,199	8,271	8,342	8,414	8,486	8,558			
Cumulative Availability, %	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%			
Max cumulative gross output, kWh	8,474,400	8,553,600	8,632,800	8,712,000	8,791,200	8,870,400	8,949,600	9,028,800	9,108,000	9,187,200	9,266,400	9,345,600	9,424,800	9,504,000			
Actual cumulative gross output, kWh	5,430,572	5,478,552	5,526,591	5,575,149	5,625,264	5,674,577	5,723,365	5,770,710	5,822,120	5,871,358	5,920,855	5,970,691	6,021,871	6,073,666			
Cumulative Capacity Factor	64.1%	64.0%	64.0%	64.0%	64.0%	64.0%	64.0%	63.9%	63.9%	63.9%	63.9%	63.9%	63.9%	63.9%			
Cumulative fuel input, MMBtu	70,627	71,250	71,876	72,508	73,156	73,773	74,404	75,030	75,675	76,315	76,956	77,607	78,248	78,900			
Cumulative gross output, kWh	5,430,572	5,478,552	5,526,591	5,575,149	5,625,264	5,674,577	5,723,365	5,770,710	5,822,120	5,871,358	5,920,855	5,970,691	6,021,871	6,073,666			
Cumulative heat rate, Btu/kWe	11,708	11,707	11,707	11,708	11,707	11,703	11,703	11,704	11,701	11,701	11,700	11,701	11,697	11,694			
Cumulative heat rate, Btu/kWe	13,005	13,005	13,005	13,006	13,005	13,001	13,000	13,002	12,998	12,998	12,997	12,998	12,994	12,991			
Service																	
Engine 1																	
Engine 2	District air compressor shut down			Air compressor restart			Trip on low antifreeze										
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve insp																	
Precipitation																	
NSTAR Power Reports	Saturday 4/17/2021	Sunday 4/18/2021	Monday 4/19/2021	Tuesday 4/20/2021	Wednesday 4/21/2021	Thursday 4/22/2021	Friday 4/23/2021	Saturday 4/24/2021	Sunday 4/25/2021	Monday 4/26/2021	Tuesday 4/27/2021	Wednesday 4/28/2021	Thursday 4/29/2021	Friday 4/30/2021	TOTAL		
Hour																	
1	1,995	1,929	1,890	1,904	1,931	1,979	1,917	1,922	2,091	1,992	1,916	1,993	2,050	2,046			
2	1,958	1,960	1,919	1,919	1,965	1,969	1,919	1,919	2,091	1,988	1,930	1,993	2,054	2,049			
3	1,960	1,961	1,959	1,956	1,968	1,977	1,919	1,919	2,091	1,991	1,981	1,993	2,057	2,048			
4	1,958	1,961	1,932	1,941	1,968	1,979	1,921	1,918	2,090	1,988	1,917	1,991	2,056	2,052			
5	1,959	1,957	1,886	1,889	1,968	1,977	1,919	1,922	2,083	1,989	1,916	1,987	2,054	2,052			
6	1,959	1,887	1,889	1,888	1,967	1,976	1,984	1,919	2,080	1,987	1,990	2,071	2,056	2,054			
7	1,958	1,885	1,886	1,885	1,966	1,977	1,918	1,918	2,081	1,986	1,937	2,089	2,055	2,055			
8	1,957	1,889	1,895	1,887	1,966	1,920	1,916	1,923	1,996	1,917	1,912	2,015	2,050	2,043			
9	1,961	1,892	1,886	1,882	1,957	1,903	1,901	1,922	2,020	1,913	1,904	1,986	2,041	2,047			
10	1,960	1,893	1,877	1,902	1,977	1,952	1,906	1,921	2,088	1,971	1,910	1,354	2,042	2,053			
11	1,933	1,890	1,888	1,950	2,023	2,005	1,983	1,922	2,086	1,990	1,950	1,916	2,038	2,066			
12	1,890	1,889	1,947	1,949	2,021	2,007	1,988	1,922	2,085	1,991	2,004	2,030	2,040	2,131			
13	1,891	1,918	1,951	1,947	2,021	2,006	1,988	1,924	2,079	1,990	1,996	2,037	2,048	2,126			
14	1,894	1,962	1,953	2,021	2,023	2,006	1,991	1,986	2,077	1,990	1,993	2,036	2,048	2,125			
15	1,896	1,961	1,960	2,022	2,027	2,004	1,990	1,985	2,075	1,989	2,014	2,034	2,044	2,124			
16	1,890	1,967	1,956	2,028	2,048	2,002	1,994	1,985	2,075	1,990	2,059	2,034	2,048	2,128			
17	1,896	1,961	1,964	2,013	2,056	2,010	2,000	1,678	2,075	1,996	2,065	2,041	2,050	2,134			
18	1,892	1,905	1,966	1,967	2,063	2,018	2,002	1,415	2,075	2,006	2,073	2,047	2,032	2,142			
19	1,893	1,889	1,967	1,966	2,050	1,960	2,003	1,415	2,076	2,003	2,076	2,048	2,049	2,112			
20	1,889	1,936	1,942	1,965	2,032	1,919	2,003	1,843	2,078	2,004	2,078	2,051	2,050	2,081			
21	1,888	1,901	1,892	1,964	2,071	1,917	1,972	2,074	2,032	1,917	2,002	2,051	2,047	2,081			
22	1,890	1,884	1,891	1,936	2,074	1,919	1,919	2,082	2,005	1,920	1,993	2,052	2,050	2,072			
23	1,888	1,891	1,892	1,895	2,026	1,920	1,920	2,085	2,048	1,921	1,993	2,045	2,051	2,043			
24	1,888	1,886	1,894	1,896	1,980	1,922	1,921	2,084	1,987	1,921	1,993	2,052	2,047	2,011			
TOTAL	46,143	46,054	46,082	46,618	48,152	47,234	46,891	45,603	49,564	47,350	47,602	47,946	49,157	49,875			
Cumulative Output Sold, kWh	811,694	857,748	903,830	950,448	998,600	1,045,834	1,092,725	1,138,328	1,187,892	1,235,242	1,282,844	1,330,790	1,379,947	1,429,822			
Transformer and line efficiency	99.8%	99.8%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.7%	99.7%	99.8%	0.0%		
Hourly average	1,923	1,919	1,920	1,942	2,006	1,968	1,954	1,900	2,065	1,973	1,983	1,998	2,048	2,078	1,986		

May 2021																		
			Saturday 5/1/2021	Sunday 5/2/2021	Monday 5/3/2021	Tuesday 5/4/2021	Wednesday 5/5/2021	Thursday 5/6/2021	Friday 5/7/2021	Saturday 5/8/2021	Sunday 5/9/2021	Monday 5/10/2021	Tuesday 5/11/2021	Wednesday 5/12/2021	Thursday 5/13/2021	Friday 5/14/2021	Saturday 5/15/2021	Sunday 5/16/2021
LFG and Biogas Flow to the Engines (KSCF)			1,174	1,144	1,107	1,140	1,177	1,147	1,154	1,177	1,161	1,162	1,132	1,170	1,167	1,156	1,158	1,134
LFG and Biogas Flow to the Engines (MMBTU HHV)			644	636	622	640	661	640	645	655	650	658	638	651	647	640	642	630
LFG and Biogas Flow to the Flare (KSCF)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Flow to the Flare (MMBTU HHV)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)			1,174	1,144	1,107	1,140	1,177	1,147	1,154	1,177	1,161	1,162	1,132	1,170	1,167	1,156	1,158	1,134
LFG and Biogas Total Flow (MMBTU HHV)			644	636	622	640	661	640	645	655	650	658	638	651	647	640	642	630
Average Methane Content (%)			54.1	54.9	55.5	55.4	55.5	55.1	55.3	54.9	55.3	55.9	55.7	55.0	54.8	54.7	54.8	54.9
Engine 1 Hours			-	-	-	15	24	24	23	24	24	24	21	12	-	-	-	-
Engine 2 Hours			24	24	24	15	-	-	-	-	-	12	23	24	24	24	24	24
Engine 3 Hours			24	23	18	24	24	23	23	24	21	12	1	10	24	24	24	24
Engine 4 Hours			24	24	24	18	24	24	24	24	24	23	24	24	24	24	24	24
Generator 1 Power Output (kWhr)			-	-	-	9,836	16,760	16,776	16,404	16,068	16,628	16,700	14,356	8,168	-	-	-	-
Generator 2 Power Output (kWhr)			16,788	16,764	16,340	10,236	-	-	-	-	-	7,280	15,316	16,104	16,392	16,264	15,688	15,896
Generator 3 Power Output (kWhr)			15,724	14,268	12,148	17,012	17,236	14,540	16,024	16,136	16,732	6,948	76	7,044	16,732	16,736	16,736	16,732
Generator 4 Power Output (kWhr)			16,736	16,908	18,344	12,072	15,544	15,548	15,872	16,732	16,724	16,992	15,812	16,808	15,552	15,540	15,548	15,540
Gross Power Output (kWhr)			49,249	47,944	46,840	49,289	49,725	47,010	48,426	49,106	47,168	48,046	45,742	48,226	48,796	48,627	48,091	48,293
Net Power Output (kWhr)			47,448	46,223	45,152	47,408	47,864	45,240	46,672	47,344	45,464	46,256	43,976	46,400	46,992	46,832	46,368	46,576
Power Sold as metered by NStar, (kWhr)			47,345	46,723	45,073	47,284	47,737	45,163	46,551	47,240	45,370	46,143	43,872	46,286	46,858	46,708	46,248	46,476
Offgrid RECs (kWhr)			1,800	1,721	1,688	1,880	1,863	1,768	1,753	1,764	1,702	1,791	1,767	1,825	1,804	1,796	1,721	1,719
Calculated Performance Results																		
Daily																		
Power output (kW average when running)																		
Generator 1			-	-	-	656	698	699	713	670	693	696	684	681	-	-	-	-
Generator 2			700	699	681	682	-	-	-	-	-	607	666	671	683	678	654	662
Generator 3			655	620	675	709	718	632	697	672	654	579	76	704	697	697	697	697
Generator 4			697	705	764	671	648	648	661	697	697	708	687	700	648	648	648	648
Power output (kW average over 24-hrs)																		
Facility Gross			2,052	1,998	1,952	2,054	2,072	1,959	2,018	2,046	1,965	2,002	1,906	2,009	2,033	2,026	2,004	2,012
Facility Net			1,977	1,926	1,881	1,975	1,994	1,885	1,945	1,973	1,894	1,927	1,832	1,933	1,958	1,951	1,932	1,941
In-plant load			75	72	70	78	78	74	73	73	71	75	74	76	75	75	72	72
Daily availability factor																		
Facility			75%	74%	69%	75%	75%	74%	73%	75%	72%	75%	71%	73%	75%	75%	75%	75%
Engine 1			0%	0%	0%	63%	100%	100%	96%	100%	100%	100%	88%	50%	0%	0%	0%	0%
Engine 2			100%	100%	100%	63%	0%	0%	0%	0%	0%	50%	96%	100%	100%	100%	100%	100%
Engine 3			100%	96%	75%	100%	100%	96%	96%	100%	88%	50%	4%	42%	100%	100%	100%	100%
Engine 4			100%	100%	100%	75%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%	100%
Daily capacity factor																		
Facility			62%	61%	59%	62%	63%	59%	61%	62%	60%	61%	58%	61%	62%	61%	61%	61%
Engine 1			0%	0%	0%	79%	85%	85%	86%	81%	84%	84%	83%	83%	0%	0%	0%	0%
Engine 2			85%	85%	83%	83%	0%	0%	0%	0%	0%	74%	81%	83%	82%	79%	80%	80%
Engine 3			79%	75%	82%	86%	87%	77%	84%	81%	79%	70%	9%	85%	85%	85%	85%	85%
Engine 4			85%	85%	93%	81%	79%	79%	80%	85%	84%	86%	83%	85%	79%	78%	79%	78%
Cumulative by engine																		
Engine operating run hours in the month																		
Max Cumulative Available, hours			24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 1			0	0	0	15	39	63	86	110	134	158	179	191	191	191	191	191
Engine 2			24	48	72	87	87	87	87	87	87	99	122	146	170	194	218	242
Engine 3			24	47	65	89	113	136	159	183	204	216	217	227	251	275	299	323
Engine 4			24	48	72	90	114	138	162	186	210	234	257	281	305	329	353	377
Engine operating run hours total from 0 hours																		
Engine 1			117,517	117,517	117,517	117,532	117,556	117,580	117,603	117,627	117,651	117,675	117,696	117,708	117,708	117,708	117,708	117,708
Engine 2			106,801	106,825	106,849	106,873	106,888	106,888	106,888	106,888	106,888	106,900	106,923	106,947	106,971	106,995	107,019	107,043
Engine 3			116,605	116,629	116,652	116,670	116,694	116,718	116,741	116,764	116,788	116,809	116,821	116,822	116,832	116,856	116,880	116,928
Engine 4			115,332	115,356	115,380	115,404	115,422	115,446	115,470	115,494	115,518	115,542	115,566	115,589	115,613	115,637	115,661	115,709
Cumulative availability, %			May 1, 2021 @ 00:00 hours															
Engine 1			0%	0%	0%	16%	33%	44%	51%	57%	62%	66%	68%	66%	61%	57%	53%	50%
Engine 2			100%	100%	100%	91%	73%	46%	51%	45%	40%	41%	46%	51%	54%	58%	61%	63%
Engine 3			100%	98%	90%	93%	94%	94%	95%	95%	94%	90%	82%	79%	80%	82%	83%	84%
Engine 4			100%	100%	100%	94%	95%	96%	96%	97%	97%	98%	97%	98%	98%	98%	98%	98%
Engine cumulative gross output, kWhr																		
Max cumulative capacity one engine			825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200
Engine 1			-	-	-	656	1,354	2,053	2,766	3,436	4,129	4,824	5,508	6,189	6,189	6,189	6,189	6,189
Engine 2			700	1,398	2,079	2,761	2,761	2,761	2,761	2,761	2,761	2,761	4,034	4,705	5,388	6,065	6,719	7,381
Engine 3			655	1,276	1,950	2,659	3,377	4,010	4,706	5,379	6,033	6,612	6,688	7,392	8,089	8,786	9,484	10,181
Engine 4			697	1,402	2,166	2,837	3,485	4,132	4,794	5,491	6,188	6,896	7,583	8,283	8,931	9,579	10,227	10,874
Cumulative capacity factor, %																		
Engine 1			0%	0%	0%	20%	33%	41%	48%	52%	56%	58%	61%	63%	58%	54%	50%	47%
Engine 2			85%	85%	84%	84%	67%	56%	48%	42%	37%	41%	44%	48%	50%	53%	54%	56%
Engine 3			79%	77%	79%	81%	82%	81%	81%	81%	81%	80%	74%	75%	75%	76%	77%	77%
Engine 4			85%	85%	88%	86%	84%	83%	83%	83%	83%	84%	84%	84%	83%	83%	83%	82%

		Saturday 5/1/2021	Sunday 5/2/2021	Monday 5/3/2021	Tuesday 5/4/2021	Wednesday 5/5/2021	Thursday 5/6/2021	Friday 5/7/2021	Saturday 5/8/2021	Sunday 5/9/2021	Monday 5/10/2021	Tuesday 5/11/2021	Wednesday 5/12/2021	Thursday 5/13/2021	Friday 5/14/2021	Saturday 5/15/2021	Sunday 5/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		72	143	209	281	353	424	494	566	635	707	775	845	917	989	1,061	1,133
Cumulative Availability, %		75.0%	74.5%	72.6%	73.2%	73.5%	73.6%	73.5%	73.7%	73.5%	73.6%	73.4%	73.4%	73.5%	73.6%	73.7%	73.8%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		49,249	97,193	144,033	193,322	243,047	290,057	338,483	387,589	434,757	482,803	528,545	576,771	625,567	674,194	722,285	770,578
Cumulative Capacity Factor		62.2%	61.4%	60.6%	61.0%	61.4%	61.0%	61.1%	61.2%	61.0%	61.0%	60.7%	60.7%	60.8%	60.8%	60.8%	60.8%
Cumulative fuel input, MMBtu HHV		644	1,280	1,902	2,541	3,202	3,842	4,487	5,142	5,791	6,449	7,088	7,739	8,386	9,026	9,668	10,297
Cumulative gross output, kWhr		49,249	97,193	144,033	193,322	243,047	290,057	338,483	387,589	434,757	482,803	528,545	576,771	625,567	674,194	722,285	770,578
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,762	11,943	11,952	11,681	11,966	12,253	11,990	12,000	12,399	12,330	12,560	12,157	11,936	11,840	12,019	11,738
Daily heat rate, Btu/kWe gross HHV		13,066	13,268	13,277	12,977	13,293	13,612	13,319	13,330	13,774	13,697	13,952	13,505	13,259	13,153	13,352	13,039
Cumulative heat rate, Btu/kWe gross LHV		11,762	11,852	11,884	11,833	11,860	11,924	11,933	11,942	11,991	12,025	12,071	12,079	12,067	12,051	12,049	12,029
Cumulative heat rate, Btu/kWe gross HHV		13,066	13,166	13,202	13,144	13,175	13,246	13,256	13,266	13,321	13,358	13,410	13,418	13,405	13,387	13,385	13,363
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		11,612	11,708	11,804	11,900	11,996	12,092	12,188	12,284	12,380	12,476	12,572	12,668	12,764	12,860	12,956	13,052
Actual cumulative engine run hours		8,630	8,701	8,767	8,839	8,911	8,982	9,052	9,124	9,193	9,265	9,333	9,403	9,475	9,547	9,619	9,691
Cumulative Availability, %		74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%
Max cumulative gross output, kWhr		9,583,200	9,662,400	9,741,600	9,820,800	9,900,000	9,979,200	10,058,400	10,137,600	10,216,800	10,296,000	10,375,200	10,454,400	10,533,600	10,612,800	10,692,000	10,771,200
Actual cumulative gross output, kWhr		6,122,915	6,170,859	6,217,699	6,266,988	6,316,713	6,363,723	6,412,149	6,461,255	6,508,423	6,556,469	6,602,211	6,650,437	6,699,233	6,747,860	6,795,951	6,844,244
Cumulative Capacity Factor		63.9%	63.9%	63.8%	63.8%	63.8%	63.8%	63.7%	63.7%	63.7%	63.7%	63.6%	63.6%	63.6%	63.6%	63.6%	63.5%
Cumulative fuel input, MMBtu HHV		79,544	80,180	80,802	81,441	82,102	82,742	83,387	84,042	84,691	85,349	85,988	86,639	87,286	87,926	88,568	89,197
Cumulative gross output, kWhr		6,122,915	6,170,859	6,217,699	6,266,988	6,316,713	6,363,723	6,412,149	6,461,255	6,508,423	6,556,469	6,602,211	6,650,437	6,699,233	6,747,860	6,795,951	6,844,244
Cumulative heat rate, Btu/kWe gross LHV		11,695	11,697	11,698	11,698	11,700	11,705	11,707	11,709	11,714	11,718	11,724	11,727	11,729	11,730	11,732	11,732
Cumulative heat rate, Btu/kWe gross HHV		12,991	12,993	12,995	12,995	12,998	13,002	13,005	13,007	13,013	13,018	13,024	13,028	13,029	13,030	13,032	13,032
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports																	
Date		Saturday 5/1/2021	Sunday 5/2/2021	Monday 5/3/2021	Tuesday 5/4/2021	Wednesday 5/5/2021	Thursday 5/6/2021	Friday 5/7/2021	Saturday 5/8/2021	Sunday 5/9/2021	Monday 5/10/2021	Tuesday 5/11/2021	Wednesday 5/12/2021	Thursday 5/13/2021	Friday 5/14/2021	Saturday 5/15/2021	Sunday 5/16/2021
Hour																	
1		2,034	1,964	1,457	1,993	1,926	1,947	1,630	2,024	1,924	1,969	1,996	2,016	1,922	1,922	1,920	1,927
2		2,034	1,966	1,456	2,042	1,956	1,925	1,973	2,024	1,924	1,401	2,000	2,015	1,922	1,948	1,944	1,927
3		1,982	1,966	1,452	2,043	1,995	1,988	1,974	2,022	1,902	1,335	2,071	2,015	1,961	1,970	1,987	1,927
4		1,964	1,968	1,456	2,042	1,997	1,995	1,973	2,022	1,334	1,565	2,063	2,016	1,993	1,937	1,923	1,927
5		1,964	1,966	1,454	2,041	1,997	1,998	1,973	2,023	1,339	1,902	2,000	2,018	1,992	1,965	1,923	1,927
6		1,963	1,969	1,610	2,042	1,998	1,993	1,972	2,022	1,337	1,986	1,996	2,017	1,952	1,922	1,923	1,925
7		1,965	1,969	2,104	2,036	1,996	1,951	1,970	2,011	1,682	2,019	1,995	1,944	1,917	1,917	1,924	1,925
8		1,967	1,970	2,127	2,038	1,996	1,919	1,969	1,972	1,933	2,019	1,931	1,943	1,917	1,918	1,924	1,926
9		1,969	1,969	2,121	1,909	1,989	1,920	856	1,974	2,018	2,018	1,914	1,940	1,916	1,916	1,924	1,926
10		1,967	1,971	2,066	1,438	1,992	1,919	1,989	1,943	2,018	2,022	1,294	1,476	1,917	1,915	1,924	1,924
11		1,966	1,968	2,027	1,977	1,975	1,921	2,017	1,924	2,021	2,015	-	1,381	1,918	1,911	1,923	1,923
12		1,968	1,970	1,968	2,011	1,992	1,923	2,018	1,925	2,022	2,016	779	1,661	1,918	1,918	1,923	1,923
13		1,968	1,971	1,966	2,011	1,996	1,923	2,017	1,927	2,021	1,924	1,402	2,046	1,917	1,929	1,924	1,924
14		1,969	1,971	1,966	2,013	1,997	1,923	2,017	1,927	2,021	1,962	1,721	2,005	1,917	1,989	1,924	1,924
15		1,969	1,970	1,967	2,013	1,993	1,924	2,018	1,929	2,021	2,017	2,022	2,007	1,954	1,989	1,922	1,925
16		1,969	1,969	2,015	1,943	1,993	1,922	2,019	1,949	2,021	1,998	2,071	2,065	1,994	1,989	1,924	1,964
17		1,969	1,969	2,041	1,998	1,999	1,929	2,023	1,976	2,018	1,998	2,097	2,024	1,996	1,994	1,924	1,997
18		1,971	1,969	1,984	1,998	1,996	1,930	2,024	1,977	1,997	1,999	2,096	1,998	1,997	1,993	1,925	1,996
19		1,970	1,968	1,975	1,953	1,990	1,930	2,021	1,975	1,971	1,998	2,093	1,995	1,996	1,994	1,923	1,995
20		1,968	1,966	1,973	1,924	1,991	1,927	2,019	1,974	1,970	1,997	2,092	1,991	1,997	1,998	1,924	1,954
21		1,966	1,965	1,974	1,920	1,994	1,926	2,018	1,946	1,969	1,996	2,089	1,950	1,995	1,919	1,923	1,923
22		1,958	1,965	1,972	1,923	1,990	1,787	2,018	1,925	1,969	1,995	2,087	1,918	1,994	1,919	1,921	1,921
23		1,961	1,966	1,972	1,986	1,990	1,289	2,020	1,925	1,968	1,996	2,046	1,923	1,935	1,922	1,925	1,922
24		1,964	1,458	1,970	1,990	1,999	1,354	2,023	1,924	1,969	1,996	2,017	1,922	1,921	1,924	1,927	1,924
TOTAL		47,345	46,723	45,073	47,284	47,737	45,163	46,551	47,240	45,370	46,143	43,872	46,286	46,858	46,708	46,248	46,476
Cumulative Output Sold, kWhr		47,345	94,068	139,141	186,425	234,162	279,325	325,876	373,116	418,486	464,629	508,501	554,787	601,645	648,353	694,601	741,077
Transformer and line efficiency		99.8%	101.1%	99.8%	99.7%	99.7%	99.8%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.7%	99.7%	99.7%	99.8%
Hourly average		1,973	1,947	1,878	1,970	1,989	1,882	1,940	1,968	1,890	1,923	1,828	1,929	1,952	1,946	1,927	1,937

[illegible]

	Monday 5/17/2021	Tuesday 5/18/2021	Wednesday 5/19/2021	Thursday 5/20/2021	Friday 5/21/2021	Saturday 5/22/2021	Sunday 5/23/2021	Monday 5/24/2021	Tuesday 5/25/2021	Wednesday 5/26/2021	Thursday 5/27/2021	Friday 5/28/2021	Saturday 5/29/2021	Sunday 5/30/2021	Monday 5/31/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880	2,976			
Actual cumulative engine run time	1,205	1,277	1,348	1,420	1,492	1,564	1,636	1,708	1,780	1,852	1,924	1,996	2,068	2,140	2,212			
Cumulative Availability, %	73.8%	73.9%	73.9%	74.0%	74.0%	74.1%	74.1%	74.1%	74.2%	74.2%	74.2%	74.3%	73.6%	73.6%	73.7%			
Max cumulative gross output, kWh	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000	2,455,200			
Actual cumulative gross output, kWh	818,905	867,672	916,050	963,800	1,012,026	1,062,189	1,112,146	1,159,291	1,207,486	1,256,042	1,304,246	1,351,232	1,386,669	1,435,295	1,483,355			
Cumulative Capacity Factor	60.8%	60.9%	60.9%	60.8%	60.8%	61.0%	61.1%	61.0%	61.0%	61.0%	61.0%	60.9%	60.4%	60.4%	60.4%			
Cumulative fuel input, MMBtu	10,926	11,564	12,190	12,816	13,436	14,083	14,729	15,332	15,940	16,571	17,186	17,790	18,245	18,847	19,447			
Cumulative gross output, kWh	818,905	867,672	916,050	963,800	1,012,026	1,062,189	1,112,146	1,159,291	1,207,486	1,256,042	1,304,246	1,351,232	1,386,669	1,435,295	1,483,355			
Heat Rate																		
Daily heat rate, Btu/kWe gross	11,718	11,762	11,650	11,807	11,564	11,618	11,635	11,516	11,358	11,700	11,485	11,570	11,553	11,159	11,238			
Daily heat rate, Btu/kWe net	13,018	13,066	12,942	13,116	12,846	12,906	12,925	12,792	12,617	12,997	12,758	12,853	12,834	12,397	12,484			
Cumulative heat rate, Btu/kWe gross	12,011	11,997	11,979	11,970	11,951	11,935	11,922	11,905	11,883	11,876	11,862	11,852	11,844	11,821	11,802			
Cumulative heat rate, Btu/kWe net	13,343	13,327	13,307	13,297	13,276	13,258	13,243	13,225	13,201	13,193	13,177	13,166	13,157	13,131	13,110			
Cumulative by Facility starting C																		
Max cumulative available engine	13,148	13,244	13,340	13,436	13,532	13,628	13,724	13,820	13,916	14,012	14,108	14,204	14,300	14,396	14,492			
Actual cumulative engine run time	9,763	9,835	9,906	9,978	10,050	10,122	10,194	10,266	10,338	10,410	10,482	10,554	10,606	10,678	10,750			
Cumulative Availability, %	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.2%	74.2%	74.2%			
Max cumulative gross output, kWh	10,850,400	10,929,600	11,008,800	11,088,000	11,167,200	11,246,400	11,325,600	11,404,800	11,484,000	11,563,200	11,642,400	11,721,600	11,800,800	11,880,000	11,959,200			
Actual cumulative gross output, kWh	6,892,571	6,941,338	6,989,716	7,037,466	7,085,692	7,135,855	7,185,812	7,232,957	7,281,152	7,329,708	7,377,912	7,424,898	7,460,335	7,508,961	7,557,021			
Cumulative Capacity Factor	63.5%	63.5%	63.5%	63.5%	63.5%	63.5%	63.4%	63.4%	63.4%	63.4%	63.4%	63.3%	63.2%	63.2%	63.2%			
Cumulative fuel input, MMBtu	89,827	90,464	91,090	91,716	92,336	92,983	93,629	94,232	94,840	95,471	96,086	96,690	97,145	97,748	98,348			
Cumulative gross output, kWh	6,892,571	6,941,338	6,989,716	7,037,466	7,085,692	7,135,855	7,185,812	7,232,957	7,281,152	7,329,708	7,377,912	7,424,898	7,460,335	7,508,961	7,557,021			
Cumulative heat rate, Btu/kWe gross	11,732	11,732	11,731	11,732	11,731	11,730	11,729	11,728	11,725	11,725	11,724	11,723	11,722	11,718	11,715			
Cumulative heat rate, Btu/kWe net	13,032	13,033	13,032	13,033	13,031	13,030	13,029	13,028	13,025	13,025	13,023	13,022	13,021	13,017	13,014			
Service																		
Engine 1																		
Engine 2																		
Engine 3																		
Engine 4																		
Oil - oil and filter change																		
Service - plugs, air filter, valve insp																		
Precipitation																		
NSTAR Power Reports	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	TOTAL		
Date	5/17/2021	5/18/2021	5/19/2021	5/20/2021	5/21/2021	5/22/2021	5/23/2021	5/24/2021	5/25/2021	5/26/2021	5/27/2021	5/28/2021	5/29/2021	5/30/2021	5/31/2021			
Hour																		
1	1,924	1,923	1,995	1,920	1,873	1,993	1,996	1,877	1,944	1,946	1,938	1,868	1,937	2,013	1,944			
2	1,962	1,924	1,997	1,920	1,874	1,993	2,067	1,877	1,944	1,947	1,937	1,869	1,017	1,968	1,944			
3	1,978	1,923	1,994	1,919	1,874	1,994	2,070	1,876	1,942	1,947	1,937	1,867	-	1,944	1,943			
4	1,922	1,923	1,970	1,919	1,945	1,994	2,070	1,875	1,894	1,947	1,939	1,867	-	1,943	1,943			
5	1,922	1,985	1,924	1,919	1,945	1,994	2,069	1,873	1,870	1,946	1,937	1,867	-	1,944	1,944			
6	1,922	1,930	1,920	1,918	1,921	1,993	2,070	1,873	1,887	1,945	1,937	1,866	-	1,944	1,944			
7	1,921	1,920	1,967	1,916	1,877	1,994	2,052	1,871	1,946	1,946	1,940	1,867	-	1,943	1,944			
8	1,922	1,917	1,914	1,916	1,941	1,992	1,999	1,870	1,919	1,945	1,938	1,867	-	1,944	1,894			
9	1,917	1,915	1,914	1,867	1,903	1,990	1,998	1,867	1,868	1,937	1,936	1,864	491	1,942	1,872			
10	1,917	1,917	1,915	1,869	1,865	1,989	1,996	1,867	1,870	1,941	1,933	1,864	1,830	1,937	1,873			
11	1,917	1,916	1,915	1,869	1,865	1,991	1,995	1,869	1,909	1,940	1,933	1,866	2,084	1,938	1,875			
12	1,918	1,916	1,916	1,868	1,891	1,991	2,013	1,869	1,943	1,938	1,933	1,866	2,085	1,940	1,875			
13	1,918	1,919	1,915	1,870	1,937	1,993	2,048	1,870	1,944	1,939	1,930	1,866	2,085	1,941	1,909			
14	1,960	1,988	1,915	1,915	1,937	1,992	2,050	1,870	1,943	1,600	1,931	1,864	2,089	1,940	1,880			
15	1,990	1,985	1,599	1,941	1,938	2,006	2,047	1,870	1,944	1,672	1,929	1,864	2,089	1,940	1,944			
16	1,942	1,989	2,061	1,940	1,938	2,067	2,046	1,938	1,942	2,070	1,931	1,918	2,092	1,941	1,904			
17	1,923	1,994	2,013	1,946	1,942	2,068	1,993	1,946	1,947	2,086	1,940	1,938	2,091	1,941	1,947			
18	1,924	1,995	1,995	1,946	1,944	2,068	1,995	1,945	1,947	2,090	1,941	1,938	2,088	1,941	1,946			
19	1,922	1,997	1,994	1,875	1,942	2,068	1,995	1,947	2,085	1,941	1,930	1,930	2,089	1,939	1,947			
20	1,921	1,994	1,953	1,935	2,009	2,066	1,931	1,905	1,946	2,086	1,941	1,867	2,052	1,940	1,946			
21	1,923	1,994	1,920	1,944	1,995	2,066	1,950	1,870	1,945	2,023	1,881	1,870	2,015	1,941	1,946			
22	1,979	1,994	1,920	1,941	1,994	2,010	1,883	1,870	1,944	1,919	1,870	1,870	2,016	1,943	1,944			
23	1,961	1,986	1,920	1,870	1,994	1,995	1,876	1,870	1,945	1,865	1,867	1,868	1,961	1,942	1,942			
24	1,925	1,933	1,921	1,874	1,993	1,877	1,880	1,880	1,947	1,909	1,867	1,870	1,942	1,943	1,941			
TOTAL	46,430	46,877	46,467	45,817	46,337	48,304	48,086	45,243	46,277	46,622	46,256	45,061	34,053	46,692	46,191			
Cumulative Output Sold, kWh	787,507	834,384	880,851	926,668	973,005	1,021,309	1,069,395	1,114,638	1,160,915	1,207,537	1,253,793	1,298,854	1,332,907	1,379,599	1,425,790			
Transformer and line efficiency	99.7%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%			
Hourly average	1,935	1,953	1,936	1,909	1,931	2,013	2,004	1,885	1,928	1,943	1,927	1,878	1,419	1,946	1,925	1,916		

June 2021																	
		Tuesday 6/1/2021	Wednesday 6/2/2021	Thursday 6/3/2021	Friday 6/4/2021	Saturday 6/5/2021	Sunday 6/6/2021	Monday 6/7/2021	Tuesday 6/8/2021	Wednesday 6/9/2021	Thursday 6/10/2021	Friday 6/11/2021	Saturday 6/12/2021	Sunday 6/13/2021	Monday 6/14/2021	Tuesday 6/15/2021	Wednesday 6/16/2021
LFG and Biogas Flow to the Engines (KSCF)		1,069	1,101	1,081	1,077	1,100	1,081	1,095	1,071	1,072	1,096	1,082	1,097	1,097	1,087	1,106	1,093
LFG and Biogas Flow to the Engines (MMBTU HHV)		593	615	610	607	613	598	605	593	596	608	598	610	606	602	615	601
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and BiogasFlow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,069	1,101	1,081	1,077	1,100	1,081	1,095	1,071	1,072	1,096	1,082	1,097	1,097	1,087	1,106	1,093
LFG and Biogas Total Flow (MMBTU HHV)		593	615	610	607	613	598	605	593	596	608	598	610	606	602	615	601
Average Methane Content (%)		54.8	55.2	55.8	55.6	55.0	54.7	54.6	54.7	54.9	54.8	54.6	55.0	54.6	54.7	54.9	54.3
Engine 1 Hours		-	-	-	-	-	-	-	-	12	24	24	24	24	24	24	24
Engine 2 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Engine 3 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Engine 4 Hours		24	24	24	23	24	24	24	24	15	-	-	-	-	-	-	-
Generator 1 Power Output (kWhr)		-	-	-	-	-	-	-	-	6,104	15,636	15,680	15,636	15,648	15,616	15,764	15,596
Generator 2 Power Output (kWhr)		15,664	16,320	16,956	15,948	16,796	16,084	16,400	16,716	16,496	15,736	15,892	15,984	15,716	15,696	16,216	16,020
Generator 3 Power Output (kWhr)		15,540	15,912	15,960	16,860	15,908	15,704	15,736	15,808	15,600	15,664	15,792	15,668	15,688	15,624	16,020	15,556
Generator 4 Power Output (kWhr)		15,524	15,900	15,944	15,772	15,960	15,700	15,700	15,792	9,428	-	-	-	-	-	-	-
Gross Power Output (kWhr)		46,777	48,181	48,913	48,621	48,710	47,540	47,888	48,362	47,714	47,208	47,541	47,478	47,251	47,054	48,117	47,376
Net Power Output (kWhr)		45,008	46,392	47,112	46,824	46,944	45,776	45,992	46,472	45,832	45,416	45,760	45,776	45,520	45,224	46,328	45,608
Power Sold as metered by NStar, (kWhr)		44,890	46,283	46,981	46,729	46,832	45,664	45,873	46,289	45,685	45,281	45,630	45,644	45,395	45,131	46,154	45,465
Offgrid RECs (kWhr)		1,769	1,789	1,801	1,797	1,766	1,764	1,897	1,890	1,882	1,791	1,782	1,702	1,729	1,832	1,787	1,770
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		-	-	-	-	-	-	-	-	509	652	653	652	652	651	657	650
Generator 2		653	680	707	665	700	670	683	697	687	666	662	666	665	654	676	668
Generator 3		648	663	665	703	663	654	656	659	650	653	658	653	654	651	668	648
Generator 4		647	663	664	686	665	654	654	658	629	-	-	-	-	-	-	-
Power output (kW average over 24-hrs)																	
Facility Gross		1,949	2,008	2,038	2,026	2,030	1,981	1,995	2,015	1,988	1,967	1,981	1,978	1,969	1,961	2,005	1,974
Facility Net		1,875	1,933	1,963	1,951	1,956	1,907	1,916	1,936	1,910	1,892	1,907	1,907	1,897	1,884	1,930	1,900
In-plant load		74	75	75	75	74	74	79	79	78	75	74	71	72	76	75	74
Daily availability factor																	
Facility		75%	75%	75%	74%	75%	75%	75%	75%	78%	75%	75%	75%	75%	75%	75%	75%
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	50%	100%	100%	100%	100%	100%	100%	100%
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 4		100%	100%	100%	96%	100%	100%	100%	100%	63%	0%	0%	0%	0%	0%	0%	0%
Daily capacity factor																	
Facility		59%	61%	62%	61%	62%	60%	60%	61%	60%	60%	60%	60%	60%	59%	61%	60%
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	62%	79%	79%	79%	79%	79%	80%	79%
Engine 2		79%	82%	86%	81%	85%	81%	83%	84%	83%	79%	80%	81%	79%	79%	82%	81%
Engine 3		78%	81%	85%	80%	79%	79%	79%	80%	79%	79%	80%	79%	79%	79%	81%	79%
Engine 4		78%	80%	81%	83%	81%	79%	79%	80%	76%	0%	0%	0%	0%	0%	0%	0%
Cumulative by engine																	
Engine operating run hours in the month																	
Max Cumulative Available, hours		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 1		0	0	0	0	0	0	0	0	12	36	60	84	108	132	156	180
Engine 2		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 3		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 4		24	48	72	95	119	143	167	191	206	206	206	206	206	206	206	206
Engine operating run hours total from 0 hours																	
Engine 1	117,708	117,708	117,708	117,708	117,708	117,708	117,708	117,708	117,708	117,720	117,744	117,768	117,792	117,816	117,840	117,864	117,888
Engine 2	107,396	107,420	107,444	107,468	107,492	107,516	107,540	107,564	107,588	107,612	107,636	107,660	107,684	107,708	107,732	107,756	107,780
Engine 3	117,281	117,305	117,329	117,353	117,377	117,401	117,425	117,449	117,473	117,497	117,521	117,545	117,569	117,593	117,617	117,641	117,665
Engine 4	116,062	116,086	116,110	116,134	116,157	116,181	116,205	116,229	116,253	116,268	116,268	116,268	116,268	116,268	116,268	116,268	116,268
Cumulative availability, % June 1, 2021 @ 00:00 hours																	
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	6%	15%	23%	29%	35%	39%	43%	47%
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 4		100%	100%	100%	99%	99%	99%	99%	99%	95%	86%	78%	72%	66%	61%	57%	54%
Engine cumulative gross output, kWhr																	
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200
Engine 1		-	-	-	-	-	-	-	-	509	1,160	1,814	2,465	3,117	3,768	4,425	5,074
Engine 2		653	1,333	2,039	2,704	3,404	4,074	4,757	5,454	6,141	6,797	7,459	8,125	8,780	9,434	10,109	10,777
Engine 3		648	1,311	1,976	2,678	3,341	3,995	4,651	5,310	5,960	6,612	7,270	7,923	8,577	9,228	9,895	10,543
Engine 4		647	1,309	1,974	2,659	3,324	3,979	4,633	5,291	5,919	5,919	5,919	5,919	5,919	5,919	5,919	5,919
Cumulative capacity factor, %																	
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	7%	14%	20%	25%	29%	33%	36%	38%
Engine 2		79%	81%	82%	82%	83%	82%	82%	83%	83%	82%	82%	82%	82%	82%	82%	82%
Engine 3		78%	79%	80%	81%	81%	81%	81%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Engine 4		78%	79%	80%	81%	81%	80%	80%	80%	72%	65%	60%	55%	51%	48%	45%	45%

		Tuesday 6/1/2021	Wednesday 6/2/2021	Thursday 6/3/2021	Friday 6/4/2021	Saturday 6/5/2021	Sunday 6/6/2021	Monday 6/7/2021	Tuesday 6/8/2021	Wednesday 6/9/2021	Thursday 6/10/2021	Friday 6/11/2021	Saturday 6/12/2021	Sunday 6/13/2021	Monday 6/14/2021	Tuesday 6/15/2021	Wednesday 6/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		72	144	216	287	359	431	503	575	650	722	794	866	938	1,010	1,082	1,154
Cumulative Availability, %		75.0%	75.0%	75.0%	74.7%	74.8%	74.8%	74.9%	74.9%	75.2%	75.2%	75.2%	75.2%	75.2%	75.1%	75.1%	75.1%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		46,777	94,958	143,871	192,492	241,202	288,742	336,630	384,992	432,706	479,914	527,455	574,933	622,184	669,238	717,355	764,731
Cumulative Capacity Factor		59.1%	59.9%	60.6%	60.8%	60.9%	60.8%	60.7%	60.8%	60.7%	60.6%	60.5%	60.5%	60.4%	60.4%	60.4%	60.3%
Cumulative fuel input, MMBtu HHV		593	1,208	1,818	2,425	3,038	3,635	4,240	4,833	5,429	6,037	6,635	7,245	7,851	8,453	9,068	9,699
Cumulative gross output, kWhr		46,777	94,958	143,871	192,492	241,202	288,742	336,630	384,992	432,706	479,914	527,455	574,933	622,184	669,238	717,355	764,731
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,416	11,489	11,230	11,229	11,323	11,316	11,377	11,038	11,237	11,596	11,321	11,571	11,545	11,517	11,500	11,418
Daily heat rate, Btu/kWe gross HHV		12,681	12,762	12,475	12,474	12,579	12,570	12,638	12,262	12,483	12,881	12,577	12,854	12,825	12,794	12,775	12,684
Cumulative heat rate, Btu/kWe gross LHV		11,416	11,453	11,377	11,340	11,336	11,333	11,339	11,301	11,294	11,324	11,324	11,344	11,359	11,370	11,379	11,382
Cumulative heat rate, Btu/kWe gross HHV		12,681	12,722	12,638	12,597	12,593	12,589	12,596	12,554	12,546	12,579	12,579	12,602	12,619	12,631	12,641	12,643
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		14,588	14,684	14,780	14,876	14,972	15,068	15,164	15,260	15,356	15,452	15,548	15,644	15,740	15,836	15,932	16,028
Actual cumulative engine run hours		10,822	10,894	10,966	11,037	11,109	11,181	11,253	11,325	11,400	11,472	11,544	11,616	11,688	11,760	11,832	11,904
Cumulative Availability, %		74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.3%	74.3%	74.3%	74.3%	74.3%
Max cumulative gross output, kWhr		12,038,400	12,117,600	12,196,800	12,276,000	12,355,200	12,434,400	12,513,600	12,592,800	12,672,000	12,751,200	12,830,400	12,909,600	12,988,800	13,068,000	13,147,200	13,226,400
Actual cumulative gross output, kWhr		7,603,798	7,651,979	7,700,892	7,749,513	7,798,223	7,845,763	7,893,651	7,942,013	7,989,727	8,036,935	8,084,476	8,131,954	8,179,205	8,226,259	8,274,376	8,321,752
Cumulative Capacity Factor		63.2%	63.1%	63.1%	63.1%	63.1%	63.1%	63.1%	63.1%	63.1%	63.0%	63.0%	63.0%	63.0%	62.9%	62.9%	62.9%
Cumulative fuel input, MMBtu HHV		98,941	99,556	100,166	100,772	101,385	101,983	102,588	103,181	103,776	104,385	104,982	105,593	106,199	106,801	107,415	108,016
Cumulative gross output, kWhr		7,603,798	7,651,979	7,700,892	7,749,513	7,798,223	7,845,763	7,893,651	7,942,013	7,989,727	8,036,935	8,084,476	8,131,954	8,179,205	8,226,259	8,274,376	8,321,752
Cumulative heat rate, Btu/kWe gross LHV		11,713	11,712	11,709	11,706	11,704	11,701	11,699	11,695	11,692	11,692	11,690	11,689	11,688	11,687	11,686	11,685
Cumulative heat rate, Btu/kWe gross HHV		13,012	13,010	13,007	13,004	13,001	12,998	12,996	12,992	12,989	12,988	12,986	12,985	12,984	12,983	12,982	12,980
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports																	
Date		Tuesday 6/1/2021	Wednesday 6/2/2021	Thursday 6/3/2021	Friday 6/4/2021	Saturday 6/5/2021	Sunday 6/6/2021	Monday 6/7/2021	Tuesday 6/8/2021	Wednesday 6/9/2021	Thursday 6/10/2021	Friday 6/11/2021	Saturday 6/12/2021	Sunday 6/13/2021	Monday 6/14/2021	Tuesday 6/15/2021	Wednesday 6/16/2021
Hour																	
1		1,869	1,871	1,944	1,940	1,941	1,873	1,870	1,919	1,936	1,871	1,879	1,880	1,879	1,879	1,874	1,948
2		1,869	1,869	1,944	1,946	1,941	1,871	1,903	1,940	1,937	1,869	1,876	1,879	1,878	1,880	1,875	1,951
3		1,931	1,870	1,943	2,002	1,942	1,873	1,942	1,939	1,938	1,874	1,876	1,937	1,878	1,879	1,873	1,950
4		1,866	1,869	1,944	1,945	1,942	1,901	1,941	1,939	1,938	1,871	1,876	1,951	1,878	1,879	1,874	1,950
5		1,866	1,870	1,945	1,944	1,942	1,944	1,942	1,940	1,938	1,873	1,876	1,952	1,879	1,878	1,875	1,950
6		1,865	1,912	1,942	1,944	1,942	1,887	1,941	1,941	1,938	1,873	1,872	1,950	1,878	1,875	1,873	1,934
7		1,866	1,870	1,941	1,943	1,942	1,871	1,917	1,875	1,940	1,874	1,871	1,934	1,879	1,874	1,875	1,880
8		1,867	1,870	1,940	1,942	1,942	1,873	1,869	1,857	1,937	1,873	1,876	1,881	1,880	1,871	1,907	1,881
9		1,865	1,867	1,937	1,901	1,944	1,870	1,862	1,854	1,933	1,871	1,870	1,882	1,879	1,861	1,871	1,874
10		1,865	1,865	1,932	1,472	1,942	1,868	1,854	1,861	1,935	1,873	1,875	1,881	1,880	1,854	1,867	1,875
11		1,865	1,926	1,939	1,820	1,940	1,868	1,851	1,861	1,915	1,873	1,873	1,880	1,880	1,892	1,894	1,875
12		1,867	1,992	1,939	2,081	1,933	1,867	1,874	1,859	1,858	1,873	1,874	1,881	1,879	1,880	1,869	1,874
13		1,868	2,050	1,938	2,012	1,931	1,876	1,902	1,882	1,855	1,897	1,875	1,881	1,880	1,911	1,871	1,874
14		1,867	2,042	1,986	2,009	1,982	1,956	1,965	2,029	1,850	1,888	1,881	1,932	1,893	2,032	1,874	
15		1,867	1,933	1,984	2,010	1,999	1,954	1,926	1,947	1,835	1,888	1,945	1,881	1,903	1,918	1,934	1,874
16		1,867	1,881	1,971	2,009	2,002	1,868	1,861	1,928	1,871	1,873	1,886	1,881	1,880	1,873	1,998	1,874
17		1,872	2,044	2,015	2,018	2,004	1,899	1,939	2,061	1,907	1,880	1,987	1,882	1,880	1,876	1,956	1,880
18		1,872	2,016	2,013	2,017	2,009	1,933	1,959	2,033	1,889	1,882	1,970	1,882	1,881	1,875	1,914	1,881
19		1,871	1,972	2,014	2,016	2,052	2,064	2,041	1,939	1,963	2,017	1,975	2,022	2,014	1,911	2,022	1,880
20		1,868	1,919	2,014	1,997	1,921	1,962	1,982	1,939	1,875	1,941	1,924	1,960	1,875	2,045	1,879	
21		1,868	1,944	1,936	1,940	1,909	1,929	1,886	1,938	1,875	1,917	1,950	1,876	1,878	1,875	2,034	1,876
22		1,867	1,944	1,940	1,941	1,945	1,880	1,911	1,935	1,874	1,878	1,917	1,878	1,881	1,873	1,946	1,875
23		1,871	1,944	1,940	1,940	1,912	1,907	1,868	1,936	1,874	1,875	1,878	1,879	1,880	1,876	1,927	1,878
24		1,871	1,943	1,940	1,940	1,873	1,870	1,867	1,937	1,874	1,877	1,879	1,879	1,879	1,873	1,948	1,878
TOTAL		44,890	46,283	46,981	46,729	46,832	45,664	45,873	46,289	45,685	45,281	45,630	45,644	45,395	45,131	46,154	45,465
Cumulative Output Sold, kWhr		44,890	91,173	138,154	184,883	231,715	277,379	323,252	369,541	415,226	460,507	506,137	551,781	597,176	642,307	688,461	733,926
Transformer and line efficiency		99.7%	99.8%	99.7%	99.8%	99.8%	99.8%	99.7%	99.6%	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%	99.8%	99.7%
Hourly average		1,870	1,928	1,958	1,947	1,951	1,903	1,911	1,929	1,904	1,887	1,901	1,902	1,891	1,880	1,923	1,894

June 2021																		
		Thursday 6/17/2021	Friday 6/18/2021	Saturday 6/19/2021	Sunday 6/20/2021	Monday 6/21/2021	Tuesday 6/22/2021	Wednesday 6/23/2021	Thursday 6/24/2021	Friday 6/25/2021	Saturday 6/26/2021	Sunday 6/27/2021	Monday 6/28/2021	Tuesday 6/29/2021	Wednesday 6/30/2021	TOTAL	Biogas	LFG
LFG and Biogas Flow to the Engine		1,104	1,113	1,091	1,112	1,088	1,081	1,090	1,099	1,097	1,120	1,133	1,114	1,118	1,195	32,961	726	32,235
LFG and Biogas Flow to the Engine		604	609	605	610	600	599	585	591	600	609	617	610	616	647	18,171	241	17,929
LFG and Biogas Flow to the Flare (t)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3%	98.7%
LFG and BiogasFlow to the Flare (t)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,104	1,113	1,091	1,112	1,088	1,081	1,090	1,099	1,097	1,120	1,133	1,114	1,118	1,195	32,961		
LFG and Biogas Total Flow (MMBTU)		604	609	605	610	600	599	585	591	600	609	617	610	616	647	18,171		
Average Methane Content (%)		54.1	54.1	54.8	54.2	54.5	54.7	53.0	53.1	54.1	53.8	53.8	54.1	54.4	53.5	54.5		
Engine 1 Hours		24	24	24	24	24	24	24	24	24	24	24	24	22	24	514		
Engine 2 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	720		
Engine 3 Hours		24	24	24	24	7	-	-	3	1	-	-	2	14	24	531		
Engine 4 Hours		-	-	-	-	17	24	24	24	24	24	24	22	11	-	400		
Generator 1 Power Output (kWhr)		15,596	15,596	15,600	15,600	15,592	15,592	15,204	15,008	15,020	15,600	15,596	15,600	14,680	16,784	332,748		
Generator 2 Power Output (kWhr)		15,584	15,588	15,840	15,588	15,880	16,140	15,200	15,008	15,128	15,584	15,580	15,580	15,580	16,248	477,168		
Generator 3 Power Output (kWhr)		15,552	15,552	15,552	15,552	4,736	-	-	232	188	-	-	228	9,112	16,764	346,508		
Generator 4 Power Output (kWhr)		-	-	-	-	10,672	15,524	15,152	14,304	14,768	15,536	15,536	14,248	6,424	-	257,884		
Gross Power Output (kWhr)		46,961	46,953	47,208	46,962	47,007	47,318	45,555	44,603	45,205	46,837	46,827	45,850	45,786	49,870	1,417,673		
Net Power Output (kWhr)		45,104	45,136	45,480	45,256	45,112	45,384	43,664	42,720	43,360	44,920	44,880	43,728	43,952	47,992	1,362,672		
Power Sold as metered by NStar, (t)		44,980	45,009	45,408	45,171	45,003	45,274	43,592	42,657	43,269	44,811	44,783	43,624	43,849	47,834	1,359,190	11,726	
Offgrid RECs (kWhr)		1,855	1,819	1,726	1,707	1,895	1,934	1,890	1,885	1,845	1,917	1,947	2,122	1,834	1,878	55,002	12,871	
Calculated Performance Results																		23%
Daily																	of total in-plant power	
Power output (kW average whe																		
Generator 1		650	650	650	650	650	650	634	625	626	650	650	650	667	699			
Generator 2		649	650	660	650	662	673	633	625	630	649	649	649	649	677			
Generator 3		648	648	648	648	677	-	-	77	188	-	-	114	651	699			
Generator 4		-	-	-	-	628	647	631	596	615	647	647	648	584	-			
Power output (kW average ove																		
Facility Gross		1,957	1,956	1,967	1,957	1,959	1,972	1,898	1,858	1,884	1,952	1,951	1,910	1,908	2,078			
Facility Net		1,879	1,881	1,895	1,886	1,880	1,891	1,819	1,780	1,807	1,872	1,870	1,822	1,831	2,000			
In-plant load		77	76	72	71	79	81	79	78	77	80	81	88	76	78			
Daily availability factor																		
Facility		75%	75%	75%	75%	75%	75%	75%	78%	76%	75%	75%	75%	74%	75%			
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%			
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 3		100%	100%	100%	100%	29%	0%	0%	13%	4%	0%	0%	8%	58%	100%			
Engine 4		0%	0%	0%	0%	71%	100%	100%	100%	100%	100%	100%	92%	46%	0%			
Daily capacity factor																		
Facility		59%	59%	60%	59%	59%	60%	58%	56%	57%	59%	59%	58%	58%	63%			
Engine 1		79%	79%	79%	79%	79%	79%	77%	76%	76%	79%	79%	79%	81%	85%			
Engine 2		79%	79%	80%	79%	80%	82%	77%	76%	76%	79%	79%	79%	79%	82%			
Engine 3		79%	79%	79%	79%	82%	0%	0%	9%	23%	0%	0%	14%	79%	85%			
Engine 4		0%	0%	0%	0%	76%	78%	77%	72%	75%	78%	78%	79%	71%	0%			
Cumulative by engine																		
Engine operating run hours in t																		
Max Cumulative Available,		408	432	456	480	504	528	552	576	600	624	648	672	696	720			
Engine 1		204	228	252	276	300	324	348	372	396	420	444	468	490	514			
Engine 2		408	432	456	480	504	528	552	576	600	624	648	672	696	720			
Engine 3		408	432	456	480	487	487	487	490	491	491	491	493	507	531			
Engine 4		206	206	206	206	223	247	271	295	319	343	367	389	400	400			
Engine operating run hours tota																		
Engine 1		117,912	117,936	117,960	117,984	118,008	118,032	118,056	118,080	118,104	118,128	118,152	118,176	118,198	118,222			
Engine 2		107,804	107,828	107,852	107,876	107,900	107,924	107,948	107,972	107,996	108,020	108,044	108,068	108,092	108,116			
Engine 3		117,689	117,713	117,737	117,761	117,785	117,809	117,833	117,857	117,881	117,905	117,929	117,953	117,977	118,001			
Engine 4		116,268	116,268	116,268	116,268	116,285	116,309	116,333	116,357	116,381	116,405	116,429	116,453	116,477	116,501			
Cumulative availability, %																		
Engine 1		50%	53%	55%	58%	60%	61%	63%	65%	66%	67%	69%	70%	70%	71%			
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 3		100%	100%	100%	100%	97%	92%	88%	85%	82%	79%	76%	73%	73%	74%			
Engine 4		50%	48%	45%	43%	44%	47%	49%	51%	53%	55%	57%	58%	57%	56%			
Engine cumulative gross output																		
Max cumulative capacity or		14,025	14,850	15,675	16,500	17,325	18,150	18,975	19,800	20,625	21,450	22,275	23,100	23,925	24,750			
Engine 1		5,724	6,374	7,024	7,674	8,324	8,973	9,607	10,232	10,858	11,508	12,158	12,808	13,475	14,174			
Engine 2		11,426	12,076	12,736	13,385	14,047	14,719	15,353	15,978	16,608	17,258	17,907	18,556	19,205	19,882			
Engine 3		11,191	11,839	12,487	13,135	13,812	13,812	13,812	13,889	14,077	14,077	14,077	14,191	14,842	15,541			
Engine 4		5,919	5,919	5,919	5,919	6,547	7,194	7,825	8,421	9,037	9,684	10,331	10,979	11,563	11,563			
Cumulative capacity factor, %																		
Engine 1		41%	43%	45%	47%	48%	49%	51%	52%	53%	54%	55%	55%	56%	57%			
Engine 2		81%	81%	81%	81%	81%	81%	81%	81%	81%	80%	80%	80%	80%	80%			
Engine 3		80%	80%	80%	80%	80%	76%	73%	70%	68%	66%	63%	61%	62%	63%			
Engine 4		42%	40%	38%	36%	38%	40%	41%	43%	44%	45%	46%	48%	48%	47%			

	Thursday 6/17/2021	Friday 6/18/2021	Saturday 6/19/2021	Sunday 6/20/2021	Monday 6/21/2021	Tuesday 6/22/2021	Wednesday 6/23/2021	Thursday 6/24/2021	Friday 6/25/2021	Saturday 6/26/2021	Sunday 6/27/2021	Monday 6/28/2021	Tuesday 6/29/2021	Wednesday 6/30/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																	
Max cumulative available engi	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880			
Actual cumulative engine run t	1,226	1,298	1,370	1,442	1,514	1,586	1,658	1,730	1,806	1,878	1,950	2,022	2,093	2,165			
Cumulative Availability, %	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%	75.2%	75.3%	75.2%	75.2%	75.2%	75.2%	75.2%			
Max cumulative gross output, k	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000			
Actual cumulative gross output,	811,692	858,645	905,853	952,815	999,822	1,047,140	1,092,695	1,137,298	1,182,503	1,229,340	1,276,167	1,322,017	1,367,803	1,417,673			
Cumulative Capacity Factor	60.3%	60.2%	60.2%	60.2%	60.1%	60.1%	60.0%	59.8%	59.7%	59.7%	59.7%	59.6%	59.6%	59.7%			
Cumulative fuel input, MMBtu t	10,273	10,882	11,486	12,096	12,697	13,295	13,880	14,471	15,071	15,680	16,298	16,908	17,524	18,171			
Cumulative gross output, kWhr	811,692	858,645	905,853	952,815	999,822	1,047,140	1,092,695	1,137,298	1,182,503	1,229,340	1,276,167	1,322,017	1,367,803	1,417,673			
Heat Rate																	
Daily heat rate, Btu/kWe gross	11,578	11,672	11,531	11,695	11,494	11,392	11,552	11,920	11,956	11,711	11,869	11,982	12,105	11,681			
Daily heat rate, Btu/kWe gross	12,862	12,966	12,809	12,991	12,768	12,655	12,833	13,241	13,282	13,009	13,185	13,311	13,447	12,976			
Cumulative heat rate, Btu/kWe	11,393	11,408	11,415	11,428	11,431	11,430	11,435	11,454	11,473	11,482	11,496	11,513	11,533	11,538			
Cumulative heat rate, Btu/kWe	12,656	12,673	12,680	12,695	12,699	12,697	12,703	12,724	12,745	12,755	12,771	12,790	12,812	12,817			
Cumulative by Facility starting C																	
Max cumulative available engi	16,124	16,220	16,316	16,412	16,508	16,604	16,700	16,796	16,892	16,988	17,084	17,180	17,276	17,372			
Actual cumulative engine run t	11,976	12,048	12,120	12,192	12,264	12,336	12,408	12,483	12,556	12,628	12,700	12,772	12,843	12,915			
Cumulative Availability, %	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%			
Max cumulative gross output, k	13,305,600	13,384,800	13,464,000	13,543,200	13,622,400	13,701,600	13,780,800	13,860,000	13,939,200	14,018,400	14,097,600	14,176,800	14,256,000	14,335,200			
Actual cumulative gross output,	8,368,713	8,415,666	8,462,874	8,509,836	8,556,843	8,604,161	8,649,716	8,694,319	8,739,524	8,786,361	8,833,188	8,879,038	8,924,824	8,974,694			
Cumulative Capacity Factor	62.9%	62.9%	62.9%	62.8%	62.8%	62.8%	62.8%	62.7%	62.7%	62.7%	62.7%	62.6%	62.6%	62.6%			
Cumulative fuel input, MMBtu t	108,620	109,229	109,834	110,444	111,044	111,643	112,228	112,818	113,419	114,028	114,645	115,256	115,871	116,518			
Cumulative gross output, kWhr	8,368,713	8,415,666	8,462,874	8,509,836	8,556,843	8,604,161	8,649,716	8,694,319	8,739,524	8,786,361	8,833,188	8,879,038	8,924,824	8,974,694			
Cumulative heat rate, Btu/kWe	11,684	11,684	11,683	11,683	11,682	11,680	11,680	11,681	11,682	11,683	11,684	11,685	11,687	11,687			
Cumulative heat rate, Btu/kWe	12,979	12,979	12,978	12,978	12,977	12,975	12,975	12,976	12,978	12,978	12,979	12,981	12,983	12,983			
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve insp																	
Precipitation																	
NSTAR Power Reports	Thursday 6/17/2021	Friday 6/18/2021	Saturday 6/19/2021	Sunday 6/20/2021	Monday 6/21/2021	Tuesday 6/22/2021	Wednesday 6/23/2021	Thursday 6/24/2021	Friday 6/25/2021	Saturday 6/26/2021	Sunday 6/27/2021	Monday 6/28/2021	Tuesday 6/29/2021	Wednesday 6/30/2021	TOTAL		
Hour																	
1	1,875	1,874	1,879	1,887	1,884	1,885	1,873	1,796	1,802	1,868	1,863	1,867	1,868	1,874			
2	1,878	1,875	1,880	1,887	1,885	1,885	1,873	1,797	1,803	1,870	1,865	1,864	1,867	1,875			
3	1,875	1,875	1,880	1,887	1,885	1,885	1,873	1,796	1,803	1,869	1,864	1,865	1,864	1,874			
4	1,875	1,876	1,880	1,886	1,884	1,884	1,872	1,798	1,803	1,867	1,864	1,868	1,858	1,875			
5	1,875	1,877	1,880	1,887	1,885	1,885	1,873	1,798	1,802	1,868	1,865	1,866	1,858	1,874			
6	1,876	1,877	1,908	1,886	1,885	1,885	1,872	1,797	1,803	1,870	1,863	1,866	1,866	1,875			
7	1,877	1,874	1,953	1,887	1,885	1,885	1,871	1,798	1,803	1,868	1,865	1,867	1,873	1,875			
8	1,877	1,873	1,941	1,885	1,758	1,874	1,860	1,794	1,831	1,870	1,865	1,865	1,861	1,970			
9	1,871	1,871	1,879	1,885	1,859	1,860	1,791	1,788	1,865	1,866	1,866	1,855	1,853	2,007			
10	1,866	1,872	1,881	1,883	1,857	1,852	1,788	1,785	1,884	1,867	1,866	1,852	1,850	2,006			
11	1,865	1,873	1,907	1,879	1,855	1,850	1,789	1,783	1,089	1,866	1,868	1,850	1,844	2,006			
12	1,866	1,873	1,937	1,878	1,854	1,843	1,789	1,783	1,842	1,867	1,867	1,850	1,638	2,005			
13	1,867	1,871	1,880	1,878	1,844	1,844	1,787	1,779	1,783	1,866	1,867	1,870	1,711	2,044			
14	1,868	1,873	1,879	1,878	1,842	1,863	1,787	1,758	1,793	1,868	1,867	1,442	1,810	2,112			
15	1,874	1,872	1,881	1,878	1,851	1,921	1,785	1,440	1,748	1,868	1,864	1,277	1,349	2,114			
16	1,872	1,871	1,879	1,878	1,861	1,858	1,784	1,727	1,867	1,868	1,867	1,775	1,893	2,107			
17	1,879	1,879	1,882	1,877	1,871	1,856	1,786	1,808	1,870	1,866	1,868	1,860	1,872	2,111			
18	1,881	1,881	1,885	1,878	1,936	1,859	1,791	1,806	1,868	1,867	1,870	1,868	1,873	2,111			
19	1,881	1,879	1,887	1,879	1,944	1,867	1,787	1,806	1,867	1,867	1,868	1,863	1,874	2,084			
20	1,878	1,879	1,887	1,879	1,943	1,871	1,789	1,805	1,866	1,866	1,868	1,874	1,874	2,064			
21	1,878	1,877	1,886	1,880	1,919	1,874	1,790	1,805	1,868	1,864	1,867	1,867	1,873	1,987			
22	1,876	1,877	1,886	1,882	1,872	1,874	1,790	1,804	1,871	1,866	1,865	1,868	1,873	1,969			
23	1,876	1,880	1,885	1,883	1,872	1,873	1,796	1,803	1,869	1,863	1,867	1,867	1,873	1,998			
24	1,874	1,880	1,886	1,884	1,872	1,873	1,796	1,803	1,869	1,866	1,864	1,866	1,874	2,017			
TOTAL	44,980	45,009	45,408	45,171	45,003	45,274	43,592	42,657	43,269	44,811	44,783	43,624	43,849	47,834			
Cumulative Output Sold, kv	778,906	823,915	869,323	914,494	959,497	1,004,771	1,048,363	1,091,020	1,134,289	1,179,100	1,223,883	1,267,507	1,311,356	1,359,190			
Transformer and line efficienc	99.7%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.8%	99.8%	99.8%	99.8%	99.8%	99.7%			
Hourly average	1,874	1,875	1,892	1,882	1,875	1,886	1,816	1,777	1,803	1,867	1,866	1,818	1,827	1,993	1,888		

July 2021																	
		Thursday 7/1/2021	Friday 7/2/2021	Saturday 7/3/2021	Sunday 7/4/2021	Monday 7/5/2021	Tuesday 7/6/2021	Wednesday 7/7/2021	Thursday 7/8/2021	Friday 7/9/2021	Saturday 7/10/2021	Sunday 7/11/2021	Monday 7/12/2021	Tuesday 7/13/2021	Wednesday 7/14/2021	Thursday 7/15/2021	Friday 7/16/2021
LFG and Biogas Flow to the Engines (KSCF)		1,155	1,178	1,155	1,195	1,129	1,157	1,185	1,152	1,167	1,167	1,157	1,155	425		541	1,213
LFG and Biogas Flow to the Engines (MMBTU HHV)		618	631	618	631	597	618	627	605	622	620	607	610	240		300	637
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	347	567	291	-
LFG and BiogasFlow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	196	325	162	-
LFG and Biogas Total Flow (KSCF)		1,155	1,178	1,155	1,195	1,129	1,157	1,185	1,152	1,167	1,167	1,157	1,155	772	567	832	1,213
LFG and Biogas Total Flow (MMBTU HHV)		618	631	618	631	597	618	627	605	622	620	607	610	436	325	462	637
Average Methane Content (%)		52.8	52.9	52.8	52.2	52.3	52.8	52.3	51.9	52.6	52.5	51.8	52.2	55.7	56.6	54.9	51.9
Engine 1 Hours		24	24	24	24	24	24	24	24	24	24	24	24	8	-	12	24
Engine 2 Hours		24	24	24	24	24	24	24	24	24	24	24	24	8	-	12	24
Engine 3 Hours		24	24	24	24	22	24	24	24	24	24	24	24	8	-	12	24
Engine 4 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 1 Power Output (kWhr)		16,784	17,220	16,784	16,776	17,020	16,776	16,776	16,772	17,428	16,780	16,776	16,776	5,500	-	8,740	18,484
Generator 2 Power Output (kWhr)		16,772	16,772	16,772	16,768	16,032	16,580	16,404	15,852	16,480	15,852	15,588	15,688	5,108	-	7,304	16,200
Generator 3 Power Output (kWhr)		16,864	17,300	16,864	16,740	14,392	15,868	15,560	15,552	15,712	15,556	15,556	15,552	5,096	-	8,460	17,188
Generator 4 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Power Output (kWhr)		50,488	51,366	50,488	50,363	47,505	49,283	48,791	47,958	49,668	48,266	47,993	48,069	15,704	-	24,557	51,947
Net Power Output (kWhr)		48,603	49,496	48,672	48,520	45,728	47,416	46,904	46,160	47,856	46,544	46,272	46,240	15,160	-	23,598	49,960
Power Sold as metered by NStar, (kWhr)		48,436	49,369	48,574	48,430	45,644	47,287	46,778	46,039	47,740	46,428	46,175	46,130	15,125	-	23,559	49,827
Offgrid RECs (kWhr)		1,885	1,871	1,817	1,842	1,775	1,867	1,884	1,795	1,811	1,723	1,722	1,827	544	-	959	1,987
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		699	718	699	699	709	699	699	699	726	699	699	699	688	-	728	770
Generator 2		699	699	699	699	668	691	684	649	687	661	650	654	639	-	609	675
Generator 3		703	721	703	698	654	661	648	648	655	648	648	648	637	-	705	716
Generator 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Power output (kW average over 24-hrs)																	
Facility Gross		2,104	2,140	2,104	2,098	1,979	2,053	2,033	1,998	2,070	2,011	2,000	2,003	654		1,023	2,164
Facility Net		2,025	2,062	2,028	2,022	1,905	1,976	1,954	1,923	1,994	1,939	1,928	1,927	632		983	2,082
In-plant load		79	78	76	77	74	78	79	75	76	72	72	76	23		40	83
Daily availability factor																	
Facility		75%	75%	75%	75%	73%	75%	75%	75%	75%	75%	75%	75%	25%	0%	38%	75%
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	33%	0%	50%	100%
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	33%	0%	50%	100%
Engine 3		100%	100%	100%	100%	92%	100%	100%	100%	100%	100%	100%	100%	33%	0%	50%	100%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Daily capacity factor																	
Facility		64%	65%	64%	64%	60%	62%	62%	61%	63%	61%	61%	61%	20%	0%	31%	66%
Engine 1		85%	87%	85%	85%	86%	85%	85%	85%	88%	85%	85%	85%	83%	0%	88%	93%
Engine 2		85%	85%	85%	85%	81%	84%	83%	79%	83%	80%	79%	79%	77%	0%	74%	82%
Engine 3		85%	87%	85%	85%	79%	80%	79%	79%	79%	79%	79%	79%	77%	0%	85%	87%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cumulative by engine																	
Engine operating run hours in the month																	
Max Cumulative Available, hours		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 1		24	48	72	96	120	144	168	192	216	240	264	288	296	296	308	332
Engine 2		24	48	72	96	120	144	168	192	216	240	264	288	296	296	308	332
Engine 3		24	48	72	96	118	142	166	190	214	238	262	286	294	294	306	330
Engine 4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine operating run hours total from 0 hours																	
Engine 1		118,222	118,246	118,270	118,294	118,318	118,342	118,366	118,390	118,414	118,438	118,462	118,486	118,510	118,518	118,530	118,554
Engine 2		108,116	108,140	108,164	108,188	108,212	108,236	108,260	108,284	108,308	108,332	108,356	108,380	108,410	108,412	108,424	108,448
Engine 3		117,813	117,837	117,861	117,885	117,909	117,931	117,955	117,979	118,003	118,027	118,051	118,075	118,099	118,107	118,119	118,143
Engine 4		116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462
Cumulative availability, %		July 1, 2021 @ 00:00 hours															
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	95%	88%	86%	86%
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	95%	88%	86%	86%
Engine 3		100%	100%	100%	100%	98%	99%	99%	99%	99%	99%	99%	99%	94%	88%	85%	86%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine cumulative gross output, kWhr																	
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200
Engine 1		699	1,417	2,116	2,815	3,524	4,223	4,922	5,621	6,347	7,047	7,746	8,445	9,132	9,832	10,531	11,230
Engine 2		699	1,398	2,097	2,795	3,463	4,154	4,838	5,487	6,174	6,834	7,484	8,137	8,776	9,416	10,059	
Engine 3		703	1,424	2,126	2,824	3,478	4,139	4,787	5,435	6,090	6,738	7,386	8,034	8,671	9,316	9,970	
Engine 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cumulative capacity factor, %																	
Engine 1		85%	86%	86%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	79%	80%	81%
Engine 2		85%	85%	85%	85%	83%	84%	83%	83%	83%	82%	82%	82%	76%	76%	76%	76%
Engine 3		85%	86%	86%	86%	84%	84%	83%	82%	82%	82%	81%	81%	75%	76%	76%	76%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

		Thursday 7/1/2021	Friday 7/2/2021	Saturday 7/3/2021	Sunday 7/4/2021	Monday 7/5/2021	Tuesday 7/6/2021	Wednesday 7/7/2021	Thursday 7/8/2021	Friday 7/9/2021	Saturday 7/10/2021	Sunday 7/11/2021	Monday 7/12/2021	Tuesday 7/13/2021	Wednesday 7/14/2021	Thursday 7/15/2021	Friday 7/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		72	144	216	288	358	430	502	574	646	718	790	862	886	886	922	994
Cumulative Availability, %		75.0%	75.0%	75.0%	75.0%	74.6%	74.7%	74.7%	74.7%	74.8%	74.8%	74.8%	74.8%	71.0%	65.9%	64.0%	64.7%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		50,488	101,854	152,342	202,705	250,210	299,493	348,284	396,242	445,910	494,176	542,169	590,238	605,942	605,942	630,499	682,446
Cumulative Capacity Factor		63.7%	64.3%	64.1%	64.0%	63.2%	63.0%	62.8%	62.5%	62.6%	62.4%	62.2%	62.1%	58.9%	54.6%	53.1%	53.9%
Cumulative fuel input, MMBtu HHV		618	1,249	1,866	2,497	3,094	3,712	4,339	4,944	5,566	6,185	6,792	7,402	7,642	7,642	7,942	8,580
Cumulative gross output, kWhr		50,488	101,854	152,342	202,705	250,210	299,493	348,284	396,242	445,910	494,176	542,169	590,238	605,942	605,942	630,499	682,446
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,010	11,058	11,010	11,277	11,313	11,296	11,568	11,354	11,264	11,556	11,384	11,427	13,733		11,015	11,044
Daily heat rate, Btu/kWe gross HHV		12,231	12,284	12,231	12,527	12,567	12,548	12,851	12,613	12,513	12,837	12,646	12,694	15,256		12,237	12,268
Cumulative heat rate, Btu/kWe gross LHV		11,010	11,034	11,026	11,089	11,131	11,158	11,216	11,232	11,236	11,267	11,278	11,290	11,353	11,353	11,340	11,317
Cumulative heat rate, Btu/kWe gross HHV		12,231	12,258	12,249	12,318	12,365	12,395	12,459	12,478	12,482	12,516	12,528	12,541	12,612	12,612	12,597	12,572
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		17,468	17,564	17,660	17,756	17,852	17,948	18,044	18,140	18,236	18,332	18,428	18,524	18,620	18,716	18,812	18,908
Actual cumulative engine run hours		12,987	13,059	13,131	13,203	13,273	13,345	13,417	13,489	13,561	13,633	13,705	13,777	13,801	13,801	13,837	13,909
Cumulative Availability, %		74.3%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%	74.1%	73.7%	73.6%	73.6%
Max cumulative gross output, kWhr		14,414,400	14,493,600	14,572,800	14,652,000	14,731,200	14,810,400	14,889,600	14,968,800	15,048,000	15,127,200	15,206,400	15,285,600	15,364,800	15,444,000	15,523,200	15,602,400
Actual cumulative gross output, kWhr		9,025,182	9,076,548	9,127,036	9,177,399	9,224,904	9,274,187	9,322,978	9,370,936	9,420,604	9,468,870	9,516,863	9,564,932	9,580,636	9,580,636	9,605,193	9,657,140
Cumulative Capacity Factor		62.6%	62.6%	62.6%	62.6%	62.6%	62.6%	62.6%	62.6%	62.6%	62.6%	62.6%	62.6%	62.4%	62.0%	61.9%	61.9%
Cumulative fuel input, MMBtu HHV		117,136	117,767	118,384	119,015	119,612	120,231	120,858	121,463	122,084	122,704	123,311	123,921	124,160	124,160	124,461	125,098
Cumulative gross output, kWhr		9,025,182	9,076,548	9,127,036	9,177,399	9,224,904	9,274,187	9,322,978	9,370,936	9,420,604	9,468,870	9,516,863	9,564,932	9,580,636	9,580,636	9,605,193	9,657,140
Cumulative heat rate, Btu/kWe gross LHV		11,683	11,680	11,676	11,674	11,672	11,670	11,670	11,668	11,666	11,665	11,664	11,663	11,666	11,666	11,664	11,661
Cumulative heat rate, Btu/kWe gross HHV		12,979	12,975	12,971	12,968	12,966	12,964	12,963	12,962	12,959	12,959	12,957	12,956	12,960	12,960	12,958	12,954
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports		Thursday 7/1/2021	Friday 7/2/2021	Saturday 7/3/2021	Sunday 7/4/2021	Monday 7/5/2021	Tuesday 7/6/2021	Wednesday 7/7/2021	Thursday 7/8/2021	Friday 7/9/2021	Saturday 7/10/2021	Sunday 7/11/2021	Monday 7/12/2021	Tuesday 7/13/2021	Wednesday 7/14/2021	Thursday 7/15/2021	Friday 7/16/2021
Date																	
Hour																	
1		2,018	2,117	2,019	2,017	2,014	1,971	1,969	1,904	1,922	1,923	1,925	1,923	1,923	-	-	2,141
2		2,064	2,118	2,018	2,018	2,015	1,969	1,970	1,917	1,956	1,934	1,925	1,923	1,923	-	-	2,140
3		2,105	2,118	2,019	2,017	1,386	1,970	1,968	1,922	1,970	1,996	1,925	1,924	1,923	-	-	2,139
4		2,065	2,118	2,019	2,017	1,388	1,968	1,970	1,923	1,970	1,949	1,925	1,924	1,923	-	-	2,139
5		2,065	2,119	2,020	2,018	1,703	1,970	1,968	1,922	1,970	1,924	1,925	1,924	1,924	-	-	2,138
6		2,016	2,115	2,019	2,017	2,037	1,970	1,970	1,922	1,970	1,924	1,926	1,924	1,924	-	-	2,137
7		2,018	2,022	2,020	2,018	2,061	1,972	1,965	1,923	1,970	1,956	1,926	1,924	1,924	-	-	2,137
8		2,017	2,036	2,020	2,019	2,013	1,967	1,962	1,919	1,801	1,967	1,925	1,921	1,661	-	-	2,134
9		2,007	2,106	2,020	2,019	1,973	1,966	1,957	1,914	1,895	1,924	1,923	1,939	-	-	-	2,061
10		2,002	2,065	2,022	2,021	1,969	1,957	1,960	1,911	2,053	1,924	1,923	1,974	-	-	-	2,054
11		1,837	2,044	2,013	2,018	1,965	1,954	1,960	1,911	2,055	1,926	1,923	1,907	-	-	-	2,050
12		1,846	2,006	2,018	2,020	1,962	1,960	1,960	1,911	2,057	1,975	1,923	1,907	-	-	-	2,044
13		2,093	2,009	2,020	2,018	1,959	1,958	1,956	1,911	2,063	1,945	1,923	1,909	-	-	600	2,042
14		2,001	2,014	2,020	2,021	1,923	1,994	1,951	1,913	2,063	1,922	1,922	1,908	-	-	1,762	2,041
15		2,008	2,014	2,020	2,020	1,925	2,005	1,956	1,915	2,063	1,923	1,923	1,903	-	-	1,984	2,043
16		2,012	2,028	2,020	2,019	1,924	2,007	1,959	1,918	2,082	1,923	1,923	1,914	-	-	2,077	2,048
17		2,022	2,065	2,020	2,020	1,924	2,012	1,941	1,922	2,092	1,924	1,923	1,921	-	-	2,156	2,055
18		2,022	2,065	2,020	2,020	1,925	2,013	1,918	1,923	2,091	1,924	1,923	1,923	-	-	2,138	2,061
19		2,022	2,067	2,020	2,017	1,923	2,014	1,920	1,923	1,981	1,924	1,924	1,923	-	-	2,139	2,063
20		2,022	2,050	2,065	2,017	1,924	1,960	1,920	1,923	1,972	1,924	1,924	1,923	-	-	2,140	2,063
21		2,022	2,018	2,066	2,014	1,921	1,922	1,921	1,923	1,972	1,924	1,924	1,923	-	-	2,141	2,065
22		2,022	2,018	2,042	2,015	1,922	1,921	1,920	1,923	1,926	1,925	1,924	1,923	-	-	2,141	2,048
23		2,022	2,018	2,017	2,015	1,922	1,921	1,921	1,923	1,923	1,924	1,924	1,923	-	-	2,141	1,992
24		2,108	2,019	2,017	2,015	1,966	1,966	1,916	1,923	1,923	1,924	1,924	1,923	-	-	2,140	1,992
TOTAL		48,436	49,369	48,574	48,430	45,644	47,287	46,778	46,039	47,740	46,428	46,175	46,130	15,125	-	23,559	49,827
Cumulative Output Sold, kWhr		48,436	97,805	146,379	194,809	240,453	287,740	334,518	380,557	428,297	474,725	520,900	567,030	582,155	582,155	605,714	655,541
Transformer and line efficiency		99.7%	99.7%	99.8%	99.8%	99.8%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	#DIV/0!	99.8%	99.7%
Hourly average		2,018	2,057	2,024	2,018	1,902	1,970	1,949	1,918	1,989	1,935	1,924	1,922	630	-	982	2,076

Thursday	Friday	Saturday			
7/29/2021	7/30/2021	7/31/2021	TOTAL	Biogas	LFG
1,155	1,184	1,164	33,662	289	33,374
610	623	607	17,768	75	17,693
-	-	-	1,206	0.4%	100%
-	-	-	683		
1,155	1,184	1,164	34,868		
610	623	607	18,450		
52.2	52.0	51.5	52.3		
24	24	24	691		
24	24	24	691		
24	24	24	690		
-	-	-	-		
16,276	16,776	15,600	485,012		
15,748	16,064	16,604	462,640		
15,924	16,712	15,556	457,784		
-	-	-	-		
47,984	49,584	47,801	1,406,890		
46,136	47,680	46,008	1,353,217		
46,031	47,568	45,910	1,349,985	CRMBCB inplant	
1,848	1,904	1,793	53,660	10,871	
				20%	
				of total in-plant	
				power	
678	699	650			
656	669	692			
664	696	648			
-	-	-			
1,999	2,066	1,992			
1,922	1,987	1,917			
77	79	75			
75%	75%	75%			
100%	100%	100%			
100%	100%	100%			
100%	100%	100%			
0%	0%	0%			
61%	63%	60%			
82%	85%	79%			
80%	81%	84%			
80%	84%	79%			
0%	0%	0%			
696	720	744			
643	667	691			
643	667	691			
642	666	690			
-	-	-			
118,865	118,889	118,913			
108,759	108,783	108,807			
118,455	118,479	118,503			
116,462	116,462	116,462			
92%	93%	93%			
92%	93%	93%			
92%	93%	93%			
0%	0%	0%			
23,925	24,750	25,575			
19,710	20,409	21,059			
18,674	19,343	20,035			
18,562	19,258	19,906			
-	-	-			
82%	82%	82%			
78%	78%	78%			
78%	78%	78%			
0%	0%	0%			

	Saturday 7/17/2021	Sunday 7/18/2021	Monday 7/19/2021	Tuesday 7/20/2021	Wednesday 7/21/2021	Thursday 7/22/2021	Friday 7/23/2021	Saturday 7/24/2021	Sunday 7/25/2021	Monday 7/26/2021	Tuesday 7/27/2021	Wednesday 7/28/2021	Thursday 7/29/2021	Friday 7/30/2021	Saturday 7/31/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine run time, hours	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880	2,976			
Actual cumulative engine run time, hours	1,066	1,138	1,210	1,282	1,353	1,425	1,497	1,569	1,641	1,713	1,785	1,856	1,928	2,000	2,072			
Cumulative Availability, %	65.3%	65.9%	66.3%	66.8%	67.1%	67.5%	67.8%	68.1%	68.4%	68.6%	68.9%	69.0%	69.3%	69.4%	69.6%			
Max cumulative gross output, kWh	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000	2,455,200			
Actual cumulative gross output, kWh	732,462	781,607	829,965	878,186	925,583	973,527	1,021,508	1,069,512	1,118,118	1,166,282	1,214,225	1,261,521	1,309,505	1,359,089	1,406,890			
Cumulative Capacity Factor	54.4%	54.8%	55.2%	55.4%	55.7%	55.9%	56.1%	56.3%	56.5%	56.6%	56.8%	56.9%	57.0%	57.2%	57.3%			
Cumulative fuel input, MMBtu	9,204	9,823	10,432	11,043	11,648	12,261	12,873	13,482	14,093	14,703	15,319	15,928	16,538	17,161	17,768			
Cumulative gross output, kWh	732,462	781,607	829,965	878,186	925,583	973,527	1,021,508	1,069,512	1,118,118	1,166,282	1,214,225	1,261,521	1,309,505	1,359,089	1,406,890			
Heat Rate																		
Daily heat rate, Btu/kWe gross	11,233	11,337	11,350	11,395	11,485	11,519	11,478	11,432	11,305	11,397	11,576	11,586	11,449	11,307	11,242			
Daily heat rate, Btu/kWe net	12,478	12,593	12,608	12,658	12,758	12,796	12,751	12,699	12,558	12,661	12,859	12,870	12,719	12,561	12,690			
Cumulative heat rate, Btu/kWe gross	11,312	11,313	11,315	11,320	11,328	11,338	11,344	11,348	11,346	11,348	11,357	11,366	11,369	11,367	11,369			
Cumulative heat rate, Btu/kWe net	12,566	12,567	12,570	12,575	12,584	12,594	12,602	12,606	12,604	12,606	12,616	12,626	12,629	12,627	12,629			
Cumulative by Facility starting C																		
Max cumulative available engine run time, hours	19,004	19,100	19,196	19,292	19,388	19,484	19,580	19,676	19,772	19,868	19,964	20,060	20,156	20,252	20,348			
Actual cumulative engine run time, hours	13,981	14,053	14,125	14,197	14,268	14,340	14,412	14,484	14,556	14,628	14,700	14,771	14,843	14,915	14,987			
Cumulative Availability, %	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.7%			
Max cumulative gross output, kWh	15,681,600	15,760,800	15,840,000	15,919,200	15,998,400	16,077,600	16,156,800	16,236,000	16,315,200	16,394,400	16,473,600	16,552,800	16,632,000	16,711,200	16,790,400			
Actual cumulative gross output, kWh	9,707,156	9,756,301	9,804,659	9,852,880	9,900,277	9,948,221	9,996,202	10,044,206	10,092,812	10,140,976	10,188,919	10,236,215	10,284,199	10,333,783	10,381,584			
Cumulative Capacity Factor	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.8%	61.8%	61.8%	61.8%	61.8%			
Cumulative fuel input, MMBtu	125,722	126,341	126,951	127,561	128,166	128,779	129,391	130,001	130,611	131,221	131,837	132,446	133,056	133,679	134,286			
Cumulative gross output, kWh	9,707,156	9,756,301	9,804,659	9,852,880	9,900,277	9,948,221	9,996,202	10,044,206	10,092,812	10,140,976	10,188,919	10,236,215	10,284,199	10,333,783	10,381,584			
Cumulative heat rate, Btu/kWe gross	11,659	11,657	11,656	11,654	11,654	11,653	11,652	11,651	11,649	11,648	11,648	11,648	11,647	11,645	11,644			
Cumulative heat rate, Btu/kWe net	12,951	12,950	12,948	12,947	12,946	12,945	12,944	12,943	12,941	12,940	12,939	12,939	12,938	12,936	12,935			
Service																		
Engine 1																		
Engine 2																		
Engine 3																		
Engine 4																		
Oil - oil and filter change																		
Service - plugs, air filter, valve insp																		
Precipitation																		
NSTAR Power Reports	Saturday 7/17/2021	Sunday 7/18/2021	Monday 7/19/2021	Tuesday 7/20/2021	Wednesday 7/21/2021	Thursday 7/22/2021	Friday 7/23/2021	Saturday 7/24/2021	Sunday 7/25/2021	Monday 7/26/2021	Tuesday 7/27/2021	Wednesday 7/28/2021	Thursday 7/29/2021	Friday 7/30/2021	Saturday 7/31/2021	TOTAL		
Date																		
Hour																		
1	1,993	1,935	1,923	1,922	1,913	1,920	1,921	1,916	1,918	1,918	1,915	1,914	1,872	2,065	1,880			
2	1,993	1,993	1,923	1,922	1,915	1,920	1,921	1,918	1,917	1,917	1,915	1,914	1,873	2,066	1,874			
3	1,993	1,992	1,924	1,923	1,916	1,921	1,922	1,918	1,918	1,917	1,915	1,914	1,876	2,065	1,874			
4	1,993	1,992	1,966	1,923	1,918	1,921	1,922	1,918	1,918	1,986	1,915	1,914	1,945	2,067	1,885			
5	1,993	1,993	1,996	1,923	1,919	1,922	1,922	1,917	1,942	1,955	1,916	1,915	1,936	2,066	1,946			
6	2,019	1,993	1,995	1,923	1,919	1,923	1,922	1,918	1,989	1,917	1,916	1,916	1,873	2,067	1,946			
7	2,085	1,992	1,955	1,923	1,920	1,922	1,923	1,919	1,989	1,917	1,917	1,915	1,873	2,018	1,936			
8	2,124	1,946	1,920	1,915	1,914	1,915	1,919	1,918	1,970	1,917	1,910	1,916	1,873	1,994	1,874			
9	2,058	1,963	1,908	1,905	1,903	1,911	1,912	1,941	1,918	1,904	1,900	1,913	1,864	1,986	1,874			
10	2,028	1,973	1,908	1,904	1,901	1,912	1,912	1,985	1,917	1,900	1,900	1,906	1,865	1,984	1,872			
11	1,989	1,961	1,961	1,904	1,533	1,906	1,910	1,916	1,919	1,901	1,900	1,890	1,497	1,976	1,908			
12	1,986	1,963	1,960	1,904	1,360	1,900	1,910	1,905	1,942	1,901	1,899	1,862	2,039	1,977	1,937			
13	1,985	1,921	1,908	1,905	1,656	1,899	1,913	1,905	1,940	1,899	1,899	1,862	1,851	1,977	1,938			
14	1,985	1,921	1,909	1,904	2,072	1,902	1,912	1,904	2,008	1,900	1,898	1,864	1,544	1,976	1,937			
15	1,987	1,921	1,909	1,904	2,056	1,903	1,913	1,908	1,918	1,901	1,899	1,863	2,053	1,983	1,937			
16	1,980	1,989	1,915	1,939	2,030	1,912	1,913	1,915	1,918	1,977	1,909	1,864	2,060	1,942	1,941			
17	1,990	1,993	1,921	1,988	1,965	1,915	1,915	1,916	1,918	1,939	1,911	1,870	2,050	1,918	1,944			
18	1,990	1,993	1,923	1,989	1,966	1,917	1,916	1,917	1,955	1,913	1,913	1,870	1,994	1,920	1,945			
19	1,991	1,994	1,923	1,959	1,966	1,917	1,916	1,916	1,989	1,913	1,914	1,871	1,994	1,920	1,946			
20	1,991	1,993	1,922	1,914	1,938	1,917	1,916	1,917	1,988	1,915	1,914	1,871	1,994	1,921	1,945			
21	1,992	1,993	1,923	1,914	1,919	1,919	1,916	1,917	1,989	1,915	1,914	1,871	1,995	1,920	1,946			
22	1,992	1,940	1,922	1,916	1,919	1,921	1,916	1,917	1,945	1,915	1,914	1,870	1,995	1,920	1,876			
23	1,943	1,922	1,921	1,917	1,916	1,921	1,916	1,917	1,916	1,915	1,913	1,871	2,048	1,920	1,874			
24	1,920	1,922	1,922	1,917	1,919	1,921	1,916	1,917	1,917	1,915	1,915	1,872	2,067	1,920	1,875			
TOTAL	48,000	47,198	46,357	46,157	45,353	45,957	45,994	46,055	46,658	46,067	45,831	45,308	46,031	47,568	45,910			
Cumulative Output Sold, kWh	703,541	750,739	797,096	843,253	888,606	934,563	980,557	1,026,612	1,073,270	1,119,337	1,165,168	1,210,476	1,256,507	1,304,075	1,349,985			
Transformer and line efficiency	99.8%	99.9%	99.8%	99.8%	99.8%	99.8%	99.8%	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%			
Hourly average	2,000	1,967	1,932	1,923	1,890	1,915	1,916	1,919	1,944	1,919	1,910	1,888	1,918	1,982	1,913			

August 2021																		
		Sunday 8/1/2021	Monday 8/2/2021	Tuesday 8/3/2021	Wednesday 8/4/2021	Thursday 8/5/2021	Friday 8/6/2021	Saturday 8/7/2021	Sunday 8/8/2021	Monday 8/9/2021	Tuesday 8/10/2021	Wednesday 8/11/2021	Thursday 8/12/2021	Friday 8/13/2021	Saturday 8/14/2021	Sunday 8/15/2021	Monday 8/16/2021	
LFG and Biogas Flow to the Engines (KSCF)		1,170	785	888	1,207	1,164	1,168	1,192	1,163	1,129	1,167	1,151	1,153	1,161	1,142	1,185	1,185	
LFG and Biogas Flow to the Engines (MMBTU HHV)		611	409	462	612	606	598	613	598	580	600	593	595	595	591	604	604	
LFG and Biogas Flow to the Flare (KSCF)		-	262	157	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	136	82	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Total Flow (KSCF)		1,170	1,047	1,045	1,207	1,164	1,168	1,192	1,163	1,129	1,167	1,151	1,153	1,161	1,142	1,185	1,185	
LFG and Biogas Total Flow (MMBTU HHV)		611	545	544	612	606	598	613	598	580	600	593	595	595	591	604	604	
Average Methane Content (%)		51.6	51.4	51.5	50.1	51.5	50.6	50.8	50.8	50.8	50.8	50.9	51.0	50.6	51.2	50.3	50.3	
Engine 1 Hours		24	16	18	24	24	24	24	24	24	24	24	24	24	24	24	24	
Engine 2 Hours		24	16	18	24	24	24	24	24	24	24	24	23	24	24	24	24	
Engine 3 Hours		24	16	18	24	24	24	24	24	24	24	24	24	24	22	24	24	
Engine 4 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Generator 1 Power Output (kWhr)		15,592	10,376	12,496	16,780	16,776	16,684	16,780	16,780	16,319	16,780	16,772	16,776	16,744	16,772	16,772	16,772	
Generator 2 Power Output (kWhr)		17,176	11,564	11,700	16,432	16,080	15,976	15,604	15,872	15,294	16,104	15,936	15,596	15,592	15,596	15,588	15,588	
Generator 3 Power Output (kWhr)		15,564	10,356	12,800	15,564	16,960	16,160	17,348	15,908	15,496	15,568	16,436	16,680	15,864	14,844	16,388	16,388	
Generator 4 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gross Power Output (kWhr)		48,387	32,312	37,074	48,853	49,893	49,120	49,773	48,603	47,873	48,522	49,179	49,107	48,228	47,269	48,784	48,788	
Net Power Output (kWhr)		46,576	31,056	35,640	46,960	48,016	47,206	47,896	46,752	46,016	46,608	47,224	47,152	46,256	45,424	46,936	46,936	
Power Sold as metered by NStar, (kWhr)		46,457	31,003	35,531	46,872	47,902	47,110	47,787	46,655	46,081	46,492	47,081	47,022	46,123	45,304	46,848	46,301	
Offgrid RECs (kWhr)		1,812	1,258	1,436	1,893	1,877	1,914	1,877	1,848	1,857	1,914	1,953	1,955	1,972	1,844	1,848	1,852	
Calculated Performance Results																		
Daily																		
Power output (kW average when running)																		
Generator 1		650	649	694	699	699	695	699	699	680	699	699	699	698	699	699	699	
Generator 2		716	723	650	685	670	666	650	661	637	671	693	650	650	650	650	650	
Generator 3		649	647	711	649	707	673	723	663	646	649	685	695	661	675	683	683	
Generator 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Power output (kW average over 24-hrs)																		
Facility Gross		2,016	1,346	1,545	2,036	2,079	2,047	2,074	2,025	1,995	2,022	2,049	2,046	2,010	1,970	2,033	2,033	
Facility Net		1,941	1,294	1,485	1,957	2,001	1,967	1,996	1,948	1,917	1,942	1,968	1,965	1,927	1,893	1,956	1,956	
In-plant load		75	52	60	79	78	80	78	77	77	80	81	81	82	77	77	77	
Daily availability factor																		
Facility		75%	50%	56%	75%	75%	75%	75%	75%	75%	75%	74%	75%	75%	73%	75%	75%	
Engine 1		100%	67%	75%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Engine 2		100%	67%	75%	100%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%	100%	
Engine 3		100%	67%	75%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%	100%	
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Daily capacity factor																		
Facility		61%	41%	47%	62%	63%	62%	63%	61%	60%	61%	62%	62%	61%	60%	62%	62%	
Engine 1		79%	79%	84%	85%	85%	84%	85%	85%	82%	85%	85%	85%	85%	85%	85%	85%	
Engine 2		87%	88%	79%	83%	81%	79%	80%	81%	77%	84%	79%	79%	79%	79%	79%	79%	
Engine 3		79%	78%	86%	79%	86%	82%	88%	80%	78%	79%	83%	84%	80%	82%	83%	83%	
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cumulative by engine																		
Engine operating run hours in the month																		
Max Cumulative Available, hours		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384	
Engine 1		24	40	58	82	106	130	154	178	202	226	250	274	298	322	346	370	
Engine 2		24	40	58	82	106	130	154	178	202	226	249	273	297	321	345	369	
Engine 3		24	40	58	82	106	130	154	178	202	226	250	274	298	320	344	368	
Engine 4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Engine operating run hours total from 0 hours																		
Engine 1		118,937	118,953	118,971	118,995	119,019	119,043	119,067	119,091	119,115	119,139	119,163	119,187	119,211	119,235	119,259	119,283	
Engine 2		108,807	108,831	108,847	108,865	108,889	108,913	108,937	108,961	108,985	109,009	109,033	109,056	109,080	109,104	109,128	109,152	
Engine 3		118,503	118,527	118,543	118,561	118,585	118,609	118,633	118,657	118,681	118,705	118,729	118,753	118,777	118,801	118,825	118,849	
Engine 4		116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	116,462	
Cumulative availability, %	August 1, 2021 @ 00:00 hours																	
Engine 1		100%	83%	81%	85%	88%	90%	92%	93%	94%	94%	95%	95%	96%	96%	96%	96%	
Engine 2		100%	83%	81%	85%	88%	90%	92%	93%	94%	94%	95%	95%	96%	96%	96%	96%	
Engine 3		100%	83%	81%	85%	88%	90%	92%	93%	94%	94%	95%	95%	96%	95%	96%	96%	
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Engine cumulative gross output, kWhr																		
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200	
Engine 1		650	1,298	1,992	2,692	3,391	4,086	4,785	5,484	6,184	6,883	7,582	8,281	8,979	9,678	10,376	11,075	
Engine 2		716	1,438	2,088	2,773	3,443	4,109	4,759	5,420	6,057	6,728	7,400	8,071	8,721	9,371	10,020	10,670	
Engine 3		649	1,296	2,007	2,655	3,362	4,035	4,758	5,421	6,067	6,715	7,400	8,095	8,756	9,431	10,114	10,797	
Engine 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cumulative capacity factor, %																		
Engine 1		79%	79%	81%	82%	82%	83%	83%	83%	83%	83%	83%	83%	84%	84%	84%	84%	
Engine 2		87%	87%	84%	84%	83%	83%	82%	82%	82%	82%	82%	82%	81%	81%	81%	81%	
Engine 3		79%	79%	81%	80%	82%	82%	82%	82%	82%	81%	82%	82%	82%	82%	82%	82%	
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

		Sunday 8/1/2021	Monday 8/2/2021	Tuesday 8/3/2021	Wednesday 8/4/2021	Thursday 8/5/2021	Friday 8/6/2021	Saturday 8/7/2021	Sunday 8/8/2021	Monday 8/9/2021	Tuesday 8/10/2021	Wednesday 8/11/2021	Thursday 8/12/2021	Friday 8/13/2021	Saturday 8/14/2021	Sunday 8/15/2021	Monday 8/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		72	120	174	246	318	390	462	534	606	678	749	821	893	963	1,035	1,107
Cumulative Availability, %		75.0%	62.5%	60.4%	64.1%	66.3%	67.7%	68.8%	69.5%	70.1%	70.6%	70.9%	71.3%	71.6%	71.7%	71.9%	72.1%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		48,387	80,699	117,773	166,626	216,519	265,639	315,412	364,015	411,888	460,410	509,589	558,696	606,924	654,193	702,977	751,765
Cumulative Capacity Factor		61.1%	50.9%	49.6%	52.6%	54.7%	55.9%	56.9%	57.5%	57.8%	58.1%	58.5%	58.8%	58.9%	59.0%	59.2%	59.3%
Cumulative fuel input, MMBtu HHV		611	1,019	1,482	2,093	2,699	3,297	3,910	4,508	5,088	5,689	6,281	6,876	7,471	8,062	8,666	9,269
Cumulative gross output, kWhr		48,387	80,699	117,773	166,626	216,519	265,639	315,412	364,015	411,888	460,410	509,589	558,696	606,924	654,193	702,977	751,765
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,363	11,381	11,228	11,268	10,934	10,961	11,080	11,076	10,914	11,135	10,845	10,914	11,102	11,255	11,138	11,137
Daily heat rate, Btu/kWe gross HHV		12,623	12,643	12,472	12,517	12,146	12,176	12,308	12,304	12,124	12,370	12,048	12,125	12,333	12,503	12,373	12,372
Cumulative heat rate, Btu/kWe gross LHV		11,363	11,371	11,326	11,309	11,222	11,174	11,159	11,148	11,121	11,122	11,096	11,080	11,081	11,094	11,097	11,100
Cumulative heat rate, Btu/kWe gross HHV		12,623	12,631	12,581	12,562	12,466	12,413	12,396	12,384	12,354	12,355	12,326	12,308	12,310	12,324	12,327	12,330
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		20,444	20,540	20,636	20,732	20,828	20,924	21,020	21,116	21,212	21,308	21,404	21,500	21,596	21,692	21,788	21,884
Actual cumulative engine run hours		15,059	15,107	15,161	15,233	15,305	15,377	15,449	15,521	15,593	15,665	15,736	15,808	15,880	15,950	16,022	16,094
Cumulative Availability, %		73.7%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%
Max cumulative gross output, kWhr		16,869,600	16,948,800	17,028,000	17,107,200	17,186,400	17,265,600	17,344,800	17,424,000	17,503,200	17,582,400	17,661,600	17,740,800	17,820,000	17,899,200	17,978,400	18,057,600
Actual cumulative gross output, kWhr		10,429,971	10,462,283	10,499,357	10,548,210	10,598,103	10,647,223	10,696,996	10,745,599	10,793,472	10,841,994	10,891,173	10,940,280	10,988,508	11,035,777	11,084,561	11,133,349
Cumulative Capacity Factor		61.8%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%
Cumulative fuel input, MMBtu HHV		134,897	135,305	135,768	136,379	136,985	137,583	138,196	138,794	139,374	139,974	140,567	141,162	141,757	142,348	142,952	143,555
Cumulative gross output, kWhr		10,429,971	10,462,283	10,499,357	10,548,210	10,598,103	10,647,223	10,696,996	10,745,599	10,793,472	10,841,994	10,891,173	10,940,280	10,988,508	11,035,777	11,084,561	11,133,349
Cumulative heat rate, Btu/kWe gross LHV		11,643	11,642	11,640	11,639	11,635	11,632	11,630	11,627	11,624	11,622	11,618	11,615	11,613	11,611	11,609	11,607
Cumulative heat rate, Btu/kWe gross HHV		12,934	12,933	12,931	12,929	12,925	12,922	12,919	12,916	12,913	12,910	12,906	12,903	12,900	12,899	12,896	12,894
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports																	
Date		Sunday 8/1/2021	Monday 8/2/2021	Tuesday 8/3/2021	Wednesday 8/4/2021	Thursday 8/5/2021	Friday 8/6/2021	Saturday 8/7/2021	Sunday 8/8/2021	Monday 8/9/2021	Tuesday 8/10/2021	Wednesday 8/11/2021	Thursday 8/12/2021	Friday 8/13/2021	Saturday 8/14/2021	Sunday 8/15/2021	Monday 8/16/2021
Hour																	
1		1,905	1,945	-	1,995	1,996	1,922	1,993	1,993	1,922	1,917	1,984	1,935	1,917	1,989	1,993	1,921
2		1,947	1,946	-	1,995	1,996	1,922	1,994	1,992	1,922	1,917	1,984	1,935	1,917	1,989	1,993	1,921
3		1,946	1,946	-	1,995	1,997	1,989	1,994	1,992	1,923	1,921	1,950	1,990	1,917	1,989	1,992	1,921
4		1,947	1,947	-	1,995	2,016	1,957	1,994	1,992	1,923	1,921	1,990	1,990	1,917	1,985	1,992	1,922
5		1,947	1,946	-	1,979	2,069	1,922	1,995	1,961	1,923	1,942	1,990	1,990	1,943	1,918	1,993	1,922
6		1,946	1,947	11	1,923	2,017	1,922	1,995	1,921	1,922	1,994	1,990	1,990	1,989	1,918	1,993	1,923
7		1,946	1,948	1,328	1,924	1,996	1,923	1,995	1,921	1,923	1,932	1,991	1,991	1,986	1,918	1,935	1,924
8		1,946	1,947	1,978	1,919	1,996	1,919	1,995	1,979	1,910	1,920	1,984	1,990	1,906	1,917	1,921	1,918
9		1,946	1,939	2,066	1,912	1,991	1,913	1,994	1,992	1,906	1,912	1,973	1,982	1,900	1,918	1,920	1,910
10		1,944	1,937	2,063	1,913	1,989	1,913	1,992	1,992	1,907	1,913	1,966	1,982	1,900	1,977	1,919	1,902
11		1,940	1,933	2,061	1,911	2,012	1,904	1,986	1,977	1,907	1,911	1,966	1,981	1,901	1,986	1,915	1,903
12		1,938	1,930	2,056	1,911	2,047	1,901	1,982	1,917	1,910	1,911	1,977	1,939	1,895	1,959	1,915	1,903
13		1,939	1,931	2,055	1,933	1,985	1,904	1,982	1,918	1,910	1,911	1,976	1,908	1,955	1,915	1,973	1,931
14		1,940	1,931	2,056	1,984	1,984	1,910	1,986	1,918	1,924	1,911	1,975	1,907	1,909	1,916	1,985	1,974
15		1,940	1,934	2,045	1,939	1,983	1,954	1,988	1,918	1,981	1,910	1,976	1,907	1,903	1,914	1,987	1,959
16		1,939	1,896	1,985	1,915	1,986	2,053	1,988	1,918	1,939	1,910	1,976	1,907	1,909	1,941	1,927	1,908
17		1,941	-	1,990	1,922	1,992	2,061	1,990	1,918	1,915	1,989	1,986	1,985	1,915	1,986	1,916	1,915
18		1,941	-	1,991	1,923	1,995	2,061	1,992	1,919	1,916	1,989	1,990	1,986	1,915	1,987	1,968	1,959
19		1,945	-	1,990	1,923	1,996	2,062	1,992	1,919	1,916	1,964	1,988	1,987	1,917	1,988	1,992	1,992
20		1,933	-	1,990	1,981	1,994	2,027	1,992	1,919	1,916	1,919	1,988	1,960	1,917	1,570	1,935	1,987
21		1,872	-	1,992	1,995	1,994	1,991	1,992	1,919	1,915	1,919	1,987	1,916	1,917	1,988	1,921	1,921
22		1,880	-	1,992	1,995	1,994	1,993	1,992	1,918	1,918	1,947	1,929	1,916	1,917	1,992	1,921	1,921
23		1,944	-	1,954	1,995	1,955	1,993	1,992	1,920	1,916	1,990	1,913	1,916	1,917	1,992	1,921	1,922
24		1,945	-	1,928	1,995	1,922	1,994	1,992	1,922	1,917	1,989	1,916	1,916	1,944	1,992	1,921	1,922
TOTAL		46,457	31,003	35,531	46,872	47,902	47,110	47,787	46,655	46,081	46,492	47,081	47,022	46,123	45,304	46,848	46,301
Cumulative Output Sold, kWhr		46,457	77,460	112,991	159,863	207,765	254,875	302,662	349,317	395,398	441,890	488,971	535,993	582,116	627,420	674,268	720,569
Transformer and line efficiency		99.7%	99.8%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	100.1%	99.8%	99.7%	99.7%	99.7%	99.7%	99.8%	98.6%
Hourly average		1,936	1,292	1,480	1,953	1,996	1,963	1,991	1,944	1,920	1,937	1,962	1,959	1,922	1,888	1,952	1,929

August 2021																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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	Tuesday 8/17/2021	Wednesday 8/18/2021	Thursday 8/19/2021	Friday 8/20/2021	Saturday 8/21/2021	Sunday 8/22/2021	Monday 8/23/2021	Tuesday 8/24/2021	Wednesday 8/25/2021	Thursday 8/26/2021	Friday 8/27/2021	Saturday 8/28/2021	Sunday 8/29/2021	Monday 8/30/2021	Tuesday 8/31/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine run	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880	2,976			
Actual cumulative engine run	1,179	1,251	1,323	1,395	1,467	1,539	1,611	1,683	1,755	1,827	1,881	1,953	2,025	2,093	2,166			
Cumulative Availability, %	72.2%	72.4%	72.5%	72.7%	72.8%	72.9%	73.0%	73.0%	73.1%	73.2%	72.6%	72.7%	72.7%	72.7%	72.7%			
Max cumulative gross output, kWh	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000	2,455,200			
Actual cumulative gross output, kWh	800,172	848,618	898,420	947,381	995,512	1,044,972	1,093,431	1,142,961	1,191,645	1,240,229	1,275,218	1,324,609	1,374,354	1,420,432	1,471,075			
Cumulative Capacity Factor	59.4%	59.5%	59.7%	59.8%	59.9%	60.0%	60.0%	60.1%	60.2%	60.2%	59.6%	59.7%	59.8%	59.8%	59.9%			
Cumulative fuel input, MMBtu	9,862	10,456	11,063	11,650	12,231	12,822	13,408	14,001	14,594	15,184	15,699	16,293	16,885	17,455	18,066			
Cumulative gross output, kWh	800,172	848,618	898,420	947,381	995,512	1,044,972	1,093,431	1,142,961	1,191,645	1,240,229	1,275,218	1,324,609	1,374,354	1,420,432	1,471,075			
Heat Rate																		
Daily heat rate, Btu/kWe gross	11,026	11,024	10,983	10,796	10,859	10,757	10,884	10,778	10,961	10,928	13,260	10,832	10,709	11,142	10,863			
Daily heat rate, Btu/kWe net	12,248	12,247	12,200	11,993	12,063	11,949	12,091	11,973	12,176	12,140	14,730	12,033	11,897	12,377	12,067			
Cumulative heat rate, Btu/kWe gross	11,095	11,091	11,085	11,070	11,060	11,046	11,038	11,027	11,024	11,021	11,082	11,073	11,060	11,062	11,055			
Cumulative heat rate, Btu/kWe net	12,325	12,321	12,314	12,298	12,286	12,270	12,262	12,250	12,247	12,243	12,311	12,300	12,286	12,289	12,281			
Cumulative by Facility starting C																		
Max cumulative available engine run	21,980	22,076	22,172	22,268	22,364	22,460	22,556	22,652	22,748	22,844	22,940	23,036	23,132	23,228	23,324			
Actual cumulative engine run	16,166	16,238	16,310	16,382	16,454	16,526	16,598	16,670	16,742	16,814	16,886	16,940	17,012	17,080	17,152			
Cumulative Availability, %	73.5%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.6%	73.5%	73.5%	73.5%	73.5%	73.5%			
Max cumulative gross output, kWh	18,136,800	18,216,000	18,295,200	18,374,400	18,453,600	18,532,800	18,612,000	18,691,200	18,770,400	18,849,600	18,928,800	19,008,000	19,087,200	19,166,400	19,245,600			
Actual cumulative gross output, kWh	11,181,756	11,230,202	11,280,004	11,328,965	11,377,096	11,426,556	11,475,015	11,524,545	11,573,229	11,621,813	11,656,802	11,706,193	11,755,938	11,802,016	11,852,659			
Cumulative Capacity Factor	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.6%	61.6%	61.6%	61.6%	61.6%			
Cumulative fuel input, MMBtu	144,148	144,742	145,349	145,936	146,517	147,108	147,694	148,287	148,880	149,469	149,985	150,579	151,171	151,741	152,352			
Cumulative gross output, kWh	11,181,756	11,230,202	11,280,004	11,328,965	11,377,096	11,426,556	11,475,015	11,524,545	11,573,229	11,621,813	11,656,802	11,706,193	11,755,938	11,802,016	11,852,659			
Cumulative heat rate, Btu/kWe gross	11,605	11,602	11,600	11,596	11,593	11,589	11,586	11,583	11,580	11,578	11,583	11,579	11,571	11,574	11,571			
Cumulative heat rate, Btu/kWe net	12,891	12,889	12,886	12,882	12,878	12,874	12,871	12,867	12,864	12,861	12,867	12,863	12,859	12,857	12,854			
Service																		
Engine 1																		
Engine 2																		
Engine 3																		
Engine 4																		
Oil - oil and filter change																		
Service - plugs, air filter, valve insp																		
Precipitation																		
NSTAR Power Reports																		
Date	Tuesday 8/17/2021	Wednesday 8/18/2021	Thursday 8/19/2021	Friday 8/20/2021	Saturday 8/21/2021	Sunday 8/22/2021	Monday 8/23/2021	Tuesday 8/24/2021	Wednesday 8/25/2021	Thursday 8/26/2021	Friday 8/27/2021	Saturday 8/28/2021	Sunday 8/29/2021	Monday 8/30/2021	Tuesday 8/31/2021	TOTAL		
Hour																		
1	1,922	1,919	1,990	1,989	1,919	1,918	1,919	1,971	1,942	1,941	1,942	1,979	1,965	1,982	2,008			
2	1,922	1,918	1,989	1,989	1,989	1,973	1,942	1,971	1,943	1,941	1,942	1,978	1,963	1,982	2,007			
3	1,922	1,917	1,988	1,989	1,987	1,990	1,990	1,971	1,942	1,941	1,942	1,980	1,963	1,982	2,007			
4	1,922	1,918	1,989	1,989	1,918	1,990	1,990	1,971	1,943	1,941	1,942	1,981	1,962	1,982	2,007			
5	1,950	1,918	1,989	1,989	1,918	1,989	1,979	1,971	1,943	1,941	1,943	1,981	1,963	1,983	2,008			
6	1,994	1,918	1,989	1,990	1,918	1,990	1,919	1,971	1,944	1,942	1,943	1,981	1,963	1,984	2,007			
7	1,991	1,918	1,986	1,990	1,920	1,991	1,918	1,971	1,944	1,942	1,944	1,981	1,963	1,982	2,007			
8	1,982	1,918	1,986	1,986	1,920	1,992	1,911	1,968	1,941	1,941	1,941	1,981	1,964	1,979	2,018			
9	1,911	1,911	1,980	1,980	1,919	1,992	1,969	1,999	1,932	1,933	113	1,981	1,965	1,999	2,036			
10	1,907	1,909	1,978	1,975	1,917	1,993	1,970	1,997	1,931	1,933	-	1,981	1,964	2,034	2,036			
11	1,910	1,907	1,980	1,976	1,917	1,993	1,977	1,997	1,930	1,933	348	1,979	1,962	2,035	2,038			
12	1,907	1,940	1,983	1,973	1,916	1,992	1,952	1,996	1,930	1,931	1,168	1,978	1,979	2,034	2,037			
13	1,956	1,979	1,983	1,972	1,916	1,993	1,949	1,996	1,931	1,931	-	1,978	1,979	1,733	2,017			
14	1,979	1,976	1,983	1,943	1,916	1,992	1,954	2,002	1,944	1,931	-	1,977	1,979	1,467	1,993			
15	1,976	1,907	1,983	1,957	1,916	1,993	1,962	2,004	2,003	1,931	-	1,977	1,979	1,328	1,996			
16	1,919	1,909	1,984	1,986	1,916	1,993	1,964	2,009	1,944	1,933	405	1,978	1,980	1,323	2,001			
17	1,916	1,915	1,989	1,986	1,916	1,993	1,969	2,011	1,937	1,938	1,956	1,978	1,980	1,321	2,003			
18	1,917	1,916	1,989	1,986	1,917	1,992	1,967	2,011	1,938	1,939	1,981	1,979	1,980	1,568	2,003			
19	1,916	1,916	1,989	1,985	1,917	1,991	1,968	1,944	1,940	1,939	1,981	1,974	1,980	1,459	2,003			
20	1,918	1,916	1,988	1,985	1,916	1,991	1,969	1,940	1,940	1,939	1,979	1,911	1,979	1,694	2,004			
21	1,918	1,984	1,987	1,988	1,917	1,990	1,968	1,940	1,940	1,939	1,980	1,912	1,979	2,010	2,004			
22	1,917	1,987	1,988	1,952	1,917	1,935	1,970	1,940	1,939	1,940	1,981	1,912	1,980	2,009	2,005			
23	1,917	1,988	1,988	1,918	1,917	1,919	1,969	1,942	1,940	1,941	1,981	1,912	1,980	2,008	2,006			
24	1,918	1,988	1,989	1,919	1,917	1,918	1,971	1,943	1,940	1,941	1,980	1,912	1,982	2,007	2,006			
TOTAL	46,407	46,392	47,667	46,888	46,156	47,503	46,416	47,436	46,601	46,502	33,439	47,161	47,533	43,885	48,257			
Cumulative Output Sold, kWh	766,976	813,368	861,035	907,923	954,079	1,001,582	1,047,998	1,095,434	1,142,035	1,188,537	1,221,976	1,269,137	1,316,670	1,360,555	1,408,812			
Transformer and line efficiency	99.8%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%	99.7%	99.7%	99.7%	99.8%	99.9%	99.9%	99.8%	99.8%			
Hourly average	1,934	1,933	1,986	1,954	1,923	1,979	1,934	1,977	1,942	1,938	1,393	1,965	1,981	1,829	2,011			

September 2021																		
		Wednesday 9/1/2021	Thursday 9/2/2021	Friday 9/3/2021	Saturday 9/4/2021	Sunday 9/5/2021	Monday 9/6/2021	Tuesday 9/7/2021	Wednesday 9/8/2021	Thursday 9/9/2021	Friday 9/10/2021	Saturday 9/11/2021	Sunday 9/12/2021	Monday 9/13/2021	Tuesday 9/14/2021	Wednesday 9/15/2021	Thursday 9/16/2021	
LFG and Biogas Flow to the Engines (KSCF)		1,165	1,075	1,188	1,193	1,183	1,172	1,197	1,206	1,124	1,096	1,151	1,191	1,168	1,124	1,221	1,118	
LFG and Biogas Flow to the Engines (MMBTU HHV)		577	566	596	601	597	599	598	603	579	557	572	584	577	549	602	551	
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Total Flow (KSCF)		1,165	1,075	1,188	1,193	1,183	1,172	1,197	1,206	1,124	1,096	1,151	1,191	1,168	1,124	1,221	1,118	
LFG and Biogas Total Flow (MMBTU HHV)		577	566	596	601	597	599	598	603	579	557	572	584	577	549	602	551	
Average Methane Content (%)		48.9	52.1	49.6	49.8	49.9	50.5	49.4	49.4	50.9	50.2	49.1	48.5	48.8	48.3	48.7	48.7	
Engine 1 Hours		23	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17	
Engine 2 Hours		23	21	24	24	24	24	24	24	24	20	9	-	3	15	24	22	
Engine 3 Hours		23	13	24	24	24	24	24	24	23	24	24	24	24	24	24	24	
Engine 4 Hours		-	11	-	-	-	-	-	-	-	-	13	24	24	14	-	7	
Generator 1 Power Output (kWhr)		16,775	15,432	17,952	17,948	17,952	17,952	17,896	16,788	16,776	17,344	17,960	17,960	16,788	16,552	16,772	11,968	
Generator 2 Power Output (kWhr)		15,600	14,410	14,404	14,408	14,412	14,412	14,352	15,436	15,584	12,280	5,084	-	1,152	8,020	14,420	13,180	
Generator 3 Power Output (kWhr)		15,000	8,000	16,736	16,736	16,744	16,740	16,740	16,552	15,232	17,372	17,936	17,232	16,496	15,984	17,860	17,336	
Generator 4 Power Output (kWhr)		-	6,750	-	-	-	-	-	-	-	-	7,020	14,352	13,608	6,804	-	4,748	
Gross Power Output (kWhr)		47,377	44,592	49,141	49,106	49,188	49,148	49,041	48,824	47,626	47,032	48,005	49,553	48,049	47,374	49,096	47,230	
Net Power Output (kWhr)		45,334	42,530	46,928	46,936	47,024	47,008	46,768	46,608	45,560	45,056	46,400	47,480	45,904	45,424	47,240	45,448	
Power Sold as metered by NStar, (kWhr)		45,241	42,440	46,825	46,839	46,941	46,938	46,670	46,511	45,469	44,978	45,942	47,420	45,794	45,324	47,132	45,361	
Offgrid RECs (kWhr)		2,043	2,059	2,213	2,170	2,164	2,141	2,273	2,216	2,066	1,976	1,965	2,073	2,145	1,951	1,856	1,781	
Calculated Performance Results																		
Daily																		
Power output (kW average when running)																		
Generator 1		729	643	748	748	748	748	746	700	699	723	748	748	700	690	699	704	
Generator 2		678	686	600	600	601	601	598	643	649	614	565	-	384	535	601	599	
Generator 3		652	615	697	697	698	698	698	690	662	724	747	718	687	666	744	722	
Generator 4		-	614	-	-	-	-	-	-	-	-	540	598	567	486	-	678	
Power output (kW average over 24-hrs)																		
Facility Gross		1,974	1,858	2,048	2,046	2,050	2,048	2,043	2,034	1,984	1,960	2,000	2,065	2,002	1,974	2,046	1,968	
Facility Net		1,889	1,772	1,955	1,956	1,959	1,959	1,949	1,942	1,898	1,877	1,918	1,978	1,913	1,893	1,968	1,894	
In-plant load		85	86	92	90	90	89	95	92	86	82	82	86	89	81	77	74	
Daily availability factor																		
Facility		72%	72%	75%	75%	75%	75%	75%	75%	74%	71%	73%	75%	78%	80%	75%	73%	
Engine 1		96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	71%	
Engine 2		96%	88%	100%	100%	100%	100%	100%	100%	100%	83%	0%	13%	63%	100%	92%	92%	
Engine 3		96%	54%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%	100%	100%	100%	
Engine 4		0%	46%	0%	0%	0%	0%	0%	0%	0%	0%	54%	100%	100%	58%	0%	29%	
Daily capacity factor																		
Facility		60%	56%	62%	62%	62%	62%	62%	62%	60%	59%	61%	63%	61%	60%	62%	60%	
Engine 1		88%	78%	91%	91%	91%	91%	90%	85%	85%	88%	91%	91%	85%	84%	85%	85%	
Engine 2		82%	83%	73%	73%	73%	73%	72%	78%	79%	74%	68%	0%	47%	65%	73%	73%	
Engine 3		79%	75%	85%	85%	85%	85%	85%	84%	80%	88%	87%	83%	81%	90%	88%	88%	
Engine 4		0%	74%	0%	0%	0%	0%	0%	0%	0%	0%	65%	72%	69%	59%	0%	82%	
Cumulative by engine																		
Engine operating run hours in the month																		
Max Cumulative Available, hours		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384	
Engine 1		23	47	71	95	119	143	167	191	215	239	263	287	311	335	359	376	
Engine 2		23	44	68	92	116	140	164	188	212	232	241	241	244	259	283	305	
Engine 3		23	36	60	84	108	132	156	180	203	227	251	275	299	323	347	371	
Engine 4		0	11	11	11	11	11	11	11	11	11	24	48	72	86	86	93	
Engine operating run hours total from 0 hours																		
Engine 1	119,637	119,660	119,684	119,708	119,732	119,756	119,780	119,804	119,828	119,852	119,876	119,900	119,924	119,948	119,972	119,996	120,013	
Engine 2	109,530	109,553	109,574	109,598	109,622	109,646	109,670	109,694	109,718	109,742	109,762	109,771	109,771	109,774	109,789	109,813	109,835	
Engine 3	119,191	119,214	119,227	119,251	119,275	119,299	119,323	119,347	119,371	119,394	119,418	119,442	119,466	119,490	119,514	119,538	119,562	
Engine 4	116,492	116,492	116,503	116,503	116,503	116,503	116,503	116,503	116,503	116,503	116,503	116,516	116,540	116,564	116,578	116,578	116,585	
Cumulative availability, % September 1, 2021 @ 00:00 hours																		
Engine 1		96%	98%	99%	99%	99%	99%	99%	99%	100%	100%	100%	100%	100%	100%	100%	98%	
Engine 2		96%	92%	94%	96%	97%	97%	98%	98%	97%	97%	91%	84%	78%	77%	79%	79%	
Engine 3		96%	75%	83%	88%	90%	92%	93%	94%	94%	95%	95%	95%	96%	96%	96%	97%	
Engine 4		0%	23%	15%	11%	9%	8%	7%	6%	5%	5%	9%	17%	23%	26%	24%	24%	
Engine cumulative gross output, kWhr																		
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200	
Engine 1		729	1,372	2,120	2,868	3,616	4,364	5,110	5,809	6,508	7,231	7,979	8,728	9,427	10,117	10,816	11,520	
Engine 2		678	1,364	1,965	2,565	3,165	3,766	4,364	5,007	5,656	6,270	6,835	7,219	7,754	8,355	8,954	9,554	
Engine 3		652	1,268	1,965	2,662	3,360	4,057	4,755	5,445	6,107	6,831	7,578	8,296	8,983	9,649	10,393	11,116	
Engine 4		-	614	614	614	614	614	614	614	614	614	1,154	1,752	2,319	2,805	2,805	3,483	
Cumulative capacity factor, %																		
Engine 1		88%	83%	86%	87%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	87%	87%	
Engine 2		82%	83%	79%	78%	77%	76%	76%	76%	76%	76%	75%	69%	67%	68%	68%	68%	
Engine 3		79%	77%	79%	81%	81%	82%	82%	82%	82%	83%	84%	84%	84%	84%	84%	84%	
Engine 4		0%	37%	25%	19%	15%	12%	11%	9%	8%	7%	13%	18%	22%	24%	23%	26%	

		Wednesday 9/1/2021	Thursday 9/2/2021	Friday 9/3/2021	Saturday 9/4/2021	Sunday 9/5/2021	Monday 9/6/2021	Tuesday 9/7/2021	Wednesday 9/8/2021	Thursday 9/9/2021	Friday 9/10/2021	Saturday 9/11/2021	Sunday 9/12/2021	Monday 9/13/2021	Tuesday 9/14/2021	Wednesday 9/15/2021	Thursday 9/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		69	138	210	282	354	426	498	570	641	709	779	851	926	1,003	1,075	1,145
Cumulative Availability, %		71.9%	71.9%	72.9%	73.4%	73.8%	74.0%	74.1%	74.2%	74.2%	73.9%	73.8%	73.9%	74.2%	74.6%	74.7%	74.5%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		47,377	91,969	141,110	190,216	239,404	288,552	337,593	386,417	434,043	481,075	529,080	578,633	626,682	674,056	723,152	770,382
Cumulative Capacity Factor		59.8%	58.1%	59.4%	60.0%	60.5%	60.7%	60.9%	61.0%	60.9%	60.7%	60.7%	60.9%	60.9%	60.8%	60.9%	60.8%
Cumulative fuel input, MMBtu HHV		577	1,143	1,739	2,341	2,937	3,536	4,135	4,738	5,316	5,873	6,445	7,029	7,605	8,154	8,756	9,307
Cumulative gross output, kWhr		47,377	91,969	141,110	190,216	239,404	288,552	337,593	386,417	434,043	481,075	529,080	578,633	626,682	674,056	723,152	770,382
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		10,960	11,432	10,922	11,021	10,922	10,971	10,981	11,120	10,940	10,655	10,717	10,607	10,808	10,426	11,040	10,504
Daily heat rate, Btu/kWe gross HHV		12,175	12,700	12,132	12,243	12,133	12,188	12,198	12,353	12,153	11,837	11,905	11,783	12,006	11,582	12,264	11,668
Cumulative heat rate, Btu/kWe gross LHV		10,960	11,189	11,096	11,076	11,045	11,032	11,025	11,037	11,026	10,990	10,965	10,934	10,925	10,890	10,900	10,876
Cumulative heat rate, Btu/kWe gross HHV		12,175	12,429	12,326	12,304	12,269	12,255	12,247	12,260	12,249	12,208	12,181	12,147	12,136	12,097	12,108	12,081
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		23,420	23,516	23,612	23,708	23,804	23,900	23,996	24,092	24,188	24,284	24,380	24,476	24,572	24,668	24,764	24,860
Actual cumulative engine run hours		17,221	17,290	17,362	17,434	17,506	17,578	17,650	17,722	17,793	17,861	17,931	18,003	18,078	18,155	18,227	18,297
Cumulative Availability, %		73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.6%	73.6%	73.6%	73.6%	73.5%	73.6%	73.6%	73.6%	73.6%	73.6%
Max cumulative gross output, kWhr		19,324,800	19,404,000	19,483,200	19,562,400	19,641,600	19,720,800	19,800,000	19,879,200	19,958,400	20,037,600	20,116,800	20,196,000	20,275,200	20,354,400	20,433,600	20,512,800
Actual cumulative gross output, kWhr		11,900,036	11,944,628	11,993,769	12,042,875	12,092,063	12,141,211	12,190,252	12,239,076	12,286,702	12,333,734	12,381,739	12,431,292	12,479,341	12,526,715	12,575,811	12,623,041
Cumulative Capacity Factor		61.6%	61.6%	61.6%	61.6%	61.6%	61.6%	61.6%	61.6%	61.6%	61.6%	61.5%	61.6%	61.5%	61.5%	61.5%	61.5%
Cumulative fuel input, MMBtu HHV		152,929	153,495	154,092	154,693	155,290	155,889	156,487	157,090	157,669	158,225	158,797	159,381	159,958	160,506	161,109	161,660
Cumulative gross output, kWhr		11,900,036	11,944,628	11,993,769	12,042,875	12,092,063	12,141,211	12,190,252	12,239,076	12,286,702	12,333,734	12,381,739	12,431,292	12,479,341	12,526,715	12,575,811	12,623,041
Cumulative heat rate, Btu/kWe gross LHV		11,569	11,568	11,565	11,563	11,561	11,558	11,556	11,554	11,552	11,548	11,545	11,541	11,539	11,534	11,532	11,529
Cumulative heat rate, Btu/kWe gross HHV		12,851	12,851	12,848	12,845	12,842	12,840	12,837	12,835	12,832	12,829	12,825	12,821	12,818	12,813	12,811	12,807
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports		Wednesday 9/1/2021	Thursday 9/2/2021	Friday 9/3/2021	Saturday 9/4/2021	Sunday 9/5/2021	Monday 9/6/2021	Tuesday 9/7/2021	Wednesday 9/8/2021	Thursday 9/9/2021	Friday 9/10/2021	Saturday 9/11/2021	Sunday 9/12/2021	Monday 9/13/2021	Tuesday 9/14/2021	Wednesday 9/15/2021	Thursday 9/16/2021
Date																	
Hour																	
1		2,002	23	1,958	1,955	1,957	1,957	1,956	1,980	1,953	1,964	1,822	2,010	1,959	1,950	1,925	1,971
2		1,958	1,069	1,959	1,956	1,956	1,957	1,956	1,981	1,432	1,966	2,013	2,011	1,960	1,950	1,948	1,972
3		1,958	1,617	1,958	1,956	1,957	1,957	1,956	1,981	1,294	1,960	2,007	2,005	1,954	1,946	1,969	1,967
4		1,958	1,547	1,958	1,956	1,957	1,958	1,957	1,981	1,724	1,965	2,011	2,009	1,958	1,950	1,974	1,972
5		1,958	1,517	1,958	1,956	1,957	1,958	1,957	1,981	1,919	1,966	2,011	2,010	1,976	1,948	1,975	1,940
6		1,957	1,597	1,957	1,956	1,956	1,959	1,957	1,977	1,953	1,961	2,005	2,005	1,999	1,947	1,967	1,918
7		1,957	1,936	1,955	1,957	1,956	1,958	1,957	1,975	1,952	1,964	2,010	1,977	2,004	1,953	1,970	1,923
8		1,953	1,962	1,955	1,957	1,957	1,959	1,949	1,976	1,951	1,781	2,011	1,962	2,001	1,923	1,965	1,914
9		1,947	1,959	1,950	1,956	1,957	1,959	1,940	1,946	1,946	1,668	1,881	1,955	1,991	1,894	1,959	1,908
10		1,948	1,979	1,944	1,950	1,955	1,959	1,937	1,943	1,944	1,956	1,426	1,957	1,994	1,703	1,961	1,796
11		1,947	2,008	1,936	1,944	1,956	1,958	1,933	1,777	1,944	2,014	1,426	1,955	1,993	1,729	1,963	1,985
12		1,946	1,925	1,936	1,941	1,956	1,956	1,929	1,623	1,944	1,794	1,418	1,947	1,365	1,667	1,957	1,954
13		1,945	1,773	1,938	1,941	1,956	1,947	1,936	1,942	1,949	1,969	1,851	1,950	1,499	1,376	1,962	1,957
14		1,945	1,952	1,940	1,940	1,956	1,948	1,939	1,941	1,953	2,025	2,004	1,949	1,764	1,861	1,964	1,919
15		1,946	1,953	1,938	1,941	1,955	1,947	1,941	1,941	1,951	2,004	1,996	1,944	1,659	1,862	1,955	1,914
16		1,958	1,958	1,947	1,941	1,956	1,948	1,775	1,948	1,963	2,005	2,000	1,975	1,946	2,019	1,964	1,923
17		2,002	1,959	1,953	1,947	1,957	1,956	1,952	1,950	1,964	2,009	2,004	2,005	1,997	2,009	1,970	1,494
18		2,003	1,959	1,955	1,955	1,955	1,957	1,955	1,952	1,959	2,004	2,002	2,000	1,989	1,967	1,967	1,015
19		2,002	1,958	1,955	1,955	1,954	1,957	1,955	1,952	1,963	2,009	2,007	2,007	1,993	1,972	1,971	1,825
20		2,002	1,957	1,955	1,955	1,954	1,957	1,955	1,953	1,965	2,009	2,007	2,007	1,998	1,973	1,973	2,023
21		2,002	1,958	1,955	1,955	1,954	1,957	1,955	1,953	1,959	1,691	2,004	1,954	1,953	1,950	1,965	2,017
22		2,002	1,957	1,955	1,955	1,954	1,956	1,964	1,952	1,964	1,435	2,010	1,958	1,949	1,927	1,971	2,021
23		1,945	1,957	1,955	1,957	1,956	1,956	1,979	1,953	1,964	1,433	2,011	1,959	1,951	1,927	1,971	2,020
24		-	1,960	1,955	1,957	1,957	1,957	1,980	1,953	1,959	1,426	2,005	1,953	1,942	1,921	1,966	2,013
TOTAL		45,241	42,440	46,825	46,839	46,941	46,938	46,670	46,511	45,469	44,978	45,942	47,420	45,794	45,324	47,132	45,361
Cumulative Output Sold, kWhr		45,241	87,681	134,506	181,345	228,286	275,224	321,894	368,405	413,874	458,852	504,794	552,214	598,008	643,332	690,464	735,825
Transformer and line efficiency		99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.8%	99.8%	99.8%	99.8%
Hourly average		1.885	1.768	1.951	1.952	1.956	1.956	1.945	1.938	1.895	1.874	1.914	1.976	1.908	1.889	1.964	1.890

September 2021																	
	Friday 9/17/2021	Saturday 9/18/2021	Sunday 9/19/2021	Monday 9/20/2021	Tuesday 9/21/2021	Wednesday 9/22/2021	Thursday 9/23/2021	Friday 9/24/2021	Saturday 9/25/2021	Sunday 9/26/2021	Monday 9/27/2021	Tuesday 9/28/2021	Wednesday 9/29/2021	Thursday 9/30/2021	TOTAL	Biogas	LFG
LFG and Biogas Flow to the Engine	1,082	1,138	1,093	202	1,009	1,093	1,170	1,150	1,153	1,153	1,133	1,140	1,127	1,073	33,287	852	32,435
LFG and Biogas Flow to the Engine	555	582	529	102	512	540	583	572	573	573	571	576	568	547	16,692	561	16,131
LFG and Biogas Flow to the Flare (	-	-	-	780	-	-	-	-	-	-	-	-	-	-	780	3.4%	97%
LFG and BiogasFlow to the Flare (	-	-	-	410	-	-	-	-	-	-	-	-	-	-	410	Biogas	LFG
LFG and Biogas Total Flow (KSCF)	1,082	1,138	1,093	982	1,009	1,093	1,170	1,150	1,153	1,153	1,133	1,140	1,127	1,073	34,067	852	33,215
LFG and Biogas Total Flow (MMBT	555	582	529	512	512	540	583	572	573	573	571	576	568	547	17,102	561	16,541
Average Methane Content (%)	50.7	50.6	47.8	51.6	50.2	48.8	49.2	49.1	49.1	49.1	49.8	50.0	49.8	50.3	49.6	3.3%	97%
Engine 1 Hours	16	24	22	3	24	24	24	24	24	24	24	24	24	24	681		
Engine 2 Hours	6	-	-	-	-	-	-	-	-	-	-	-	-	-	311		
Engine 3 Hours	22	21	21	3	7	13	25	24	24	24	24	24	25	24	652		
Engine 4 Hours	24	24	22	3	24	24	24	24	24	24	24	24	24	19	401		
Generator 1 Power Output (kWhr)	11,012	17,964	18,800	2,550	18,840	18,904	17,260	16,776	16,780	16,780	16,784	16,784	16,784	16,244	493,077		
Generator 2 Power Output (kWhr)	3,480	-	-	-	-	-	-	-	-	-	-	-	-	-	190,634		
Generator 3 Power Output (kWhr)	14,168	13,212	9,200	2,500	4,360	9,116	17,244	16,760	16,764	16,764	16,756	16,760	16,756	16,108	445,164		
Generator 4 Power Output (kWhr)	17,880	17,900	17,000	2,600	18,824	14,776	14,776	15,000	14,804	14,804	14,776	14,776	14,460	11,368	259,278		
Gross Power Output (kWhr)	46,522	49,118	45,018	7,647	42,030	45,072	49,289	48,555	48,346	48,346	48,294	48,332	47,970	43,709	1,388,630		
Net Power Output (kWhr)	44,872	47,456	43,575	6,839	40,304	43,184	47,528	46,824	46,712	46,712	46,600	46,656	46,296	42,200	1,333,045		
Power Sold as metered by NStar, (	44,789	47,353	43,480	6,824	40,309	43,117	47,421	46,693	46,598	47,695	46,505	46,540	46,171	42,118	1,331,438	CRMCB Inplant	
Offgrid RECs (KWhr)	1,650	1,662	1,443	808	1,726	1,888	1,761	1,731	1,634	1,634	1,694	1,676	1,674	1,509	55,582	7,419	13%
Calculated Performance Results																	
Daily																	
Power output (kW average whe																of total in-plant power	
Generator 1	688	749	855	850	785	788	719	699	699	699	699	699	699	677			
Generator 2	580	-	-	-	-	-	-	-	-	-	-	-	-	-			
Generator 3	644	629	438	833	623	701	690	698	699	699	698	698	670	671			
Generator 4	745	746	773	867	784	709	616	625	617	617	616	616	603	598			
Power output (kW average ove																	
Facility Gross	1,938	2,047	1,876	319	1,751	1,878	2,054	2,023	2,014	2,014	2,012	2,014	1,999	1,821			
Facility Net	1,870	1,977	1,816	285	1,679	1,799	1,980	1,951	1,946	1,946	1,942	1,944	1,929	1,758			
In-plant load	69	69	60	34	72	79	73	72	68	68	71	70	70	63			
Daily availability factor																	
Facility	71%	72%	68%	9%	57%	64%	76%	75%	75%	75%	75%	75%	76%	70%			
Engine 1	67%	100%	92%	13%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 2	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Engine 3	92%	88%	88%	13%	29%	54%	104%	100%	100%	100%	100%	100%	104%	100%			
Engine 4	100%	100%	92%	13%	100%	100%	100%	100%	100%	100%	100%	100%	100%	79%			
Daily capacity factor																	
Facility	59%	62%	57%	10%	53%	57%	62%	61%	61%	61%	61%	61%	61%	55%			
Engine 1	83%	91%	104%	103%	95%	95%	87%	85%	85%	85%	85%	85%	85%	82%			
Engine 2	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Engine 3	78%	76%	53%	101%	75%	85%	84%	85%	85%	85%	85%	85%	81%	81%			
Engine 4	90%	90%	94%	105%	95%	86%	75%	76%	75%	75%	75%	75%	73%	73%			
Cumulative by engine																	
Engine operating run hours in t																	
Max Cumulative Available,	408	432	456	480	504	528	552	576	600	624	648	672	696	720			
Engine 1	392	416	438	441	465	489	513	537	561	585	609	633	657	681			
Engine 2	311	311	311	311	311	311	311	311	311	311	311	311	311	311			
Engine 3	393	414	435	438	445	458	483	507	531	555	579	603	628	652			
Engine 4	117	141	163	166	190	214	238	262	286	310	334	358	382	401			
Engine operating run hours tota																	
Engine 1	120,029	120,053	120,075	120,078	120,102	120,126	120,150	120,174	120,198	120,222	120,246	120,270	120,294	120,318			
Engine 2	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841			
Engine 3	119,584	119,605	119,626	119,629	119,636	119,649	119,674	119,698	119,722	119,746	119,770	119,794	119,819	119,843			
Engine 4	116,609	116,633	116,655	116,658	116,682	116,706	116,730	116,754	116,778	116,802	116,826	116,850	116,874	116,898			
Cumulative availability, %																	
Engine 1	96%	96%	96%	92%	92%	93%	93%	93%	94%	94%	94%	94%	94%	95%			
Engine 2	76%	72%	68%	65%	59%	56%	56%	52%	50%	48%	48%	46%	45%	43%			
Engine 3	96%	96%	95%	91%	88%	87%	88%	88%	89%	89%	89%	90%	90%	91%			
Engine 4	29%	33%	36%	35%	38%	41%	43%	45%	48%	50%	52%	53%	55%	56%			
Engine cumulative gross output																	
Max cumulative capacity or	14,025	14,850	15,675	16,500	17,325	18,150	18,975	19,800	20,625	21,450	22,275	23,100	23,925	24,750			
Engine 1	12,208	12,956	13,811	14,661	15,446	16,234	16,953	17,652	18,351	19,050	19,749	20,449	21,148	21,825			
Engine 2	9,534	9,534	9,534	9,534	9,534	9,534	9,534	9,534	9,534	9,534	9,534	9,534	9,534	9,534			
Engine 3	11,760	12,389	12,827	13,660	14,283	14,984	15,674	16,373	17,071	17,770	18,468	19,166	19,836	20,507			
Engine 4	4,228	4,974	5,746	6,613	7,397	8,106	8,722	9,347	9,964	10,581	11,197	11,813	12,415	13,013			
Cumulative capacity factor, %																	
Engine 1	87%	87%	88%	89%	89%	89%	89%	89%	89%	89%	89%	89%	88%	88%			
Engine 2	68%	64%	61%	58%	55%	53%	50%	48%	46%	44%	43%	41%	40%	39%			
Engine 3	84%	83%	82%	83%	82%	83%	83%	83%	83%	83%	83%	83%	83%	83%			
Engine 4	30%	33%	37%	40%	43%	45%	46%	47%	48%	49%	50%	51%	52%	53%			

	Friday 9/17/2021	Saturday 9/18/2021	Sunday 9/19/2021	Monday 9/20/2021	Tuesday 9/21/2021	Wednesday 9/22/2021	Thursday 9/23/2021	Friday 9/24/2021	Saturday 9/25/2021	Sunday 9/26/2021	Monday 9/27/2021	Tuesday 9/28/2021	Wednesday 9/29/2021	Thursday 9/30/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																	
Max cumulative available engi	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880			
Actual cumulative engine run t	1,213	1,282	1,347	1,366	1,411	1,472	1,545	1,617	1,689	1,761	1,833	1,905	1,978	2,045			
Cumulative Availability, %	74.3%	74.2%	73.8%	70.6%	70.0%	69.7%	70.0%	70.2%	70.4%	70.6%	70.7%	70.9%	71.0%	71.0%			
Max cumulative gross output, k	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000			
Actual cumulative gross output,	816,904	866,022	911,040	918,687	960,717	1,005,789	1,055,078	1,103,633	1,151,979	1,200,325	1,248,619	1,296,951	1,344,921	1,388,630			
Cumulative Capacity Factor	60.7%	60.7%	60.5%	58.0%	57.8%	57.7%	57.9%	58.1%	58.2%	58.3%	58.4%	58.5%	58.6%	58.4%			
Cumulative fuel input, MMBtu t	9,863	10,445	10,974	11,077	11,589	12,129	12,712	13,284	13,857	14,430	15,001	15,578	16,146	16,692			
Cumulative gross output, kWhr	816,904	866,022	911,040	918,687	960,717	1,005,789	1,055,078	1,103,633	1,151,979	1,200,325	1,248,619	1,296,951	1,344,921	1,388,630			
Heat Rate																	
Daily heat rate, Btu/kWe gross	10,743	10,674	10,582	12,062	10,972	10,787	10,640	10,605	10,671	10,671	10,651	10,736	10,659	11,257			
Daily heat rate, Btu/kWe gross	11,934	11,857	11,755	13,399	12,189	11,983	11,820	11,780	11,854	11,854	11,832	11,926	11,841	12,505			
Cumulative heat rate, Btu/kWe	10,868	10,857	10,843	10,854	10,859	10,856	10,846	10,835	10,828	10,822	10,815	10,812	10,807	10,821			
Cumulative heat rate, Btu/kWe	12,073	12,061	12,046	12,057	12,063	12,059	12,048	12,036	12,029	12,022	12,014	12,011	12,005	12,021			
Cumulative by Facility starting C																	
Max cumulative available engi	24,956	25,052	25,148	25,244	25,340	25,436	25,532	25,628	25,724	25,820	25,916	26,012	26,108	26,204			
Actual cumulative engine run t	18,365	18,434	18,499	18,508	18,563	18,624	18,687	18,769	18,841	18,913	18,985	19,057	19,130	19,197			
Cumulative Availability, %	73.6%	73.6%	73.6%	73.3%	73.3%	73.2%	73.2%	73.2%	73.2%	73.2%	73.3%	73.3%	73.3%	73.3%			
Max cumulative gross output, k	20,592,000	20,671,200	20,750,400	20,829,600	20,908,800	20,988,000	21,067,200	21,146,400	21,225,600	21,304,800	21,384,000	21,463,200	21,542,400	21,621,600			
Actual cumulative gross output,	12,669,563	12,718,681	12,763,699	12,771,346	12,813,376	12,858,448	12,907,737	12,956,292	13,004,638	13,052,984	13,101,278	13,149,610	13,197,580	13,241,289			
Cumulative Capacity Factor	61.5%	61.5%	61.5%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.2%			
Cumulative fuel input, MMBtu t	162,215	162,797	163,326	163,429	163,941	164,481	165,064	165,636	166,209	166,782	167,353	167,930	168,498	169,044			
Cumulative gross output, kWhr	12,669,563	12,718,681	12,763,699	12,771,346	12,813,376	12,858,448	12,907,737	12,956,292	13,004,638	13,052,984	13,101,278	13,149,610	13,197,580	13,241,289			
Cumulative heat rate, Btu/kWe	11,522	11,522	11,519	11,519	11,518	11,515	11,512	11,508	11,505	11,502	11,499	11,496	11,493	11,492			
Cumulative heat rate, Btu/kWe	12,804	12,800	12,796	12,797	12,795	12,792	12,788	12,784	12,781	12,777	12,774	12,771	12,767	12,766			
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve insp																	
Precipitation																	
NSTAR Power Reports																	
Date	Friday 9/17/2021	Saturday 9/18/2021	Sunday 9/19/2021	Monday 9/20/2021	Tuesday 9/21/2021	Wednesday 9/22/2021	Thursday 9/23/2021	Friday 9/24/2021	Saturday 9/25/2021	Sunday 9/26/2021	Monday 9/27/2021	Tuesday 9/28/2021	Wednesday 9/29/2021	Thursday 9/30/2021	TOTAL		
Hour																	
1	2,017	2,024	2,019	-	2,034	1,551	2,022	1,923	1,949	1,974	1,928	1,926	1,975	1,924			
2	2,018	2,027	2,020	-	2,034	1,553	2,024	1,925	1,927	1,975	1,930	1,928	1,959	1,926			
3	2,012	1,674	2,015	-	2,028	1,549	2,019	1,919	1,921	1,971	1,925	1,923	1,924	1,922			
4	2,016	1,444	2,018	-	2,032	1,553	2,022	1,924	1,926	1,977	1,928	1,926	1,928	1,924			
5	2,018	1,446	2,020	-	2,034	1,554	2,024	1,926	1,928	2,010	1,930	1,928	1,930	1,926			
6	1,724	1,942	2,015	-	2,028	1,545	2,017	1,920	1,923	2,001	1,924	1,924	1,925	1,921			
7	1,428	2,120	2,020	-	2,032	1,547	2,018	1,923	1,926	2,004	1,921	1,928	1,928	1,925			
8	1,418	2,121	2,022	-	1,612	1,543	2,015	1,919	1,929	2,053	1,918	1,925	1,922	1,922			
9	1,588	2,115	2,015	-	1,433	1,558	2,008	1,909	1,924	2,048	1,952	1,913	1,912	1,910			
10	1,984	2,118	1,978	-	1,473	1,556	2,001	1,914	1,925	2,049	1,961	1,915	1,913	1,713			
11	1,935	2,085	1,845	-	1,501	1,555	1,963	1,918	1,922	2,022	1,960	1,916	1,911	1,422			
12	1,961	2,016	1,425	40	1,529	1,683	1,959	1,956	1,917	1,983	1,950	1,909	1,903	1,413			
13	1,912	2,021	1,623	-	1,523	2,066	1,962	1,963	1,916	1,981	1,957	1,918	1,910	900			
14	1,386	2,021	2,020	-	1,536	2,061	1,964	1,965	1,920	1,984	1,961	1,922	1,915	-			
15	1,397	2,015	2,013	-	1,531	2,059	1,962	1,960	1,920	1,991	1,954	1,913	1,914	1,021			
16	1,790	2,019	2,017	-	1,540	2,017	1,967	1,965	1,942	1,995	1,960	1,932	1,917	1,944			
17	2,027	2,020	2,021	-	1,547	2,022	1,972	1,971	1,976	1,999	1,967	1,977	1,922	2,073			
18	2,021	2,015	2,019	-	1,546	2,018	1,967	1,968	1,970	2,000	1,924	1,972	1,922	2,072			
19	2,024	2,020	2,023	-	1,552	2,022	1,923	1,971	1,974	1,987	1,927	1,975	1,924	2,076			
20	2,025	2,020	2,025	-	1,555	2,023	1,924	1,973	1,975	1,977	1,928	1,976	1,926	2,077			
21	2,019	2,015	1,991	680	1,551	2,017	1,919	1,968	1,970	1,931	1,923	1,971	1,920	2,071			
22	2,024	2,019	1,975	2,036	1,555	2,022	1,924	1,972	1,973	1,928	1,926	1,975	1,924	2,073			
23	2,025	2,021	341	2,038	1,557	2,024	1,925	1,973	1,975	1,930	1,928	1,976	1,926	1,988			
24	2,020	2,015	-	2,030	1,546	2,019	1,920	1,968	1,970	1,925	1,923	1,972	1,921	1,975			
TOTAL	44,789	47,353	43,480	6,824	40,309	43,117	47,421	46,693	46,598	47,695	46,505	46,540	46,171	42,118			
Cumulative Output Sold, kv	780,614	827,967	871,447	878,271	918,580	961,697	1,009,118	1,055,811	1,102,409	1,150,104	1,196,609	1,243,149	1,289,320	1,331,438			
Transformer and line efficienc	99.8%	99.8%	99.8%	99.8%	100.0%	99.8%	99.8%	99.7%	99.8%	102.1%	99.8%	99.8%	99.7%	99.8%			
Hourly average	1,866	1,973	1,812	284	1,680	1,797	1,976	1,946	1,942	1,987	1,938	1,939	1,924	1,755			

OCTOBER 2021																		
		Friday 10/1/2021	Saturday 10/2/2021	Sunday 10/3/2021	Monday 10/4/2021	Tuesday 10/5/2021	Wednesday 10/6/2021	Thursday 10/7/2021	Friday 10/8/2021	Saturday 10/9/2021	Sunday 10/10/2021	Monday 10/11/2021	Tuesday 10/12/2021	Wednesday 10/13/2021	Thursday 10/14/2021	Friday 10/15/2021	Saturday 10/16/2021	
LFG and Biogas Flow to the Engines (KSCF)		1,160	1,153	1,153	1,134	1,134	1,128	1,149	1,199	1,185	1,197	1,117	1,142	1,158	1,204	1,166	1,255	
LFG and Biogas Flow to the Engines (MMBTU HHV)		580	598	603	594	594	582	601	626	621	628	597	617	620	636	609	663	
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Total Flow (KSCF)		1,160	1,153	1,153	1,134	1,134	1,128	1,149	1,199	1,185	1,197	1,117	1,142	1,158	1,204	1,166	1,255	
LFG and Biogas Total Flow (MMBTU HHV)		580	598	603	594	594	582	601	626	621	628	597	617	620	636	609	663	
Average Methane Content (%)		49.4	51.3	51.7	51.8	51.8	51.0	51.7	51.6	51.8	51.8	52.8	53.4	52.9	52.2	51.6	52.2	
Engine 1 Hours		24	24	24	24	24	24	24	24	24	24	17	13	24	24	24	24	
Engine 2 Hours		-	-	-	-	-	-	-	15	24	24	24	20	15	24	24	4	
Engine 3 Hours		22	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
Engine 4 Hours		24	24	24	24	24	24	24	10	-	-	-	11	11	-	-	19	
Generator 1 Power Output (kWhr)		17,156	16,788	16,784	16,788	16,784	16,428	16,356	16,424	16,200	16,204	11,116	8,524	16,644	16,780	16,780	16,780	
Generator 2 Power Output (kWhr)		-	-	-	-	-	-	-	8,492	14,428	14,428	14,428	12,292	8,324	15,156	15,592	2,716	
Generator 3 Power Output (kWhr)		16,756	16,756	16,760	16,760	16,756	15,660	16,372	15,932	15,724	16,404	16,756	16,748	16,688	16,756	16,168	16,556	
Generator 4 Power Output (kWhr)		14,516	14,380	14,380	14,376	14,376	14,216	14,212	5,708	-	-	852	7,728	5,228	-	-	11,804	
Gross Power Output (kWhr)		48,427	47,885	47,918	47,941	47,941	46,320	46,982	46,587	46,398	47,067	43,116	45,227	46,884	48,743	48,596	47,881	
Net Power Output (kWhr)		46,752	46,248	46,288	46,272	46,272	44,608	45,264	44,832	44,632	45,312	41,408	43,544	45,232	46,936	46,744	46,136	
Power Sold as metered by NStar, (kWhr)		46,663	46,164	46,205	46,164	46,162	44,516	45,169	44,751	44,527	45,240	41,345	43,456	45,063	46,828	46,634	46,040	
Offgrid RECs (kWhr)		1,675	1,637	1,630	1,669	1,669	1,712	1,718	1,755	1,766	1,755	1,708	1,683	1,652	1,809	1,852	1,745	
Calculated Performance Results																		
Daily																		
Power output (kW average when running)																		
Generator 1		715	700	699	700	699	685	682	684	675	675	654	656	694	699	699	699	
Generator 2		-	-	-	-	-	-	-	566	601	601	601	615	555	632	650	679	
Generator 3		762	698	698	698	698	653	682	664	655	684	698	698	695	698	674	690	
Generator 4		605	599	599	599	599	592	592	571	-	-	-	703	475	-	-	621	
Power output (kW average over 24-hrs)																		
Facility Gross		2,018	1,995	1,997	1,998	1,998	1,930	1,958	1,941	1,933	1,961	1,797	1,884	1,954	2,031	2,025	1,995	
Facility Net		1,948	1,927	1,929	1,928	1,928	1,859	1,886	1,868	1,860	1,888	1,725	1,814	1,885	1,956	1,948	1,922	
In-plant load		70	68	68	70	70	71	72	73	74	73	71	70	69	75	77	73	
Daily availability factor																		
Facility		73%	75%	75%	75%	75%	75%	75%	76%	75%	75%	68%	71%	77%	75%	75%	74%	
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	71%	54%	100%	100%	100%	100%	
Engine 2		0%	0%	0%	0%	0%	0%	0%	63%	100%	100%	100%	83%	63%	100%	100%	17%	
Engine 3		92%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Engine 4		100%	100%	100%	100%	100%	100%	100%	42%	0%	0%	0%	46%	46%	0%	0%	79%	
Daily capacity factor																		
Facility		61%	60%	61%	61%	61%	58%	59%	59%	59%	59%	54%	57%	59%	62%	61%	60%	
Engine 1		87%	85%	85%	85%	85%	83%	83%	83%	82%	82%	79%	79%	84%	85%	85%	85%	
Engine 2		0%	0%	0%	0%	0%	0%	0%	69%	73%	73%	74%	77%	79%	79%	82%	82%	
Engine 3		92%	85%	85%	85%	85%	79%	83%	80%	79%	83%	85%	85%	84%	85%	82%	84%	
Engine 4		73%	73%	73%	73%	73%	72%	72%	69%	0%	0%	0%	85%	58%	0%	0%	75%	
Cumulative by engine																		
Engine operating run hours in the month																		
Max Cumulative Available, hours		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384	
Engine 1		24	48	72	96	120	144	168	192	216	240	257	270	294	318	342	366	
Engine 2		0	0	0	0	0	0	0	15	39	63	87	107	122	146	170	174	
Engine 3		22	46	70	94	118	142	166	190	214	238	262	286	310	334	358	382	
Engine 4		24	48	72	96	120	144	168	178	178	178	178	189	200	200	200	219	
Engine operating run hours total from 0 hours																		
Engine 1		120,318	120,342	120,366	120,390	120,414	120,438	120,462	120,486	120,510	120,534	120,558	120,575	120,588	120,612	120,636	120,660	120,684
Engine 2		109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,841	109,856	109,880	109,904	109,928	109,948	109,963	109,987	110,011	110,015
Engine 3		119,843	119,865	119,889	119,913	119,937	119,961	119,985	120,009	120,033	120,057	120,081	120,105	120,129	120,153	120,177	120,201	120,225
Engine 4		116,893	116,917	116,941	116,965	116,989	117,013	117,037	117,061	117,071	117,071	117,071	117,071	117,082	117,093	117,093	117,093	117,112
Cumulative availability, %	October 1, 2021 @ 00:00 hours																	
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	97%	94%	94%	95%	95%	95%	
Engine 2		0%	0%	0%	0%	0%	0%	0%	8%	18%	26%	33%	37%	39%	43%	47%	45%	
Engine 3		92%	96%	97%	98%	98%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	
Engine 4		100%	100%	100%	100%	100%	100%	100%	93%	82%	74%	67%	66%	64%	60%	56%	57%	
Engine cumulative gross output, kWhr																		
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200	
Engine 1		715	1,414	2,114	2,813	3,513	4,197	4,879	5,563	6,238	6,913	7,567	8,223	8,916	9,615	10,314	11,014	
Engine 2		-	-	-	-	-	-	-	566	1,167	1,768	2,370	2,984	3,599	4,171	4,820	5,499	
Engine 3		762	1,460	2,158	2,856	3,555	4,207	4,889	5,553	6,208	6,892	7,590	8,288	8,983	9,681	10,355	11,045	
Engine 4		605	1,204	1,803	2,402	3,001	3,594	4,186	4,756	4,756	4,756	4,756	5,459	5,934	5,934	5,934	6,556	
Cumulative capacity factor, %																		
Engine 1		87%	86%	85%	85%	85%	85%	84%	84%	84%	84%	83%	83%	83%	83%	83%	83%	
Engine 2		0%	0%	0%	0%	0%	0%	0%	9%	16%	21%	26%	30%	33%	36%	39%	42%	
Engine 3		92%	88%	87%	87%	86%	85%	85%	84%	84%	84%	84%	84%	84%	84%	84%	84%	
Engine 4		73%	73%	73%	73%	73%	73%	72%	72%	64%	58%	52%	55%	55%	51%	48%	50%	

		Friday 10/1/2021	Saturday 10/2/2021	Sunday 10/3/2021	Monday 10/4/2021	Tuesday 10/5/2021	Wednesday 10/6/2021	Thursday 10/7/2021	Friday 10/8/2021	Saturday 10/9/2021	Sunday 10/10/2021	Monday 10/11/2021	Tuesday 10/12/2021	Wednesday 10/13/2021	Thursday 10/14/2021	Friday 10/15/2021	Saturday 10/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		70	142	214	286	358	430	502	575	647	719	784	852	926	998	1,070	1,141
Cumulative Availability, %		72.9%	74.0%	74.3%	74.5%	74.6%	74.7%	74.7%	74.9%	74.9%	74.9%	74.2%	74.0%	74.2%	74.3%	74.3%	74.3%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		48,427	96,312	144,230	192,171	240,112	286,432	333,414	380,001	426,399	473,466	516,582	561,809	608,693	657,436	706,032	753,913
Cumulative Capacity Factor		61.1%	60.8%	60.7%	60.7%	60.6%	60.3%	60.1%	60.0%	59.8%	59.8%	59.3%	59.1%	59.1%	59.3%	59.4%	59.5%
Cumulative fuel input, MMBtu HHV		580	1,178	1,781	2,375	2,969	3,551	4,152	4,778	5,399	6,027	6,624	7,241	7,861	8,498	9,107	9,769
Cumulative gross output, kWhr		48,427	96,312	144,230	192,171	240,112	286,432	333,414	380,001	426,399	473,466	516,582	561,809	608,693	657,436	706,032	753,913
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		10,785	11,238	11,326	11,157	11,157	11,311	11,514	12,094	12,054	12,003	12,471	12,279	11,908	11,749	11,281	12,455
Daily heat rate, Btu/kWe gross HHV		11,981	12,484	12,582	12,394	12,394	12,565	12,790	13,435	13,391	13,334	13,853	13,640	13,228	13,052	12,532	13,836
Cumulative heat rate, Btu/kWe gross LHV		10,785	11,010	11,115	11,126	11,132	11,161	11,211	11,319	11,399	11,459	11,544	11,603	11,626	11,635	11,611	11,665
Cumulative heat rate, Btu/kWe gross HHV		11,981	12,231	12,348	12,359	12,366	12,398	12,454	12,574	12,663	12,730	12,823	12,889	12,915	12,925	12,898	12,958
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		26,300	26,396	26,492	26,588	26,684	26,780	26,876	26,972	27,068	27,164	27,260	27,356	27,452	27,548	27,644	27,740
Actual cumulative engine run hours		19,267	19,339	19,411	19,483	19,555	19,627	19,699	19,772	19,844	19,916	19,981	20,049	20,123	20,195	20,267	20,338
Cumulative Availability, %		73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%
Max cumulative gross output, kWhr		21,700,800	21,780,000	21,859,200	21,938,400	22,017,600	22,096,800	22,176,000	22,255,200	22,334,400	22,413,600	22,492,800	22,572,000	22,651,200	22,730,400	22,809,600	22,888,800
Actual cumulative gross output, kWhr		13,289,716	13,337,601	13,385,519	13,433,460	13,481,401	13,527,721	13,574,703	13,621,290	13,667,688	13,714,755	13,757,871	13,803,098	13,849,982	13,898,725	13,947,321	13,995,202
Cumulative Capacity Factor		61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.2%	61.1%	61.1%	61.1%	61.1%
Cumulative fuel input, MMBtu HHV		169,625	170,222	170,825	171,420	172,014	172,596	173,197	173,823	174,444	175,071	175,669	176,286	176,906	177,542	178,151	178,814
Cumulative gross output, kWhr		13,289,716	13,337,601	13,385,519	13,433,460	13,481,401	13,527,721	13,574,703	13,621,290	13,667,688	13,714,755	13,757,871	13,803,098	13,849,982	13,898,725	13,947,321	13,995,202
Cumulative heat rate, Btu/kWe gross LHV		11,490	11,489	11,488	11,487	11,486	11,485	11,485	11,488	11,489	11,491	11,494	11,497	11,498	11,499	11,498	11,502
Cumulative heat rate, Btu/kWe gross HHV		12,764	12,763	12,762	12,761	12,759	12,759	12,759	12,761	12,763	12,765	12,769	12,771	12,773	12,773	12,773	12,777
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports		Friday 10/1/2021	Saturday 10/2/2021	Sunday 10/3/2021	Monday 10/4/2021	Tuesday 10/5/2021	Wednesday 10/6/2021	Thursday 10/7/2021	Friday 10/8/2021	Saturday 10/9/2021	Sunday 10/10/2021	Monday 10/11/2021	Tuesday 10/12/2021	Wednesday 10/13/2021	Thursday 10/14/2021	Friday 10/15/2021	Saturday 10/16/2021
Date																	
Hour																	
1		1,978	1,926	1,928	1,926	1,928	1,925	1,828	1,927	1,891	1,898	1,899	1,898	1,460	1,928	1,971	1,923
2		1,980	1,927	1,930	1,928	1,930	1,927	1,830	1,928	1,831	1,901	1,904	1,901	1,976	1,930	1,972	1,926
3		1,975	1,922	1,925	1,924	1,924	1,921	1,825	1,924	1,823	1,896	1,921	1,896	1,971	1,927	1,970	1,922
4		1,979	1,926	1,928	1,926	1,927	1,921	1,828	1,926	1,824	1,898	1,923	1,897	1,968	1,928	1,970	1,923
5		1,981	1,927	1,930	1,928	1,928	1,925	1,830	1,928	1,821	1,900	1,924	1,899	1,971	1,930	1,973	1,443
6		1,975	1,924	1,926	1,923	1,924	1,925	1,883	1,924	1,816	1,896	1,922	1,377	1,966	1,925	1,969	1,485
7		1,977	1,926	1,928	1,926	1,925	1,926	1,886	1,927	1,828	1,897	1,923	1,299	1,964	1,925	1,970	1,962
8		1,952	1,928	1,930	1,919	1,923	1,923	1,874	1,921	1,832	1,849	1,920	1,299	1,956	1,922	1,966	1,972
9		1,916	1,925	1,926	1,916	1,918	1,918	1,869	1,883	1,879	1,832	1,914	1,420	1,942	1,938	1,963	1,968
10		1,918	1,926	1,928	1,919	1,920	1,804	1,870	1,704	1,860	1,901	1,914	1,891	1,896	1,942	1,958	1,968
11		1,917	1,923	1,924	1,923	1,922	1,798	1,872	1,791	1,828	1,902	1,915	1,939	1,647	1,964	1,965	1,971
12		1,910	1,917	1,917	1,917	1,917	1,793	1,865	1,810	1,824	1,898	1,235	1,766	1,434	1,959	1,960	1,965
13		1,924	1,920	1,917	1,921	1,919	1,796	1,869	1,822	1,825	1,870	1,230	1,921	1,785	1,961	1,915	1,966
14		1,963	1,922	1,922	1,922	1,921	1,801	1,887	1,825	1,828	1,831	1,892	1,961	1,892	1,963	1,916	1,970
15		1,961	1,916	1,918	1,919	1,916	1,790	1,889	1,816	1,867	1,827	1,917	1,960	1,916	1,958	1,909	1,966
16		1,948	1,918	1,922	1,921	1,920	1,801	1,898	1,821	1,897	1,858	1,919	1,966	1,917	1,962	1,915	1,967
17		1,929	1,921	1,928	1,928	1,928	1,830	1,902	1,828	1,899	1,903	1,926	1,972	1,925	1,971	1,925	1,970
18		1,924	1,918	1,924	1,920	1,924	1,827	1,905	1,824	1,895	1,898	1,922	1,969	1,923	1,969	1,921	1,966
19		1,927	1,921	1,926	1,923	1,925	1,828	1,924	1,826	1,897	1,897	1,434	1,970	1,924	1,970	1,923	1,967
20		1,927	1,927	1,928	1,927	1,927	1,830	1,926	1,829	1,899	1,900	1,234	1,968	1,927	1,972	1,921	1,970
21		1,924	1,924	1,923	1,925	1,921	1,826	1,926	1,867	1,844	1,894	1,231	1,970	1,923	1,969	1,917	1,966
22		1,927	1,927	1,926	1,928	1,924	1,827	1,928	1,900	1,825	1,897	1,292	1,972	1,924	1,971	1,919	1,966
23		1,927	1,929	1,928	1,930	1,928	1,829	1,930	1,902	1,899	1,901	1,413	1,975	1,929	1,974	1,925	1,970
24		1,924	1,924	1,923	1,925	1,923	1,825	1,925	1,898	1,895	1,896	1,888	1,370	1,927	1,970	1,921	1,968
TOTAL		46,663	46,164	46,205	46,164	46,162	44,516	45,169	44,751	44,527	45,240	41,345	43,456	45,063	46,828	46,634	46,040
Cumulative Output Sold, kWhr		46,663	92,827	139,032	185,196	231,358	275,874	321,043	365,794	410,321	455,561	496,906	540,362	585,425	632,253	678,887	724,927
Transformer and line efficiency		99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%
Hourly average		1,944	1,924	1,925	1,924	1,923	1,855	1,882	1,865	1,855	1,885	1,723	1,811	1,878	1,951	1,943	1,918

[illegible]

	Sunday 10/17/2021	Monday 10/18/2021	Tuesday 10/19/2021	Wednesday 10/20/2021	Thursday 10/21/2021	Friday 10/22/2021	Saturday 10/23/2021	Sunday 10/24/2021	Monday 10/25/2021	Tuesday 10/26/2021	Wednesday 10/27/2021	Thursday 10/28/2021	Friday 10/29/2021	Saturday 10/30/2021	Sunday 10/31/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine run time	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880	2,976			
Actual cumulative engine run time	1,213	1,285	1,358	1,430	1,502	1,574	1,646	1,718	1,788	1,860	1,929	2,001	2,073	2,145	2,217			
Cumulative Availability, %	74.3%	74.4%	74.5%	74.5%	74.5%	74.5%	74.5%	74.6%	74.5%	74.5%	74.4%	74.4%	74.5%	74.5%	74.5%			
Max cumulative gross output, kWh	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000	2,455,200			
Actual cumulative gross output, kWh	802,499	850,021	896,897	943,641	990,568	1,038,145	1,085,299	1,129,467	1,178,599	1,226,444	1,274,627	1,321,368	1,368,211	1,416,013	1,463,077			
Cumulative Capacity Factor	59.6%	59.6%	59.6%	59.6%	59.6%	59.6%	59.6%	59.4%	59.5%	59.6%	59.6%	59.6%	59.6%	59.6%	59.6%			
Cumulative fuel input, MMBtu	10,403	11,028	11,634	12,288	12,918	13,551	14,181	14,793	15,436	16,064	16,700	17,315	17,927	18,558	19,178			
Cumulative gross output, kWh	802,499	850,021	896,897	943,641	990,568	1,038,145	1,085,299	1,129,467	1,178,599	1,226,444	1,274,627	1,321,368	1,368,211	1,416,013	1,463,077			
Heat Rate																		
Daily heat rate, Btu/kWe gross	11,750	11,824	11,639	12,604	12,085	11,981	12,025	12,459	11,792	11,810	11,880	11,852	11,763	11,883	11,847			
Daily heat rate, Btu/kWe net	13,053	13,135	12,930	14,002	13,425	13,309	13,358	13,840	13,099	13,119	13,198	13,166	13,067	13,200	13,161			
Cumulative heat rate, Btu/kWe gross	11,670	11,678	11,676	11,722	11,740	11,751	11,763	11,790	11,790	11,791	11,794	11,796	11,795	11,798	11,800			
Cumulative heat rate, Btu/kWe net	12,964	12,973	12,971	13,022	13,041	13,053	13,067	13,097	13,097	13,098	13,102	13,104	13,103	13,106	13,108			
Cumulative by Facility starting C																		
Max cumulative available engine run time	27,836	27,932	28,028	28,124	28,220	28,316	28,412	28,508	28,604	28,700	28,796	28,892	28,988	29,084	29,180			
Actual cumulative engine run time	20,410	20,482	20,555	20,627	20,699	20,771	20,843	20,915	20,985	21,057	21,126	21,198	21,270	21,342	21,414			
Cumulative Availability, %	73.3%	73.3%	73.3%	73.3%	73.3%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%			
Max cumulative gross output, kWh	22,968,000	23,047,200	23,126,400	23,205,600	23,284,800	23,364,000	23,443,200	23,522,400	23,601,600	23,680,800	23,760,000	23,839,200	23,918,400	23,997,600	24,076,800			
Actual cumulative gross output, kWh	14,043,788	14,091,310	14,138,186	14,184,930	14,231,857	14,279,434	14,326,588	14,370,756	14,419,888	14,467,733	14,515,916	14,562,657	14,609,500	14,657,302	14,704,366			
Cumulative Capacity Factor	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%			
Cumulative fuel input, MMBtu	179,448	180,072	180,678	181,333	181,963	182,596	183,226	183,837	184,481	185,108	185,744	186,360	186,972	187,603	188,222			
Cumulative gross output, kWh	14,043,788	14,091,310	14,138,186	14,184,930	14,231,857	14,279,434	14,326,588	14,370,756	14,419,888	14,467,733	14,515,916	14,562,657	14,609,500	14,657,302	14,704,366			
Cumulative heat rate, Btu/kWe gross	11,502	11,504	11,504	11,508	11,510	11,511	11,513	11,516	11,517	11,518	11,519	11,520	11,521	11,522	11,523			
Cumulative heat rate, Btu/kWe net	12,778	12,779	12,779	12,783	12,786	12,787	12,789	12,792	12,793	12,795	12,796	12,797	12,798	12,799	12,800			
Service																		
Engine 1																		
Engine 2																		
Engine 3																		
Engine 4																		
Oil - oil and filter change																		
Service - plugs, air filter, valve insp																		
Precipitation																		
NSTAR Power Reports	Sunday 10/17/2021	Monday 10/18/2021	Tuesday 10/19/2021	Wednesday 10/20/2021	Thursday 10/21/2021	Friday 10/22/2021	Saturday 10/23/2021	Sunday 10/24/2021	Monday 10/25/2021	Tuesday 10/26/2021	Wednesday 10/27/2021	Thursday 10/28/2021	Friday 10/29/2021	Saturday 10/30/2021	Sunday 10/31/2021	TOTAL		
Hour																		
1	1,970	1,921	1,870	1,871	1,871	1,875	1,872	1,873	1,970	1,972	2,017	1,869	1,872	1,924	1,975			
2	1,973	1,922	1,874	1,874	1,874	1,876	1,876	1,875	1,971	1,976	2,019	1,871	1,875	1,929	1,982			
3	1,969	1,919	1,870	1,871	1,873	1,920	1,873	1,873	1,968	1,972	2,017	1,869	1,870	1,926	2,023			
4	1,971	1,922	1,871	1,871	1,873	1,921	1,876	1,871	1,967	1,973	2,017	1,868	1,873	1,925	2,022			
5	1,974	1,924	1,872	1,873	1,876	1,924	1,878	1,874	1,971	1,977	2,020	1,873	1,877	1,928	2,025			
6	1,971	1,920	1,870	1,870	1,871	1,921	1,875	1,871	1,969	1,974	2,013	1,868	1,874	1,924	1,533			
7	1,972	1,920	1,871	1,871	1,872	1,922	1,874	1,871	1,963	1,974	2,013	1,861	1,873	1,925	1,571			
8	1,974	1,919	1,869	1,870	1,869	1,920	1,877	1,873	1,962	1,953	2,012	1,863	1,865	1,927	2,025			
9	1,971	1,915	1,865	1,864	1,865	1,913	1,875	1,870	1,960	1,973	2,004	1,862	1,861	1,924	2,019			
10	1,969	1,916	1,862	1,865	1,862	1,912	1,876	1,873	1,955	1,974	1,997	1,861	1,872	1,912	2,020			
11	1,965	1,919	1,792	1,866	1,868	1,914	1,879	1,876	1,963	1,997	1,987	1,864	1,874	1,878	2,024			
12	1,968	1,395	1,917	1,865	1,863	1,914	1,875	1,872	1,961	1,408	2,001	1,861	1,871	1,874	1,986			
13	1,969	1,924	1,869	1,866	1,864	1,914	1,876	1,873	1,962	1,316	2,002	1,865	1,870	1,873	1,558			
14	1,938	1,968	1,870	1,867	1,867	1,917	1,879	1,876	1,959	1,220	1,997	1,868	1,878	1,878	1,902			
15	1,920	1,960	1,866	1,863	1,863	1,914	1,913	1,873	1,962	1,998	1,577	1,867	1,868	1,897	1,619			
16	1,922	1,967	1,870	1,864	1,865	1,917	1,922	1,873	1,956	2,002	1,997	1,865	1,867	1,921	1,336			
17	1,925	1,973	1,877	1,874	1,876	1,925	1,928	1,876	1,975	2,009	1,958	1,879	1,880	1,924	1,838			
18	1,921	1,945	1,874	1,871	1,873	1,922	1,924	1,872	1,972	2,013	1,919	1,874	1,873	1,923	2,023			
19	1,922	1,921	1,873	1,871	1,874	1,901	1,885	1,007	1,972	2,013	1,901	1,874	1,873	1,922	2,020			
20	1,923	1,923	1,874	1,873	1,877	1,876	1,877	89	1,976	2,016	1,873	1,876	1,876	1,927	1,996			
21	1,919	1,916	1,871	1,870	1,873	1,874	1,872	1,688	1,972	2,013	1,871	1,872	1,874	1,925	1,971			
22	1,919	1,888	1,872	1,868	1,873	1,873	1,873	1,971	2,013	1,869	1,874	1,876	1,876	1,925	1,970			
23	1,923	1,871	1,876	1,870	1,876	1,875	1,877	1,973	1,975	2,016	1,873	1,876	1,879	1,953	1,936			
24	1,920	1,866	1,873	1,868	1,872	1,871	1,871	1,971	1,972	2,015	1,869	1,874	1,897	1,974	1,921			
TOTAL	46,768	45,634	44,868	44,856	44,893	45,759	45,203	42,416	47,204	45,767	46,156	44,854	44,968	46,038	45,295			
Cumulative Output Sold, kWh	771,695	817,329	862,197	907,053	951,946	997,705	1,042,908	1,085,324	1,132,528	1,178,295	1,224,451	1,269,305	1,314,273	1,360,311	1,405,606			
Transformer and line efficiency	99.8%	99.8%	99.8%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.7%			
Hourly average	1,949	1,901	1,870	1,869	1,871	1,907	1,883	1,767	1,967	1,907	1,923	1,869	1,874	1,918	1,887			

NOVEMBER 2021								DLST Sunday 11/7/2021	Monday 11/8/2021	Tuesday 11/9/2021	Wednesday 11/10/2021	Thursday 11/11/2021	Friday 11/12/2021	Saturday 11/13/2021	Sunday 11/14/2021	Monday 11/15/2021	Tuesday 11/16/2021
		Monday 11/1/2021	Tuesday 11/2/2021	Wednesday 11/3/2021	Thursday 11/4/2021	Friday 11/5/2021	Saturday 11/6/2021										
LFG and Biogas Flow to the Engines (KSCF)		1,187	1,223	1,244	1,210	1,189	1,207	1,230	1,262	1,257	1,301	1,292	1,303	1,271	1,262	1,258	1,267
LFG and Biogas Flow to the Engines (MMBTU HHV)		608	626	638	619	610	621	643	661	661	677	665	665	697	685	685	677
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,187	1,223	1,244	1,210	1,189	1,207	1,230	1,262	1,257	1,301	1,292	1,303	1,271	1,262	1,258	1,267
LFG and Biogas Total Flow (MMBTU HHV)		608	626	638	619	610	621	643	661	661	677	665	665	697	685	685	677
Average Methane Content (%)		50.6	50.5	50.7	50.5	50.7	50.8	51.6	51.8	52.0	51.4	50.8	50.4	54.2	53.6	53.8	52.8
Engine 1 Hours		24	24	24	24	24	24	25	24	24	24	24	24	24	24	24	24
Engine 2 Hours		24	24	24	24	24	24	25	24	24	24	24	24	24	24	24	24
Engine 3 Hours		24	24	24	24	24	24	25	24	24	24	24	24	24	24	24	24
Engine 4 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 1 Power Output (kWhr)		15,816	15,592	15,596	15,364	15,588	15,588	16,079	16,432	16,780	16,780	16,780	16,776	16,788	16,788	16,788	16,596
Generator 2 Power Output (kWhr)		15,580	15,576	15,584	15,248	15,008	15,112	15,951	15,644	16,436	16,544	16,124	17,268	17,956	16,924	17,604	15,804
Generator 3 Power Output (kWhr)		15,548	15,556	15,552	15,220	15,552	15,100	15,754	15,548	14,320	16,240	15,624	16,684	16,736	16,728	16,736	16,040
Generator 4 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Power Output (kWhr)		46,966	46,825	46,800	45,878	46,168	45,896	48,435	47,676	47,566	49,621	48,488	50,803	51,572	50,584	51,234	48,561
Net Power Output (kWhr)		45,200	45,184	45,216	44,328	44,648	44,336	46,948	46,080	46,032	48,024	46,904	49,160	49,952	48,896	49,512	46,832
Power Sold as metered by NStar, (kWhr)		45,084	45,060	45,102	44,221	44,537	44,223	46,807	45,946	45,915	47,898	46,806	49,020	49,811	48,781	49,379	46,712
Offgrid RECs (kWhr)		1,766	1,641	1,584	1,550	1,519	1,560	1,487	1,596	1,534	1,597	1,584	1,643	1,620	1,688	1,722	1,729
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		659	650	650	640	650	650	643	685	699	699	699	699	700	700	700	692
Generator 2		649	649	649	635	625	630	638	652	685	689	672	720	748	705	734	659
Generator 3		648	648	648	634	648	629	630	648	597	677	651	695	697	697	697	668
Generator 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Power output (kW average over 24-hrs)																	
Facility Gross		1,957	1,951	1,950	1,912	1,924	1,912	1,937	1,987	1,982	2,068	2,020	2,117	2,149	2,108	2,135	2,023
Facility Net		1,883	1,883	1,884	1,847	1,860	1,847	1,878	1,920	1,918	2,001	1,954	2,048	2,081	2,037	2,063	1,951
In-plant load		74	68	66	65	63	65	59	67	64	67	66	68	68	70	72	72
Daily availability factor																	
Facility		75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Daily capacity factor																	
Facility		59%	59%	59%	58%	58%	58%	59%	60%	60%	63%	61%	64%	65%	64%	65%	61%
Engine 1		80%	79%	79%	78%	79%	79%	78%	83%	85%	85%	85%	85%	85%	85%	85%	84%
Engine 2		79%	79%	79%	78%	79%	79%	77%	79%	83%	84%	81%	87%	85%	89%	89%	80%
Engine 3		79%	79%	79%	77%	79%	76%	76%	79%	72%	82%	79%	84%	85%	84%	85%	81%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cumulative by engine																	
Engine operating run hours in the month																	
Max Cumulative Available, hours		24	48	72	96	120	144	169	193	217	241	265	289	313	337	361	385
Engine 1		24	48	72	96	120	144	169	193	217	241	265	289	313	337	361	385
Engine 2		24	48	72	96	120	144	169	193	217	241	265	289	313	337	361	385
Engine 3		24	48	72	96	120	144	169	193	217	241	265	289	313	337	361	385
Engine 4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine operating run hours total from 0 hours																	
Engine 1		121,041	121,065	121,089	121,113	121,137	121,161	121,210	121,234	121,258	121,282	121,306	121,330	121,354	121,378	121,402	121,426
Engine 2		110,316	110,340	110,364	110,388	110,412	110,436	110,485	110,509	110,533	110,557	110,581	110,605	110,629	110,653	110,677	110,701
Engine 3		120,585	120,609	120,633	120,657	120,681	120,705	120,754	120,778	120,802	120,826	120,850	120,874	120,898	120,922	120,946	120,970
Engine 4		117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170	117,170
Cumulative availability, % November 1, 2021 @ 00:00 hours																	
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine cumulative gross output, kWhr																	
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200
Engine 1		659	1,309	1,959	2,599	3,248	3,898	4,541	5,225	5,925	6,624	7,323	8,022	8,721	9,421	10,120	10,812
Engine 2		649	1,298	1,948	2,583	3,208	3,838	4,476	5,128	5,813	6,502	7,174	7,893	8,641	9,347	10,080	10,739
Engine 3		648	1,296	1,944	2,578	3,226	3,855	4,485	5,133	5,730	6,407	7,058	7,753	8,450	9,147	9,844	10,513
Engine 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cumulative capacity factor, %																	
Engine 1		80%	79%	79%	79%	79%	79%	79%	79%	80%	80%	81%	81%	81%	82%	82%	82%
Engine 2		79%	79%	79%	78%	78%	78%	78%	78%	78%	79%	79%	80%	81%	81%	81%	81%
Engine 3		79%	79%	79%	78%	78%	78%	78%	78%	77%	78%	78%	78%	79%	79%	80%	80%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

		Monday 11/1/2021	Tuesday 11/2/2021	Wednesday 11/3/2021	Thursday 11/4/2021	Friday 11/5/2021	Saturday 11/6/2021	Sunday 11/7/2021	Monday 11/8/2021	Tuesday 11/9/2021	Wednesday 11/10/2021	Thursday 11/11/2021	Friday 11/12/2021	Saturday 11/13/2021	Sunday 11/14/2021	Monday 11/15/2021	Tuesday 11/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		72	144	216	288	360	432	507	579	651	723	795	867	939	1,011	1,083	1,155
Cumulative Availability, %		75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.4%	75.4%	75.3%	75.3%	75.3%	75.3%	75.2%	75.2%	75.2%	75.2%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		46,966	93,791	140,591	186,469	232,637	278,533	326,968	374,644	422,210	471,831	520,319	571,122	622,694	673,278	724,512	773,073
Cumulative Capacity Factor		59.3%	59.2%	59.2%	58.9%	58.7%	58.6%	59.0%	59.1%	59.2%	59.6%	59.7%	60.1%	60.5%	60.7%	61.0%	61.0%
Cumulative fuel input, MMBtu HHV		608	1,233	1,872	2,491	3,100	3,721	4,363	5,025	5,686	6,362	7,027	7,691	8,388	9,073	9,758	10,436
Cumulative gross output, kWhr		46,966	93,791	140,591	186,469	232,637	278,533	326,968	374,644	422,210	471,831	520,319	571,122	622,694	673,278	724,512	773,073
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,648	12,029	12,276	12,144	11,890	12,173	11,941	12,484	12,513	12,275	12,337	11,775	12,163	12,190	12,036	12,557
Daily heat rate, Btu/kWe gross HHV		12,939	13,363	13,637	13,490	13,208	13,523	13,265	13,869	13,901	13,635	13,704	13,080	13,511	13,542	13,370	13,949
Cumulative heat rate, Btu/kWe gross LHV		11,648	11,838	11,984	12,023	11,997	12,026	12,013	12,073	12,123	12,139	12,157	12,123	12,126	12,131	12,125	12,152
Cumulative heat rate, Btu/kWe gross HHV		12,939	13,151	13,312	13,356	13,327	13,359	13,345	13,412	13,467	13,485	13,505	13,467	13,471	13,476	13,469	13,499
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		29,276	29,372	29,468	29,564	29,660	29,756	29,852	29,948	30,044	30,140	30,236	30,332	30,428	30,524	30,620	30,716
Actual cumulative engine run hours		21,486	21,558	21,630	21,702	21,774	21,846	21,921	21,993	22,065	22,137	22,209	22,281	22,353	22,425	22,497	22,569
Cumulative Availability, %		73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.4%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%
Max cumulative gross output, kWhr		24,156,000	24,235,200	24,314,400	24,393,600	24,472,800	24,552,000	24,631,200	24,710,400	24,789,600	24,868,800	24,948,000	25,027,200	25,106,400	25,185,600	25,264,800	25,344,000
Actual cumulative gross output, kWhr		14,751,332	14,798,157	14,844,957	14,890,835	14,937,003	14,982,899	15,031,334	15,079,010	15,126,576	15,176,197	15,224,685	15,275,488	15,327,060	15,377,644	15,428,878	15,477,439
Cumulative Capacity Factor		61.1%	61.1%	61.1%	61.0%	61.0%	61.0%	61.0%	61.0%	61.0%	61.0%	61.0%	61.0%	61.0%	61.1%	61.1%	61.1%
Cumulative fuel input, MMBtu HHV		188,830	189,455	190,094	190,713	191,322	191,943	192,586	193,247	193,908	194,585	195,249	195,914	196,610	197,295	197,980	198,658
Cumulative gross output, kWhr		14,751,332	14,798,157	14,844,957	14,890,835	14,937,003	14,982,899	15,031,334	15,079,010	15,126,576	15,176,197	15,224,685	15,275,488	15,327,060	15,377,644	15,428,878	15,477,439
Cumulative heat rate, Btu/kWe gross LHV		11,523	11,525	11,527	11,529	11,530	11,531	11,534	11,537	11,540	11,542	11,545	11,545	11,547	11,550	11,551	11,554
Cumulative heat rate, Btu/kWe gross HHV		12,801	12,803	12,805	12,807	12,809	12,811	12,812	12,816	12,819	12,822	12,825	12,825	12,828	12,830	12,832	12,835
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports																	
Date		Monday 11/1/2021	Tuesday 11/2/2021	Wednesday 11/3/2021	Thursday 11/4/2021	Friday 11/5/2021	Saturday 11/6/2021	Sunday 11/7/2021	Monday 11/8/2021	Tuesday 11/9/2021	Wednesday 11/10/2021	Thursday 11/11/2021	Friday 11/12/2021	Saturday 11/13/2021	Sunday 11/14/2021	Monday 11/15/2021	Tuesday 11/16/2021
Hour																	
1		1,920	1,868	1,881	1,879	1,857	1,853	1,855	1,884	1,925	1,985	1,975	1,977	2,075	2,075	2,043	2,026
2		1,925	1,871	1,884	1,884	1,858	1,855	1,857	1,881	1,922	1,983	1,943	1,975	2,072	2,073	2,075	2,024
3		1,922	1,865	1,882	1,881	1,859	1,853	1,854	1,881	1,920	1,979	1,923	1,973	2,073	2,066	2,073	2,009
4		1,921	1,867	1,879	1,879	1,857	1,852	1,853	1,883	1,925	1,984	1,930	1,980	2,076	2,036	2,076	1,977
5		1,898	1,872	1,883	1,883	1,860	1,855	1,857	1,881	1,923	1,981	1,926	1,977	2,075	2,022	2,075	1,975
6		1,874	1,872	1,882	1,881	1,858	1,847	1,855	1,881	1,921	1,979	1,925	2,006	2,072	2,022	2,071	1,974
7		1,869	1,872	1,880	1,815	1,856	1,826	1,853	1,892	1,925	1,983	1,927	2,027	2,075	2,029	2,075	1,976
8		1,872	1,870	1,879	1,703	1,855	1,834	1,857	1,972	1,925	1,976	1,922	2,021	2,072	2,025	2,068	1,970
9		1,868	1,875	1,874	1,725	1,851	1,830	1,857	1,944	1,926	1,972	1,920	2,016	2,075	2,025	2,066	1,879
10		1,868	1,872	1,872	1,727	1,851	1,833	1,873	1,928	1,425	1,966	1,924	2,022	2,079	2,029	2,071	1,856
11		1,872	1,876	1,877	1,788	1,856	1,838	1,886	1,924	1,336	2,064	1,920	2,022	2,077	2,027	2,070	1,877
12		1,858	1,876	1,871	1,876	1,853	1,835	1,884	1,918	1,699	2,066	1,917	2,020	2,075	2,025	2,068	1,722
13		1,858	1,878	1,870	1,874	1,853	1,834	1,882	1,922	1,981	2,069	1,936	2,025	2,079	2,030	2,073	1,963
14		1,862	1,883	1,877	1,850	1,856	1,838	1,886	1,919	1,977	2,049	1,969	2,061	2,077	2,029	2,070	1,971
15		1,862	1,880	1,870	1,803	1,859	1,835	1,883	1,924	2,025	2,018	1,971	2,074	2,076	2,027	2,069	1,971
16		1,866	1,881	1,875	1,826	1,858	1,833	1,882	1,927	2,078	2,026	1,978	2,119	2,081	2,030	2,073	1,976
17		1,878	1,889	1,883	1,881	1,862	1,838	1,887	1,924	2,079	1,996	1,976	2,124	2,078	2,026	2,072	1,974
18		1,871	1,886	1,884	1,880	1,858	1,835	1,882	1,923	2,042	1,975	1,972	2,122	2,075	2,026	2,050	1,976
19		1,869	1,885	1,883	1,881	1,855	1,832	1,881	1,923	2,032	1,978	1,976	2,102	2,079	2,028	2,027	1,978
20		1,872	1,888	1,886	1,876	1,858	1,851	1,883	1,924	2,002	1,972	1,973	2,077	2,077	2,026	2,025	1,937
21		1,871	1,885	1,882	1,857	1,853	1,855	1,879	1,921	1,980	1,973	1,972	2,072	2,073	2,025	2,023	1,925
22		1,869	1,881	1,881	1,856	1,849	1,853	1,876	1,925	1,983	1,977	1,980	2,079	2,077	2,028	2,026	1,929
23		1,871	1,885	1,885	1,860	1,854	1,854	1,883	1,924	1,983	1,974	1,976	2,077	2,073	2,027	2,023	1,924
24		1,868	1,883	1,882	1,856	1,851	1,854	1,881	1,921	1,981	1,973	1,975	2,072	2,070	2,025	2,017	1,923
TOTAL		45,084	45,060	45,102	44,221	44,537	44,223	46,807	45,946	45,915	47,898	46,806	49,020	49,811	48,781	49,379	46,712
Cumulative Output Sold, kWhr		45,084	90,144	135,246	179,467	224,004	268,227	315,034	360,980	406,895	454,793	501,599	550,619	600,430	649,211	698,590	745,302
Transformer and line efficiency		99.7%	99.7%	99.7%	99.8%	99.8%	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%	99.7%	99.7%	99.8%	99.7%	99.7%
Hourly average		1,879	1,878	1,879	1,843	1,856	1,843	1,872	1,914	1,913	1,996	1,950	2,043	2,075	2,033	2,057	1,946

NOVEMBER 2021																	
	Wednesday 11/17/2021	Thursday 11/18/2021	Friday 11/19/2021	Saturday 11/20/2021	Sunday 11/21/2021	Monday 11/22/2021	Tuesday 11/23/2021	Wednesday 11/24/2021	Thursday 11/25/2021	Friday 11/26/2021	Saturday 11/27/2021	Sunday 11/28/2021	Monday 11/29/2021	Tuesday 11/30/2021	TOTAL	Biogas	LFG
LFG and Biogas Flow to the Engine	1,235	1,242	1,218	1,282	1,270	1,270	1,234	1,234	1,207	1,312	1,242	1,242	1,244	1,247	37,443	763	36,680
LFG and Biogas Flow to the Engine	660	674	656	656	659	672	653	641	636	701	650	650	648	645	19,635	514	19,121
LFG and Biogas Flow to the Flare (	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6%	97%
LFG and BiogasFlow to the Flare (f	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF	1,235	1,242	1,218	1,282	1,270	1,270	1,234	1,234	1,207	1,312	1,242	1,242	1,244	1,247	37,443		
LFG and Biogas Total Flow (MMBT	660	674	656	656	659	672	653	641	636	701	650	650	648	645	19,635		
Average Methane Content (%)	52.8	53.6	53.2	50.6	51.3	52.3	52.2	51.3	52.0	52.8	51.7	51.7	51.4	51.1	51.8		
Engine 1 Hours	24	24	24	24	24	24	24	24	24	24	24	24	24	24	721		
Engine 2 Hours	24	24	24	22	24	24	24	24	24	24	24	24	24	24	719		
Engine 3 Hours	24	24	24	24	24	24	24	24	24	24	24	24	24	24	721		
Engine 4 Hours	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
Generator 1 Power Output (kWhr)	16,784	16,776	16,192	16,792	16,780	16,328	15,464	16,788	16,784	16,792	16,788	15,020	15,972	16,792	490,183		
Generator 2 Power Output (kWhr)	16,164	16,780	15,248	15,716	16,528	17,328	16,740	15,608	16,776	17,192	16,784	16,676	16,472	16,152	488,527		
Generator 3 Power Output (kWhr)	15,556	16,236	16,740	16,732	16,728	16,684	16,732	15,804	16,084	16,740	15,912	15,556	16,296	15,780	480,518		
Generator 4 Power Output (kWhr)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gross Power Output (kWhr)	48,636	49,815	48,259	49,343	50,153	50,418	49,006	48,271	49,670	50,877	49,595	47,344	48,799	48,820	1,462,079		
Net Power Output (kWhr)	46,752	48,104	46,528	47,576	48,448	48,680	47,160	46,400	47,900	49,028	47,739	45,505	46,870	46,886	1,410,828		
Power Sold as metered by NStar, (	46,636	47,976	46,422	47,499	48,364	48,557	47,056	46,319	47,859	48,921	47,650	45,417	46,749	46,780	1,407,507	CRMBCB inplant	
Offgrid RECs (kWhr)	1,884	1,711	1,731	1,767	1,705	1,738	1,846	1,871	1,770	1,849	1,856	1,839	1,929	1,934	51,250	9,170	
Calculated Performance Results																	18%
Daily																	of total in-plant power
Power output (kW average whe																	
Generator 1	699	699	675	700	699	680	644	700	699	700	700	626	666	700			
Generator 2	674	699	635	714	689	722	698	650	699	716	699	695	686	673			
Generator 3	648	677	698	697	697	695	697	659	670	698	663	648	679	658			
Generator 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Power output (kW average ove																	
Facility Gross	2,027	2,076	2,011	2,056	2,090	2,101	2,042	2,011	2,070	2,120	2,066	1,973	2,033	2,034			
Facility Net	1,948	2,004	1,939	1,982	2,019	2,028	1,965	1,933	1,996	2,043	1,989	1,896	1,953	1,954			
In-plant load	79	71	72	74	71	72	77	78	74	77	77	77	80	81			
Daily availability factor																	
Facility	77%	75%	75%	73%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%			
Engine 1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 2	100%	100%	100%	92%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 4	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Daily capacity factor																	
Facility	61%	63%	61%	62%	63%	64%	62%	61%	63%	64%	63%	60%	62%	62%			
Engine 1	85%	85%	82%	85%	85%	82%	78%	85%	85%	85%	85%	76%	81%	85%			
Engine 2	82%	85%	77%	87%	83%	88%	85%	79%	85%	87%	85%	84%	83%	82%			
Engine 3	79%	82%	85%	85%	84%	84%	85%	80%	81%	85%	80%	79%	82%	80%			
Engine 4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Cumulative by engine																	
Engine operating run hours in tl																	
Max Cumulative Available,	409	433	457	481	505	529	553	577	601	625	649	673	697	721			
Engine 1	409	433	457	481	505	529	553	577	601	625	649	673	697	721			
Engine 2	409	433	457	479	503	527	551	575	599	623	647	671	695	719			
Engine 3	409	433	457	481	505	529	553	577	601	625	649	673	697	721			
Engine 4	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Engine operating run hours tote																	
Engine 1	121,450	121,474	121,498	121,522	121,546	121,570	121,594	121,618	121,642	121,666	121,690	121,714	121,738	121,762			
Engine 2	110,725	110,749	110,773	110,795	110,819	110,843	110,867	110,891	110,915	110,939	110,963	110,987	111,011	111,035			
Engine 3	120,994	121,018	121,042	121,066	121,090	121,114	121,138	121,162	121,186	121,210	121,234	121,258	121,282	121,306			
Engine 4	117,172	117,172	117,172	117,172	117,172	117,172	117,172	117,172	117,172	117,172	117,172	117,172	117,172	117,172			
Cumulative availability, %																	
Engine 1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Engine cumulative gross output																	
Max cumulative capacity or	14,025	14,850	15,675	16,500	17,325	18,150	18,975	19,800	20,625	21,450	22,275	23,100	23,925	24,750			
Engine 1	11,511	12,210	12,885	13,585	14,284	14,964	15,608	16,308	17,007	17,707	18,406	19,032	19,698	20,397			
Engine 2	11,412	12,111	12,747	13,461	14,150	14,872	15,569	16,219	16,918	17,635	18,334	19,029	19,715	20,388			
Engine 3	11,161	11,837	12,535	13,232	13,929	14,624	15,321	15,980	16,650	17,348	18,011	18,659	19,338	19,995			
Engine 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Cumulative capacity factor, %																	
Engine 1	82%	82%	82%	82%	82%	82%	82%	82%	82%	83%	83%	82%	82%	82%			
Engine 2	81%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%			
Engine 3	80%	80%	80%	80%	80%	81%	81%	81%	81%	81%	81%	81%	81%	81%			
Engine 4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			

	Wednesday 11/17/2021	Thursday 11/18/2021	Friday 11/19/2021	Saturday 11/20/2021	Sunday 11/21/2021	Monday 11/22/2021	Tuesday 11/23/2021	Wednesday 11/24/2021	Thursday 11/25/2021	Friday 11/26/2021	Saturday 11/27/2021	Sunday 11/28/2021	Monday 11/29/2021	Tuesday 11/30/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																	
Max cumulative available engine	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880			
Actual cumulative engine run	1,229	1,301	1,373	1,443	1,515	1,587	1,659	1,731	1,803	1,875	1,947	2,019	2,091	2,163			
Cumulative Availability, %	75.3%	75.3%	75.3%	75.2%	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%	75.1%			
Max cumulative gross output, kWh	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000			
Actual cumulative gross output, kWh	821,709	871,524	919,783	969,126	1,019,279	1,069,697	1,118,703	1,166,974	1,216,644	1,267,521	1,317,116	1,364,460	1,413,259	1,462,079			
Cumulative Capacity Factor	61.0%	61.1%	61.1%	61.2%	61.3%	61.4%	61.4%	61.4%	61.4%	61.6%	61.6%	61.5%	61.5%	61.5%			
Cumulative fuel input, MMBtu	11,096	11,769	12,425	13,081	13,740	14,412	15,065	15,706	16,342	17,043	17,692	18,342	18,990	19,635			
Cumulative gross output, kWh	821,709	871,524	919,783	969,126	1,019,279	1,069,697	1,118,703	1,166,974	1,216,644	1,267,521	1,317,116	1,364,460	1,413,259	1,462,079			
Heat Rate																	
Daily heat rate, Btu/kWe gross	12,214	12,171	12,240	11,971	11,821	11,998	11,986	11,959	11,525	12,401	11,793	12,353	11,944	11,901			
Daily heat rate, Btu/kWe gross	13,568	13,520	13,597	13,299	13,132	13,329	13,315	13,285	12,802	13,776	13,100	13,723	13,269	13,220			
Cumulative heat rate, Btu/kWe	12,155	12,156	12,161	12,151	12,135	12,128	12,122	12,115	12,091	12,104	12,092	12,101	12,096	12,089			
Cumulative heat rate, Btu/kWe	13,503	13,504	13,509	13,498	13,480	13,473	13,466	13,459	13,432	13,446	13,433	13,443	13,437	13,429			
Cumulative by Facility starting C																	
Max cumulative available engine	30,812	30,908	31,004	31,100	31,196	31,292	31,388	31,484	31,580	31,676	31,772	31,868	31,964	32,060			
Actual cumulative engine run	22,643	22,715	22,787	22,857	22,929	23,001	23,073	23,145	23,217	23,289	23,361	23,433	23,505	23,577			
Cumulative Availability, %	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%			
Max cumulative gross output, kWh	25,423,200	25,502,400	25,581,600	25,660,800	25,740,000	25,819,200	25,898,400	25,977,600	26,056,800	26,136,000	26,215,200	26,294,400	26,373,600	26,452,800			
Actual cumulative gross output, kWh	15,526,075	15,575,890	15,624,149	15,673,492	15,723,645	15,774,063	15,823,069	15,871,340	15,921,010	15,971,887	16,021,482	16,068,826	16,117,625	16,166,445			
Cumulative Capacity Factor	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.1%			
Cumulative fuel input, MMBtu	199,318	199,991	200,647	201,304	201,962	202,634	203,287	203,928	204,564	205,265	205,914	206,564	207,212	207,857			
Cumulative gross output, kWh	15,526,075	15,575,890	15,624,149	15,673,492	15,723,645	15,774,063	15,823,069	15,871,340	15,921,010	15,971,887	16,021,482	16,068,826	16,117,625	16,166,445			
Cumulative heat rate, Btu/kWe	11,556	11,558	11,560	11,562	11,563	11,564	11,565	11,566	11,566	11,569	11,570	11,572	11,573	11,574			
Cumulative heat rate, Btu/kWe	12,838	12,840	12,842	12,844	12,844	12,846	12,847	12,849	12,849	12,852	12,852	12,855	12,856	12,857			
Service																	
Engine 1																	
Engine 2																	
Engine 3																	
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve insp																	
Precipitation																	
NSTAR Power Reports	Wednesday 11/17/2021	Thursday 11/18/2021	Friday 11/19/2021	Saturday 11/20/2021	Sunday 11/21/2021	Monday 11/22/2021	Tuesday 11/23/2021	Wednesday 11/24/2021	Thursday 11/25/2021	Friday 11/26/2021	Saturday 11/27/2021	Sunday 11/28/2021	Monday 11/29/2021	Tuesday 11/30/2021	TOTAL		
Hour																	
1	1,929	1,972	2,025	2,023	1,977	2,028	2,023	1,969	1,970	2,026	2,022	1,946	1,872	1,965			
2	1,926	1,976	2,026	2,020	1,997	2,026	2,020	1,970	1,971	2,020	2,019	1,920	1,868	1,963			
3	1,923	1,975	2,022	1,997	2,023	2,023	2,019	1,963	1,963	2,021	2,016	1,918	1,864	1,962			
4	1,927	1,968	2,027	1,975	2,025	2,028	2,020	1,969	1,972	2,026	2,020	1,921	1,873	1,964			
5	1,927	1,978	2,025	1,971	2,025	2,027	2,019	1,968	1,967	2,019	2,014	1,922	1,865	1,935			
6	1,923	1,973	1,615	1,970	2,022	2,021	2,016	1,919	1,965	2,020	2,017	1,916	1,855	1,912			
7	1,922	1,962	1,848	1,971	2,028	2,024	2,019	1,917	1,973	2,026	2,022	1,922	1,858	1,918			
8	1,920	1,971	2,017	1,971	2,026	2,061	2,010	1,915	1,970	2,020	1,983	1,924	1,869	1,915			
9	1,918	1,967	2,021	1,974	2,023	1,863	2,000	1,915	1,973	2,022	1,971	1,921	1,948	1,913			
10	1,912	1,974	2,024	1,981	2,003	1,693	2,016	1,922	1,980	2,026	1,978	1,924	2,060	1,918			
11	1,912	1,996	2,016	1,980	1,977	2,051	2,015	1,918	1,973	2,062	1,976	1,926	2,036	1,918			
12	1,909	2,008	1,375	1,976	1,976	2,066	1,907	1,919	1,969	2,068	1,974	1,876	1,889	1,920			
13	1,950	2,012	1,333	1,981	1,989	2,069	1,330	1,924	1,980	2,074	1,981	1,826	2,010	1,935			
14	1,967	2,012	1,843	1,980	2,026	2,066	1,506	1,921	2,013	2,074	1,979	1,850	2,021	1,961			
15	1,964	2,015	2,020	1,977	2,024	2,063	2,017	1,921	2,022	2,070	1,974	1,870	2,016	1,965			
16	1,966	2,025	2,028	1,979	2,028	2,069	2,024	1,927	2,027	2,074	1,978	1,873	2,011	1,970			
17	1,968	2,024	2,025	1,976	2,025	2,073	2,013	1,924	2,025	2,066	1,965	1,872	2,010	1,973			
18	1,962	2,022	2,019	1,972	2,024	2,069	2,019	1,913	2,021	2,067	1,966	1,867	2,014	1,968			
19	1,966	2,026	2,022	1,967	2,024	2,074	2,019	1,922	2,024	2,050	1,971	1,875	1,993	1,971			
20	1,967	2,024	2,019	1,967	2,023	2,068	2,016	1,919	2,017	2,023	1,968	1,873	1,964	1,968			
21	1,967	2,022	2,013	1,972	2,022	2,034	2,016	1,916	2,021	2,015	1,960	1,867	1,962	1,966			
22	1,968	2,026	2,020	1,975	2,028	2,022	2,017	1,922	2,021	2,020	1,969	1,872	1,966	1,972			
23	1,974	2,025	2,021	1,975	2,026	2,022	2,015	1,917	2,022	2,019	1,966	1,870	1,962	1,967			
24	1,969	2,023	2,018	1,969	2,023	2,017	1,980	1,929	2,020	2,013	1,961	1,866	1,963	1,961			
TOTAL	46,636	47,976	46,422	47,499	48,364	48,557	47,056	46,319	47,859	48,921	47,650	45,417	46,749	46,780			
Cumulative Output Sold, kWh	791,938	839,914	886,336	933,835	982,199	1,030,756	1,077,812	1,124,131	1,171,990	1,220,911	1,268,561	1,313,978	1,360,727	1,407,507			
Transformer and line efficiency	99.8%	99.7%	99.8%	99.8%	99.8%	99.7%	99.8%	99.8%	99.9%	99.8%	99.8%	99.8%	99.7%	99.8%			
Hourly average	1,943	1,999	1,934	1,979	2,015	2,023	1,961	1,930	1,994	2,038	1,985	1,892	1,948	1,949	1,952		

DECEMBER 2021																	
		Wednesday 12/1/2021	Thursday 12/2/2021	Friday 12/3/2021	Saturday 12/4/2021	Sunday 12/5/2021	Monday 12/6/2021	Tuesday 12/7/2021	Wednesday 12/8/2021	Thursday 12/9/2021	Friday 12/10/2021	Saturday 12/11/2021	Sunday 12/12/2021	Monday 12/13/2021	Tuesday 12/14/2021	Wednesday 12/15/2021	Thursday 12/16/2021
LFG and Biogas Flow to the Engines (KSCF)		1,241	1,248	1,172	1,284	1,267	1,273	1,300	1,308	1,299	1,330	1,209	1,291	1,401	1,374	1,336	1,384
LFG and Biogas Flow to the Engines (MMBTU HHV)		638	640	610	660	650	681	698	708	708	725	663	716	755	730	713	755
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and BiogasFlow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,241	1,248	1,172	1,284	1,267	1,273	1,300	1,308	1,299	1,330	1,209	1,291	1,401	1,374	1,336	1,384
LFG and Biogas Total Flow (MMBTU HHV)		638	640	610	660	650	681	698	708	708	725	663	716	755	730	713	755
Average Methane Content (%)		50.8	50.7	51.5	50.8	50.7	52.9	53.1	53.5	53.9	53.9	54.2	54.8	53.2	52.5	52.8	53.9
Engine 1 Hours		24	24	22	22	22	24	24	24	24	24	24	24	24	24	24	24
Engine 2 Hours		24	24	22	22	22	24	24	24	24	24	24	24	24	24	24	24
Engine 3 Hours		24	24	21	24	24	24	24	24	24	24	24	22	24	15	6	16
Engine 4 Hours		-	-	-	-	-	4	-	-	-	6	-	-	14	21	24	24
Generator 1 Power Output (kWhr)		16,792	16,792	14,960	16,800	16,796	16,976	18,792	19,232	19,560	19,148	17,704	19,436	17,608	17,160	18,360	16,760
Generator 2 Power Output (kWhr)		16,520	17,404	15,256	16,784	15,684	16,680	18,780	19,504	19,724	18,972	18,140	19,680	17,612	17,444	18,384	17,100
Generator 3 Power Output (kWhr)		15,564	15,660	14,584	16,764	16,764	16,696	18,580	19,184	18,640	16,624	16,068	18,256	16,628	8,988	3,664	10,440
Generator 4 Power Output (kWhr)		-	-	-	-	-	872	-	-	-	3,212	-	-	8,920	15,148	18,928	17,236
Gross Power Output (kWhr)		48,981	49,905	44,859	50,417	49,300	51,276	56,251	58,020	58,010	58,020	52,017	57,487	60,861	58,836	59,434	61,618
Net Power Output (kWhr)		47,049	48,139	43,167	48,517	47,442	49,517	54,389	56,100	56,110	56,155	50,485	55,783	58,895	56,884	57,522	59,772
Power Sold as metered by NStar, (kWhr)		46,941	47,998	43,129	48,445	47,337	49,407	54,296	55,997	56,013	56,055	50,379	55,680	58,784	56,758	57,393	59,634
Offgrid RECs (kWhr)		1,932	1,766	1,692	1,900	1,859	1,757	1,862	1,920	1,900	1,865	1,532	1,704	1,966	1,952	1,912	1,846
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		700	700	680	764	763	707	783	801	815	798	738	810	734	715	765	698
Generator 2		688	725	693	763	713	695	783	813	822	791	756	820	734	727	766	713
Generator 3		649	653	694	699	699	696	774	799	777	693	670	830	693	599	611	653
Generator 4		-	-	-	-	-	218	-	-	-	535	-	-	637	721	789	718
Power output (kW average over 24-hrs)																	
Facility Gross		2,041	2,079	1,869	2,101	2,054	2,137	2,344	2,418	2,417	2,418	2,167	2,395	2,536	2,452	2,476	2,567
Facility Net		1,960	2,006	1,799	2,022	1,977	2,063	2,266	2,338	2,338	2,340	2,104	2,324	2,454	2,370	2,397	2,491
In-plant load		81	74	71	79	77	73	78	80	79	78	64	71	82	81	80	77
Daily availability factor																	
Facility		75%	75%	68%	71%	71%	79%	75%	75%	75%	81%	75%	73%	90%	88%	81%	92%
Engine 1		100%	100%	92%	92%	92%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 2		100%	100%	92%	92%	92%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	88%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%	63%	25%	67%
Engine 4		0%	0%	0%	0%	0%	17%	0%	0%	0%	25%	0%	0%	58%	88%	100%	100%
Daily capacity factor																	
Facility		62%	63%	57%	64%	62%	65%	71%	73%	73%	73%	66%	73%	77%	74%	75%	78%
Engine 1		85%	85%	82%	93%	93%	86%	95%	97%	99%	97%	89%	98%	89%	87%	93%	85%
Engine 2		83%	88%	84%	92%	86%	84%	95%	99%	100%	96%	92%	99%	89%	88%	93%	86%
Engine 3		79%	79%	84%	85%	85%	84%	94%	97%	94%	84%	81%	101%	84%	73%	74%	79%
Engine 4		0%	0%	0%	0%	0%	26%	0%	0%	0%	65%	0%	0%	77%	87%	96%	87%
Cumulative by engine																	
Engine operating run hours in the month																	
Max Cumulative Available, hours		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 1		24	48	70	92	114	138	162	186	210	234	258	282	306	330	354	378
Engine 2		24	48	70	92	114	138	162	186	210	234	258	282	306	330	354	378
Engine 3		24	48	69	93	117	141	165	189	213	237	261	283	307	322	328	344
Engine 4		0	0	0	0	0	4	4	4	4	10	10	10	24	45	69	93
Engine operating run hours total from 0 hours																	
Engine 1	121,762	121,786	121,810	121,832	121,854	121,876	121,900	121,924	121,948	121,972	121,996	122,020	122,044	122,068	122,092	122,116	122,140
Engine 2	111,035	111,059	111,083	111,105	111,127	111,149	111,173	111,197	111,221	111,245	111,269	111,293	111,317	111,341	111,365	111,389	111,413
Engine 3	121,306	121,330	121,354	121,375	121,399	121,423	121,447	121,471	121,495	121,519	121,543	121,567	121,591	121,615	121,639	121,663	121,687
Engine 4	117,172	117,172	117,172	117,172	117,172	117,172	117,176	117,176	117,176	117,176	117,182	117,182	117,182	117,196	117,217	117,241	117,265
Cumulative availability, %	December 1, 2021 @ 00:00 hours																
Engine 1	100%	100%	97%	96%	95%	96%	96%	96%	97%	97%	98%	98%	98%	98%	98%	98%	98%
Engine 2	100%	100%	97%	96%	95%	96%	96%	96%	97%	97%	98%	98%	98%	98%	98%	98%	98%
Engine 3	100%	100%	96%	97%	98%	98%	98%	98%	98%	99%	99%	99%	98%	98%	96%	91%	90%
Engine 4	0%	0%	0%	0%	0%	0%	3%	2%	2%	2%	4%	4%	3%	8%	13%	19%	24%
Engine cumulative gross output, kWhr																	
Max cumulative capacity one engine		825	1,650	2,475	3,300	4,125	4,950	5,775	6,600	7,425	8,250	9,075	9,900	10,725	11,550	12,375	13,200
Engine 1		700	1,399	2,079	2,843	3,606	4,314	5,097	5,898	6,713	7,511	8,249	9,058	9,792	10,507	11,272	11,970
Engine 2		688	1,414	2,107	2,870	3,583	4,278	5,060	5,873	6,695	7,485	8,241	9,061	9,795	10,522	11,288	12,000
Engine 3		649	1,301	1,995	2,694	3,392	4,088	4,862	5,662	6,438	7,131	7,800	8,630	9,323	9,922	10,533	11,185
Engine 4		-	-	-	-	-	218	218	218	218	753	753	753	1,390	2,112	2,900	3,619
Cumulative capacity factor, %																	
Engine 1		85%	85%	84%	86%	87%	87%	88%	89%	90%	91%	91%	91%	91%	91%	91%	91%
Engine 2		83%	86%	85%	87%	87%	86%	88%	89%	90%	91%	91%	91%	91%	91%	91%	91%
Engine 3		79%	79%	81%	82%	82%	83%	84%	86%	87%	86%	86%	87%	87%	86%	85%	85%
Engine 4		0%	0%	0%	0%	0%	4%	4%	3%	3%	9%	8%	8%	13%	18%	23%	27%

		Wednesday 12/1/2021	Thursday 12/2/2021	Friday 12/3/2021	Saturday 12/4/2021	Sunday 12/5/2021	Monday 12/6/2021	Tuesday 12/7/2021	Wednesday 12/8/2021	Thursday 12/9/2021	Friday 12/10/2021	Saturday 12/11/2021	Sunday 12/12/2021	Monday 12/13/2021	Tuesday 12/14/2021	Wednesday 12/15/2021	Thursday 12/16/2021
Cumulative by Facility in month																	
Max cumulative available engine run hours		96	192	288	384	480	576	672	768	864	960	1,056	1,152	1,248	1,344	1,440	1,536
Actual cumulative engine run hours		72	144	209	277	345	421	493	565	637	715	787	857	943	1,027	1,105	1,193
Cumulative Availability, %		75.0%	75.0%	72.6%	72.1%	71.9%	73.1%	73.4%	73.6%	73.7%	74.5%	74.5%	74.4%	75.6%	76.4%	76.7%	77.7%
Max cumulative gross output, kWhr		79,200	158,400	237,600	316,800	396,000	475,200	554,400	633,600	712,800	792,000	871,200	950,400	1,029,600	1,108,800	1,188,000	1,267,200
Actual cumulative gross output, kWhr		48,981	98,886	143,745	194,162	243,462	294,738	350,989	409,009	467,019	525,039	577,056	634,543	695,404	754,240	813,674	875,292
Cumulative Capacity Factor		61.8%	62.4%	60.5%	61.3%	61.5%	62.0%	63.3%	64.6%	65.5%	66.3%	66.2%	66.8%	67.5%	68.0%	68.5%	69.1%
Cumulative fuel input, MMBtu HHV		638	1,278	1,888	2,549	3,198	3,880	4,578	5,286	5,993	6,719	7,382	8,098	8,853	9,582	10,296	11,050
Cumulative gross output, kWhr		48,981	98,886	143,745	194,162	243,462	294,738	350,989	409,009	467,019	525,039	577,056	634,543	695,404	754,240	813,674	875,292
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,731	11,543	12,243	11,791	11,860	11,963	11,177	10,980	10,982	11,252	11,477	11,215	11,160	11,163	10,805	11,024
Daily heat rate, Btu/kWe gross HHV		13,032	12,822	13,600	13,099	13,174	13,289	12,416	12,198	12,200	12,499	12,750	12,458	12,397	12,401	12,003	12,246
Cumulative heat rate, Btu/kWe gross LHV		11,731	11,636	11,825	11,817	11,825	11,849	11,741	11,633	11,553	11,519	11,515	11,488	11,460	11,436	11,390	11,365
Cumulative heat rate, Btu/kWe gross HHV		13,032	12,926	13,136	13,127	13,136	13,163	13,043	12,923	12,833	12,796	12,792	12,762	12,730	12,704	12,653	12,624
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		32,156	32,252	32,348	32,444	32,540	32,636	32,732	32,828	32,924	33,020	33,116	33,212	33,308	33,404	33,500	33,596
Actual cumulative engine run hours		23,649	23,721	23,786	23,854	23,922	23,998	24,070	24,142	24,214	24,292	24,364	24,434	24,520	24,604	24,682	24,770
Cumulative Availability, %		73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.5%	73.6%	73.6%	73.6%	73.6%	73.7%	73.7%	73.7%
Max cumulative gross output, kWhr		26,532,000	26,611,200	26,690,400	26,769,600	26,848,800	26,928,000	27,007,200	27,086,400	27,165,600	27,244,800	27,324,000	27,403,200	27,482,400	27,561,600	27,640,800	27,720,000
Actual cumulative gross output, kWhr		16,215,426	16,265,331	16,310,190	16,360,607	16,409,907	16,461,183	16,517,434	16,575,454	16,633,464	16,691,484	16,743,501	16,800,988	16,861,849	16,920,685	16,980,119	17,041,737
Cumulative Capacity Factor		61.1%	61.1%	61.1%	61.1%	61.1%	61.1%	61.2%	61.2%	61.2%	61.3%	61.3%	61.3%	61.4%	61.4%	61.4%	61.5%
Cumulative fuel input, MMBtu HHV		208,495	209,135	209,745	210,406	211,055	211,737	212,435	213,143	213,850	214,576	215,239	215,955	216,710	217,439	218,153	218,907
Cumulative gross output, kWhr		16,215,426	16,265,331	16,310,190	16,360,607	16,409,907	16,461,183	16,517,434	16,575,454	16,633,464	16,691,484	16,743,501	16,800,988	16,861,849	16,920,685	16,980,119	17,041,737
Cumulative heat rate, Btu/kWe gross LHV		11,575	11,574	11,576	11,577	11,578	11,579	11,578	11,576	11,574	11,572	11,571	11,569	11,569	11,568	11,565	11,563
Cumulative heat rate, Btu/kWe gross HHV		12,858	12,858	12,860	12,861	12,861	12,863	12,861	12,859	12,857	12,855	12,855	12,854	12,852	12,850	12,848	12,845
Service																	
Engine 1							District connect to horizontal					2 Utility trips					
Engine 2							Cell 6					Dispatch reclosed					
Engine 3		Vent fan shut off								Trip MAP sensor	Trip over kW swing						
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports		Wednesday 12/1/2021	Thursday 12/2/2021	Friday 12/3/2021	Saturday 12/4/2021	Sunday 12/5/2021	Monday 12/6/2021	Tuesday 12/7/2021	Wednesday 12/8/2021	Thursday 12/9/2021	Friday 12/10/2021	Saturday 12/11/2021	Sunday 12/12/2021	Monday 12/13/2021	Tuesday 12/14/2021	Wednesday 12/15/2021	Thursday 12/16/2021
Date																	
Hour																	
1		1,967	1,967	2,069	2,017	2,021	1,972	2,177	2,311	2,371	2,387	2,365	2,202	2,356	2,465	2,384	2,383
2		1,969	1,965	2,073	2,020	1,995	1,976	2,173	2,312	2,371	2,387	2,366	2,214	2,354	2,463	2,384	2,379
3		1,968	1,963	2,063	2,013	1,963	2,014	2,170	2,308	2,235	2,383	2,358	2,269	2,351	2,427	2,377	2,369
4		1,971	1,987	2,070	2,019	1,967	2,020	2,177	2,317	1,775	2,387	2,358	2,306	2,356	2,415	2,381	2,369
5		1,968	2,015	2,066	2,019	1,970	2,020	2,173	2,314	2,371	2,387	2,343	2,311	2,316	2,415	2,381	2,372
6		1,928	2,014	2,065	2,012	1,968	2,013	2,168	2,309	2,374	2,377	2,357	2,312	2,306	2,406	2,374	2,365
7		1,913	2,025	2,032	2,019	1,971	2,021	2,171	2,313	2,382	1,750	2,346	2,333	2,358	2,412	2,379	2,372
8		1,912	2,013	2,013	2,015	1,973	2,029	2,268	2,310	2,377	1,667	2,327	2,344	2,352	2,350	2,380	2,148
9		1,912	2,012	2,005	2,012	1,970	2,060	2,271	2,315	2,355	2,251	2,281	2,338	2,375	2,306	2,437	2,689
10		1,925	2,019	1,882	2,019	1,977	1,830	2,283	2,357	2,351	2,500	2,259	2,331	2,694	2,342	2,415	2,608
11		1,945	2,018	-	2,019	1,977	1,592	2,301	2,350	2,341	2,707	2,235	2,322	2,609	2,209	2,411	2,595
12		1,962	2,044	-	2,018	1,970	1,923	2,286	2,340	2,329	2,600	2,221	2,298	2,604	2,291	2,408	2,604
13		1,970	1,524	1,372	2,025	1,975	2,354	2,299	2,346	2,336	2,551	2,219	2,310	2,608	2,203	2,415	2,607
14		1,967	1,731	1,727	2,023	1,976	2,135	2,293	2,351	2,345	2,109	2,312	2,544	2,346	2,413	2,605	
15		1,966	2,063	1,629	2,021	1,970	2,103	2,298	2,343	2,337	2,408	1,101	2,315	2,259	2,293	2,388	2,549
16		1,972	2,069	1,938	2,026	1,973	2,153	2,310	2,345	2,359	2,377	2,168	2,304	2,520	2,363	2,386	2,514
17		1,966	2,073	2,010	2,023	1,967	2,151	2,304	2,348	2,371	2,380	2,207	2,328	2,514	2,391	2,388	2,515
18		1,965	2,068	2,013	2,015	1,962	2,144	2,307	2,341	2,372	2,369	2,189	2,361	2,507	2,374	2,376	2,510
19		1,967	2,073	2,016	2,020	1,967	2,147	2,311	2,327	2,371	2,362	2,199	2,368	2,494	2,384	2,394	2,515
20		1,964	2,072	2,021	2,021	1,965	2,143	2,311	2,338	2,359	2,366	2,194	2,365	2,464	2,381	2,388	2,515
21		1,964	2,068	2,016	2,014	1,962	2,136	2,311	2,342	2,380	2,371	2,179	2,359	2,454	2,380	2,383	2,510
22		1,969	2,073	2,018	2,021	1,966	2,148	2,314	2,348	2,388	2,384	2,181	2,366	2,461	2,382	2,391	2,516
23		1,967	2,074	2,018	2,019	1,970	2,157	2,313	2,348	2,383	1,852	1,023	2,361	2,467	2,380	2,384	2,515
24		1,964	2,068	2,013	2,015	1,962	2,166	2,307	2,364	2,380	2,342	1,813	2,351	2,461	2,380	2,376	2,510
TOTAL		46,941	47,998	43,129	48,445	47,337	49,407	54,296	55,997	56,013	56,055	50,379	55,680	58,784	56,758	57,393	59,634
Cumulative Output Sold, kWhr		46,941	94,939	138,068	186,513	233,850	283,257	337,553	393,550	449,563	505,618	555,997	611,677	670,461	727,219	784,612	844,246
Transformer and line efficiency		99.8%	99.7%	99.9%	99.9%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%
Hourly average		1,956	2,000	1,797	2,019	1,972	2,059	2,262	2,333	2,334	2,336	2,099	2,320	2,449	2,365	2,391	2,485

DECEMBER 2021																		
	Friday 12/17/2021	Saturday 12/18/2021	Sunday 12/19/2021	Monday 12/20/2021	Tuesday 12/21/2021	Wednesday 12/22/2021	Thursday 12/23/2021	Friday 12/24/2021	Saturday 12/25/2021	Sunday 12/26/2021	Monday 12/27/2021	Tuesday 12/28/2021	Wednesday 12/29/2021	Thursday 12/30/2021	Friday 12/31/2021	TOTAL	Biogas	LFG
LFG and Biogas Flow to the Engine	1,405	1,390	1,390	1,430	1,444	1,504	1,485	1,472	1,509	1,481	1,500	1,464	1,481	1,481	1,483	42,636	718	41,918
LFG and Biogas Flow to the Engine	755	747	747	755	769	815	782	782	816	792	800	792	792	794	793	22,783	484	22,299
LFG and Biogas Flow to the Flare (	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1%	98%
LFG and BiogasFlow to the Flare (	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)	1,405	1,390	1,390	1,430	1,444	1,504	1,485	1,472	1,509	1,481	1,500	1,464	1,481	1,481	1,483	42,636		
LFG and Biogas Total Flow (MMBT	755	747	747	755	769	815	782	782	816	792	800	792	792	794	793	22,783		
Average Methane Content (%)	53.1	53.1	53.1	52.2	52.6	53.5	52.0	52.5	53.5	52.9	52.7	53.5	52.9	53.0	52.8	52.8		
Engine 1 Hours	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24		
Engine 2 Hours	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24		
Engine 3 Hours	24	24	24	18	18	24	24	24	24	24	24	24	24	24	24	24		
Engine 4 Hours	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24		
Generator 1 Power Output (kWhr)	15,604	15,604	15,604	16,268	15,268	15,600	15,600	15,604	15,604	15,588	15,612	15,596	15,016	15,016	15,120	515,580		
Generator 2 Power Output (kWhr)	14,600	14,564	14,756	14,852	14,976	15,140	14,420	14,668	15,592	14,572	14,428	14,740	15,148	15,148	15,632	506,904		
Generator 3 Power Output (kWhr)	14,728	14,372	14,364	10,552	12,400	15,556	14,720	14,372	15,060	15,544	15,572	15,096	14,924	14,924	15,076	460,364		
Generator 4 Power Output (kWhr)	14,812	14,536	14,728	16,016	15,168	15,216	14,396	14,644	15,572	14,552	14,412	14,788	15,128	15,128	15,612	289,024		
Gross Power Output (kWhr)	59,834	59,182	59,558	57,778	57,901	61,609	59,235	59,399	61,910	60,359	60,118	60,317	60,326	60,326	61,544	1,774,688		
Net Power Output (kWhr)	57,902	57,230	57,554	55,683	55,885	59,580	57,130	57,331	59,877	58,372	58,032	58,322	58,322	58,328	59,629	1,715,103		
Power Sold as metered by NStar, (	57,762	57,095	57,433	55,553	55,754	59,439	56,999	57,202	59,764	58,307	57,878	58,203	58,198	59,356	59,325	1,712,514	CRMCB inplant	
Offgrid RECs (kWhr)	1,932	1,952	2,004	2,095	2,016	2,031	2,108	2,072	2,033	1,987	2,086	1,995	2,004	1,998	1,915	59,593	11,905	20%
Calculated Performance Results																		
Daily																		
Power output (kW average whe																		of total in-plant power
Generator 1	650	650	650	678	636	650	650	650	650	650	651	650	626	626	630			
Generator 2	608	607	615	619	624	631	601	611	650	607	601	614	631	631	651			
Generator 3	614	599	599	586	689	648	613	599	628	648	649	629	622	622	628			
Generator 4	617	606	614	667	632	634	600	610	649	606	601	616	630	630	651			
Power output (kW average ove																		
Facility Gross	2,493	2,466	2,482	2,407	2,413	2,567	2,468	2,475	2,580	2,515	2,505	2,513	2,514	2,514	2,564			
Facility Net	2,413	2,385	2,398	2,320	2,329	2,483	2,380	2,389	2,495	2,432	2,418	2,430	2,430	2,430	2,485			
In-plant load	81	81	84	87	84	85	88	86	85	83	87	83	84	83	80			
Daily availability factor																		
Facility	100%	100%	100%	94%	94%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 3	100%	100%	100%	75%	75%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Engine 4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Daily capacity factor																		
Facility	76%	75%	75%	73%	73%	78%	75%	75%	78%	76%	76%	76%	76%	76%	78%			
Engine 1	79%	79%	79%	82%	77%	79%	79%	79%	79%	79%	79%	79%	76%	76%	76%			
Engine 2	74%	74%	75%	75%	76%	76%	73%	74%	79%	74%	73%	74%	77%	77%	79%			
Engine 3	74%	73%	73%	71%	84%	79%	74%	73%	76%	79%	76%	75%	75%	75%	76%			
Engine 4	75%	73%	74%	81%	77%	77%	73%	74%	79%	73%	73%	75%	76%	76%	79%			
Cumulative by engine																		
Engine operating run hours in ti																		
Max Cumulative Available,	408	432	456	480	504	528	552	576	600	624	648	672	696	720	744			
Engine 1	402	426	450	474	498	522	546	570	594	618	642	666	690	714	738			
Engine 2	402	426	450	474	498	522	546	570	594	618	642	666	690	714	738			
Engine 3	368	392	416	434	452	476	500	524	548	572	596	620	644	668	692			
Engine 4	117	141	165	189	213	237	261	285	309	333	357	381	405	429	453			
Engine operating run hours tota																		
Engine 1	122,164	122,188	122,212	122,236	122,260	122,284	122,308	122,332	122,356	122,380	122,404	122,428	122,452	122,476	122,500			
Engine 2	111,437	111,461	111,485	111,509	111,533	111,557	111,581	111,605	111,629	111,653	111,677	111,701	111,725	111,749	111,773			
Engine 3	121,674	121,698	121,722	121,746	121,768	121,792	121,816	121,840	121,864	121,888	121,912	121,936	121,960	121,984	121,998			
Engine 4	117,289	117,313	117,337	117,361	117,385	117,409	117,433	117,457	117,481	117,505	117,529	117,553	117,577	117,601	117,625			
Cumulative availability, %																		
Engine 1	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%			
Engine 2	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%			
Engine 3	90%	91%	91%	90%	90%	90%	91%	91%	92%	92%	92%	92%	93%	93%	93%			
Engine 4	29%	33%	36%	39%	42%	45%	47%	49%	52%	53%	55%	57%	58%	60%	61%			
Engine cumulative gross output																		
Max cumulative capacity or	14,025	14,850	15,675	16,500	17,325	18,150	18,975	19,800	20,625	21,450	22,275	23,100	23,925	24,750	25,575			
Engine 1	13,271	13,271	13,921	14,599	15,235	15,885	16,535	17,185	17,835	18,485	19,135	19,785	20,435	21,085	21,666			
Engine 2	12,609	13,215	13,830	14,449	15,073	15,704	16,305	16,916	17,566	18,173	18,774	19,388	20,019	20,650	21,302			
Engine 3	11,799	12,398	12,996	13,583	14,272	14,920	15,533	16,132	16,759	17,407	18,056	18,685	19,307	19,929	20,557			
Engine 4	4,236	4,841	5,455	6,122	6,754	7,388	7,988	8,598	9,247	9,854	10,454	11,070	11,701	12,331	12,981			
Cumulative capacity factor, %																		
Engine 1	90%	89%	89%	88%	88%	88%	87%	87%	86%	86%	86%	86%	85%	85%	85%			
Engine 2	90%	89%	88%	88%	87%	86%	86%	85%	85%	85%	84%	84%	84%	83%	83%			
Engine 3	84%	83%	83%	82%	82%	82%	82%	81%	81%	81%	81%	81%	81%	81%	80%			
Engine 4	30%	33%	35%	37%	39%	41%	42%	43%	45%	46%	47%	48%	49%	50%	51%			

	Friday 12/17/2021	Saturday 12/18/2021	Sunday 12/19/2021	Monday 12/20/2021	Tuesday 12/21/2021	Wednesday 12/22/2021	Thursday 12/23/2021	Friday 12/24/2021	Saturday 12/25/2021	Sunday 12/26/2021	Monday 12/27/2021	Tuesday 12/28/2021	Wednesday 12/29/2021	Thursday 12/30/2021	Friday 12/31/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine run time, hours	1,632	1,728	1,824	1,920	2,016	2,112	2,208	2,304	2,400	2,496	2,592	2,688	2,784	2,880	2,976			
Actual cumulative engine run time, hours	1,289	1,385	1,481	1,571	1,661	1,757	1,853	1,949	2,045	2,141	2,237	2,333	2,429	2,525	2,621			
Cumulative Availability, %	79.0%	80.2%	81.2%	81.8%	82.4%	83.2%	83.9%	84.6%	85.2%	85.8%	86.3%	86.8%	87.2%	87.7%	88.1%			
Max cumulative gross output, kWh	1,346,400	1,425,600	1,504,800	1,584,000	1,663,200	1,742,400	1,821,600	1,900,800	1,980,000	2,059,200	2,138,400	2,217,600	2,296,800	2,376,000	2,455,200			
Actual cumulative gross output, kWh	935,126	994,308	1,053,866	1,111,644	1,169,545	1,231,154	1,290,389	1,349,788	1,411,698	1,472,057	1,532,175	1,592,492	1,652,818	1,713,144	1,774,688			
Cumulative Capacity Factor	69.5%	69.7%	70.0%	70.2%	70.3%	70.7%	70.8%	71.0%	71.3%	71.5%	71.7%	71.8%	72.0%	72.1%	72.3%			
Cumulative fuel input, MMBtu	11,805	12,552	13,299	14,055	14,824	15,639	16,421	17,203	18,019	18,811	19,611	20,403	21,196	21,990	22,783			
Cumulative gross output, kWh	935,126	994,308	1,053,866	1,111,644	1,169,545	1,231,154	1,290,389	1,349,788	1,411,698	1,472,057	1,532,175	1,592,492	1,652,818	1,713,144	1,774,688			
Heat Rate																		
Daily heat rate, Btu/kWe gross	11,353	11,365	11,294	11,769	11,956	11,908	11,887	11,854	11,866	11,813	11,976	11,825	11,823	11,853	11,598			
Daily heat rate, Btu/kWe net	12,612	12,625	12,546	13,074	13,281	13,229	13,205	13,169	13,182	13,123	13,304	13,136	13,134	13,167	12,883			
Cumulative heat rate, Btu/kWe gross	11,364	11,364	11,360	11,381	11,410	11,435	11,455	11,473	11,490	11,503	11,522	11,533	11,544	11,555	11,556			
Cumulative heat rate, Btu/kWe net	12,624	12,624	12,619	12,643	12,675	12,702	12,725	12,745	12,764	12,779	12,799	12,812	12,824	12,836	12,838			
Cumulative by Facility starting C																		
Max cumulative available engine run time, hours	33,692	33,788	33,884	33,980	34,076	34,172	34,268	34,364	34,460	34,556	34,652	34,748	34,844	34,940	35,036			
Actual cumulative engine run time, hours	24,866	24,962	25,058	25,148	25,238	25,334	25,430	25,526	25,622	25,718	25,814	25,910	26,006	26,102	26,198			
Cumulative Availability, %	73.8%	73.9%	74.0%	74.0%	74.1%	74.1%	74.2%	74.3%	74.4%	74.4%	74.5%	74.6%	74.6%	74.7%	74.8%			
Max cumulative gross output, kWh	27,799,200	27,878,400	27,957,600	28,036,800	28,116,000	28,195,200	28,274,400	28,353,600	28,432,800	28,512,000	28,591,200	28,670,400	28,749,600	28,828,800	28,908,000			
Actual cumulative gross output, kWh	17,101,571	17,160,753	17,220,311	17,278,089	17,335,990	17,397,599	17,456,834	17,516,233	17,578,143	17,638,502	17,698,620	17,758,937	17,819,263	17,879,589	17,941,133			
Cumulative Capacity Factor	61.5%	61.6%	61.6%	61.6%	61.7%	61.7%	61.7%	61.8%	61.8%	61.9%	61.9%	61.9%	62.0%	62.0%	62.1%			
Cumulative fuel input, MMBtu	219,662	220,409	221,156	221,912	222,681	223,496	224,278	225,060	225,876	226,668	227,468	228,260	229,053	229,847	230,640			
Cumulative gross output, kWh	17,101,571	17,160,753	17,220,311	17,278,089	17,335,990	17,397,599	17,456,834	17,516,233	17,578,143	17,638,502	17,698,620	17,758,937	17,819,263	17,879,589	17,941,133			
Cumulative heat rate, Btu/kWe gross	11,563	11,562	11,561	11,562	11,563	11,563	11,565	11,566	11,567	11,568	11,570	11,570	11,571	11,572	11,572			
Cumulative heat rate, Btu/kWe net	12,845	12,844	12,843	12,844	12,845	12,846	12,848	12,849	12,850	12,851	12,852	12,853	12,854	12,855	12,855			
Service																		
Engine 1																		
Engine 2																		
Engine 3																		
Engine 4																		
Oil - oil and filter change																		
Service - plugs, air filter, valve insp																		
Precipitation																		
NSTAR Power Reports	Friday 12/17/2021	Saturday 12/18/2021	Sunday 12/19/2021	Monday 12/20/2021	Tuesday 12/21/2021	Wednesday 12/22/2021	Thursday 12/23/2021	Friday 12/24/2021	Saturday 12/25/2021	Sunday 12/26/2021	Monday 12/27/2021	Tuesday 12/28/2021	Wednesday 12/29/2021	Thursday 12/30/2021	Friday 12/31/2021	TOTAL		
Date																		
Hour																		
1	2,516	2,367	2,466	2,352	2,366	2,418	2,411	2,366	2,463	2,513	2,417	2,418	2,417	2,420	2,420			
2	2,515	2,369	2,466	2,310	2,365	2,416	2,410	2,365	2,463	2,515	2,416	2,417	2,419	2,421	2,421			
3	2,507	2,360	2,460	2,303	2,359	2,460	2,407	2,359	2,456	2,505	2,408	2,413	2,413	2,507	2,410			
4	2,508	2,369	2,466	2,310	2,368	2,515	2,412	2,366	2,461	2,458	2,414	2,417	2,419	2,511	2,419			
5	2,468	2,367	2,466	2,305	2,332	2,514	2,412	2,365	2,463	2,419	2,415	2,418	2,418	2,514	2,499			
6	2,461	2,360	2,461	2,300	2,334	2,505	2,403	2,357	2,458	2,412	2,406	2,412	2,410	2,509	2,509			
7	2,466	2,365	2,463	2,287	2,370	2,465	2,405	2,361	2,462	2,419	2,408	2,416	2,417	2,513	2,516			
8	2,428	2,363	2,372	2,263	2,310	2,448	2,358	2,362	2,465	2,417	2,410	2,413	2,412	2,509	2,516			
9	2,407	2,361	2,363	2,330	2,307	2,562	2,352	2,359	2,457	2,411	2,404	2,406	2,415	2,503	2,476			
10	2,367	2,368	2,367	2,380	2,256	2,562	2,364	2,365	2,464	2,420	2,411	2,414	2,448	2,426	2,422			
11	2,363	2,368	2,369	2,370	1,915	2,544	2,365	2,365	2,511	2,423	2,412	2,414	2,414	2,461	2,418			
12	2,360	2,364	2,363	1,656	1,919	2,505	2,358	2,360	2,507	2,413	2,404	2,165	2,410	2,452	2,418			
13	2,365	2,371	2,369	1,810	1,926	2,513	2,367	2,367	2,513	2,421	2,412	2,531	2,416	2,502	2,516			
14	2,366	2,370	2,368	1,951	1,937	2,512	2,368	2,367	2,515	2,422	2,414	2,513	2,467	2,507	2,519			
15	2,363	2,364	2,361	2,392	2,345	2,506	2,356	2,360	2,510	2,414	2,408	2,504	2,505	2,508	2,512			
16	2,368	2,369	2,367	2,610	2,646	2,513	2,360	2,365	2,515	2,420	2,410	2,512	2,478	2,517	2,517			
17	2,371	2,369	2,362	2,512	2,511	2,507	2,364	2,365	2,512	2,414	2,413	2,514	2,417	2,518	2,509			
18	2,363	2,362	2,359	2,498	2,502	2,506	2,357	2,360	2,507	2,410	2,406	2,410	2,410	2,505	2,511			
19	2,364	2,371	2,364	2,505	2,509	2,415	2,360	2,375	2,513	2,415	2,420	2,420	2,417	2,466	2,513			
20	2,374	2,371	2,364	2,490	2,510	2,415	2,364	2,461	2,512	2,417	2,416	2,416	2,417	2,419	2,517			
21	2,363	2,375	2,358	2,406	2,433	2,407	2,359	2,454	2,507	2,409	2,409	2,410	2,410	2,413	2,508			
22	2,369	2,466	2,363	2,411	2,414	2,414	2,363	2,460	2,508	2,414	2,417	2,418	2,419	2,420	2,424			
23	2,367	2,466	2,360	2,410	2,413	2,411	2,365	2,462	2,513	2,415	2,416	2,420	2,417	2,421	2,421			
24	2,363	2,460	2,356	2,392	2,407	2,406	2,359	2,456	2,509	2,411	2,412	2,412	2,413	2,414	2,414			
TOTAL	57,762	57,095	57,433	55,553	55,754	59,439	56,999	57,202	59,764	58,307	57,878	58,203	58,198	59,356	59,325			
Cumulative Output Sold, kWh	902,008	959,103	1,016,536	1,072,089	1,127,843	1,187,282	1,244,281	1,301,483	1,361,247	1,419,554	1,477,432	1,535,635	1,593,833	1,653,189	1,712,514			
Transformer and line efficiency	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.7%	99.8%	99.8%	101.8%	99.5%			
Hourly average	2,407	2,379	2,393	2,315	2,323	2,477	2,375	2,383	2,490	2,429	2,412	2,425	2,425	2,473	2,472			

Energy Biogas Flow Rate from SCADA												
		Minutes	Totalizer Reading,	scfm	Tot KSCF	% Methane		Heat valued per time period,	Tot Heat value in month,	Average methane content,	Biogas flow rate,	Biogas flow rate 50% methane,
Date	Time	in Period	KSCF		in month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
1-Apr-21	10:14	614	188.03	17		65%	66%	7.0				
1-Apr-21	10:14	-	-			66%	65%					
2-Apr-21	14:00	1,666	34.05	20		65%	66%	22.6				
5-Apr-21	13:11	4,271	118.62	20		65%	65%	55.6				
6-Apr-21	14:10	1,499	147.34	19		62%	65%	18.5				
8-Apr-21	9:53	2,623	200.54	20		65%	62%	34.2				
9-Apr-21	13:15	1,642	234.43	21		65%	65%	22.3				
12-Apr-21	10:07	4,132	313.59	19		65%	65%	52.1				
14-Apr-21	11:13	2,946	371.77	20		66%	65%	38.6				
15-Apr-21	12:56	1,543	401.89	20		65%	66%	20.0				
16-Apr-21	10:01	1,265	428.22	21		65%	65%	17.3				
19-Apr-21	10:06	4,325	512.85	20		66%	65%	56.1				
21-Apr-21	12:14	3,008	566.32	18		66%	66%	35.7				
22-Apr-21	15:54	1,660	601.52	21		65%	66%	23.3				
23-Apr-21	12:43	1,249	627.77	21		65%	65%	17.3				
26-Apr-21	10:29	4,186	710.00	20		66%	65%	54.5				
29-Apr-21	10:40	4,331	796.07	20		65%	66%	57.1				
30-Apr-21	12:12	1,532	824.63	19		65%	65%	18.8				
1-May-21	0:00	708	836.42	17	847.01	65%	65%	7.8	558.6	65.2	20	25.6
3-May-21	9:22	3,442	893.75	17		65%	65%	37.7				
4-May-21	13:15	1,673	923.19	18		65%	65%	19.4				
5-May-21	14:31	1,516	951.44	19		65%	65%	18.6				
7-May-21	13:44	2,833	1,001.93	18		65%	65%	33.2				
10-May-21	12:24	4,240	1,080.10	18		63%	65%	50.6				
14-May-21	11:05	5,681	1,190.96	20		63%	63%	70.7				
17-May-21	13:32	4,467	1,267.81	17		65%	63%	49.8				
19-May-21	13:05	2,853	1,318.25	18		65%	65%	33.2				
25-May-21	12:23	8,598	1,481.52	19		65%	65%	107.4				
26-May-21	15:51	1,648	1,512.32	19		65%	65%	20.3				
27-May-21	10:13	1,102	1,532.35	18		65%	65%	13.2				
29-May-21	1:11	2,338	1,572.10	17		64%	65%	25.9				
1-Jun-21	0:00	4,249	1,657.98	20	821.56	64%	64%	55.6	535.5	64.4	18	23.7
2-Jun-21	11:00	2,100	1,700.43	20		65%	64%	27.7				
3-Jun-21	9:19	1,339	1,724.89	18		61%	65%	15.6				
7-Jun-21	13:01	5,982	1,808.00	14		45%	61%	44.6				
9-Jun-21	10:59	2,758	1,852.16	16		35%	45%	17.9				
10-Jun-21	9:34	1,355	1,871.75	14		25%	35%	5.9				

Energy Biogas Flow Rate from SCADA												
		Minutes	Totalizer Reading,	scfm	Tot KSCF	% Methane		Heat valued per time period,	Tot Heat value in month,	Average methane content,	Biogas flow rate,	Biogas flow rate 50% methane,
Date	Time	in Period	KSCF		in month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
14-Jun-21	14:47	6,073	1,978.83	18		25%	25%	27.1				
16-Jun-21	0:00	1,993	2,013.51	17		25%	25%	8.8				
17-Jun-21	0:00	1,440	2,039.94	18		25%	25%	6.7				
18-Jun-21	0:00	1,440	2,068.47	20		25%	25%	7.2				
21-Jun-21	0:00	4,320	2,191.87	8		25%	25%	31.2				
23-Jun-21	0:00	2,880	2,215.90	8		25%	25%	6.1				
24-Jun-21	0:00	1,440	2,242.59	19		25%	25%	6.8				
25-Jun-21	0:00	1,440	2,266.06	16		25%	25%	5.9				
26-Jun-21	0:00	1,440	2,285.55	14		25%	25%	4.9				
27-Jun-21	0:00	1,440	2,305.95	14		25%	25%	5.2				
28-Jun-21	0:00	1,440	2,323.74	12		25%	25%	4.5				
29-Jun-21	0:00	1,440	2,340.96	12		25%	25%	4.4				
30-Jun-21	0:00	1,440	2,358.81	12		25%	25%	4.5				
1-Jul-21	0:00	1,440	2,384.40	18	726.42	25%	25%	6.5	241.4	32.8	17	11.0
2-Jul-21	0:00	1,440	2,413.90	20		25%	25%	7.5				
3-Jul-21	0:00	1,440	2,440.91	19		25%	25%	6.8				
4-Jul-21	0:00	1,440	2,466.39	18		25%	25%	6.4				
5-Jul-21	0:00	1,440	2,489.61	16		25%	25%	5.9				
6-Jul-21	0:00	1,440	2,511.37	15		25%	25%	5.5				
7-Jul-21	0:00	1,440	2,531.37	14		25%	25%	5.1				
8-Jul-21	0:00	1,440	2,562.21	21		25%	25%	7.8				
9-Jul-21	0:00	1,440	2,586.08	17		25%	25%	6.0				
10-Jul-21	0:00	1,440	2,608.18	15		25%	25%	5.6				
11-Jul-21	0:00	1,440	2,629.81	15		25%	25%	5.5				
12-Jul-21	0:00	1,440	2,635.57	4		25%	25%	1.5				
13-Jul-21	0:00	1,440	2,647.38	8		25%	25%	3.0				
14-Jul-21	0:00	1,440	2,659.00	8		25%	25%	2.9				
15-Jul-21	0:00	1,440	2,665.69	5		25%	25%	1.7				
16-Jul-21	0:00	1,440	2,665.70	0		25%	25%	0.0				
17-Jul-21	0:00	1,440	2,665.70	-		25%	25%	-				
18-Jul-21	0:00	1,440	2,665.70	-		25%	25%	-				
19-Jul-21	0:00	1,440	2,665.75	0		25%	25%	0.0				
20-Jul-21	0:00	1,440	2,665.78	0		25%	25%	0.0				
21-Jul-21	0:00	1,440	2,665.84	0		25%	25%	0.0				
22-Jul-21	0:00	1,440	2,665.89	0		25%	25%	0.0				
23-Jul-21	0:00	1,440	2,665.96	0		25%	25%	0.0				
24-Jul-21	0:00	1,440	2,665.99	0		25%	25%	0.0				

Energy Biogas Flow Rate from SCADA												
		Minutes	Totalizer Reading,	scfm	Tot KSCF	% Methane		Heat valued per time period,	Tot Heat value in month,	Average methane content,	Biogas flow rate,	Biogas flow rate 50% methane,
Date	Time	in Period	KSCF		in month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
25-Jul-21	0:00	1,440	2,665.99	-		25%	25%	-				
26-Jul-21	0:00	1,440	2,666.02	0		35%	25%	0.0				
27-Jul-21	0:00	1,440	2,666.08	0		40%	35%	0.0				
28-Jul-21	0:00	1,440	2,666.18	0		45%	40%	0.0				
29-Jul-21	0:00	1,440	2,666.25	0		48%	45%	0.0				
30-Jul-21	0:00	1,440	2,673.14	5		52%	48%	3.5				
31-Jul-21	0:00	1,440	2,673.14	-		55%	52%	-				
1-Aug-21	0:00	1,440	2,673.14	-	288.74	57%	55%	-	74.8	25.6	6	3.3
2-Aug-21	0:00	1,440	2,673.19	0		59%	57%	0.0				
3-Aug-21	0:00	1,440	2,675.44	2		65%	59%	1.4				
4-Aug-21	0:00	1,440	2,679.18	3		65%	65%	2.5				
5-Aug-21	0:00	1,440	2,703.96	17		65%	65%	16.3				
6-Aug-21	0:00	1,440	2,732.32	20		65%	65%	18.7				
7-Aug-21	0:00	1,440	2,741.77	7		65%	65%	6.2				
8-Aug-21	0:00	1,440	2,741.77	-		65%	65%	-				
9-Aug-21	0:00	1,440	2,741.79	0		65%	65%	0.0				
10-Aug-21	0:00	1,440	2,741.88	0		65%	65%	0.1				
11-Aug-21	0:00	1,440	2,741.88	-		65%	65%	-				
12-Aug-21	0:00	1,440	2,741.93	0		65%	65%	0.0				
13-Aug-21	0:00	1,440	2,741.93	-		65%	65%	-				
14-Aug-21	0:00	1,440	2,741.93	-		65%	65%	-				
15-Aug-21	0:00	1,440	2,741.93	-		65%	65%	-				
17-Aug-21	0:00	2,880	2,752.06	4		65%	65%	6.7				
18-Aug-21	0:00	1,440	2,753.55	1		65%	65%	1.0				
19-Aug-21	0:00	1,440	2,758.20	3		65%	65%	3.1				
20-Aug-21	0:00	1,440	2,765.16	5		65%	65%	4.6				
21-Aug-21	0:00	1,440	2,766.23	1		65%	65%	0.7				
22-Aug-21	0:00	1,440	2,766.53	0		65%	65%	0.2				
23-Aug-21	0:00	1,440	2,774.55	6		65%	65%	5.3				
24-Aug-21	0:00	1,440	2,780.18	4		65%	65%	3.7				
25-Aug-21	0:00	1,440	2,784.50	3		65%	65%	2.8				
26-Aug-21	0:00	1,440	2,787.96	2		65%	65%	2.3				
27-Aug-21	0:00	1,440	2,792.69	3		65%	65%	3.1				
28-Aug-21	0:00	1,440	2,794.78	1		65%	65%	1.4				
29-Aug-21	0:00	1,440	2,808.06	9		65%	65%	8.7				
30-Aug-21	0:00	1,440	2,825.00	12		65%	65%	11.1				
31-Aug-21	0:00	1,440	2,845.00	14		65%	65%	13.2				

Energy Biogas Flow Rate from SCADA												
		Minutes	Totalizer Reading,	scfm	Tot KSCF	% Methane		Heat valued per time period,	Tot Heat value in month,	Average methane content,	Biogas flow rate,	Biogas flow rate 50% methane,
Date	Time	in Period	KSCF		in month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
1-Sep-21	0:00	1,440	2,866.80	15	193.66	65%	65%	14.3	127.3	65.0	4	5.8
2-Sep-21	0:00	1,440	18.11	13	Reset to 0	65%	65%	11.9				
3-Sep-21	0:00	1,440	35.11	12		65%	65%	11.2				
4-Sep-21	0:00	1,440	52.61	12		65%	65%	11.5				
5-Sep-21	0:00	1,440	70.59	12		65%	65%	11.8				
6-Sep-21	0:00	1,440	88.63	13		65%	65%	11.9				
7-Sep-21	0:00	1,440	106.65	13		65%	65%	11.9				
8-Sep-21	0:00	1,440	124.69	13		65%	65%	11.9				
9-Sep-21	0:00	1,440	145.69	15		65%	65%	13.8				
10-Sep-21	0:00	1,440	167.69	15		65%	65%	14.5				
11-Sep-21	0:00	1,440	194.31	18		65%	65%	17.5				
12-Sep-21	0:00	1,440	223.02	20		65%	65%	18.9				
13-Sep-21	0:00	1,440	253.02	21		65%	65%	19.7				
14-Sep-21	0:00	1,440	283.92	21		65%	65%	20.3				
15-Sep-21	0:00	1,440	315.72	22		65%	65%	20.9				
16-Sep-21	0:00	1,440	348.00	22		65%	65%	21.2				
17-Sep-21	0:00	1,440	382.02	24		65%	65%	22.4				
18-Sep-21	0:00	1,440	414.62	23		65%	65%	21.4				
19-Sep-21	0:00	1,440	449.22	24		65%	65%	22.8				
20-Sep-21	0:00	1,440	482.82	23		65%	65%	22.1				
21-Sep-21	0:00	1,440	515.42	23		65%	65%	21.4				
22-Sep-21	0:00	1,440	550.02	24		65%	65%	22.8				
23-Sep-21	0:00	1,440	583.62	23		65%	65%	22.1				
24-Sep-21	0:00	1,440	617.30	23		65%	65%	22.2				
25-Sep-21	0:00	1,440	650.82	23		65%	65%	22.0				
26-Sep-21	0:00	1,440	684.42	23		65%	65%	22.1				
27-Sep-21	0:00	1,440	717.00	23		65%	65%	21.4				
28-Sep-21	0:00	1,440	751.62	24		65%	65%	22.8				
29-Sep-21	0:00	1,440	785.22	23		65%	65%	22.1				
30-Sep-21	0:00	1,440	818.82	23		65%	65%	22.1				
1-Oct-21	0:00	1,440	852.42	23	852.42	65%	65%	22.1	560.7	65.0	20	25.7
1-Oct-21	0:00	-	60.00		Reset to 60	65.5%	65.5%					
2-Oct-21	0:00	1,440	83.06	16		65.5%	65.5%	12.0				
3-Oct-21	0:00	1,440	101.21	13		65.5%	65.5%	19.0				
4-Oct-21	0:00	1,440	129.83	20		65.5%	65.5%	14.8				
5-Oct-21	0:00	1,440	152.17	16		65.5%	65.5%	15.0				
6-Oct-21	0:00	1,440	174.81	16		65.5%	65.5%	16.0				

Energy Biogas Flow Rate from SCADA												
		Minutes	Totalizer Reading,	scfm	Tot KSCF	% Methane		Heat valued per time period,	Tot Heat value in month,	Average methane content,	Biogas flow rate,	Biogas flow rate 50% methane,
Date	Time	in Period	KSCF		in month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
7-Oct-21	0:00	1,440	198.99	17		65.5%	65.5%	8.6				
8-Oct-21	0:00	1,440	211.93	9		65.5%	65.5%	20.8				
9-Oct-21	0:00	1,440	243.28	22		65.5%	65.5%	17.0				
10-Oct-21	0:00	1,440	268.93	18		65.5%	65.5%	17.7				
11-Oct-21	0:00	1,440	295.66	19		65.5%	65.5%	16.2				
12-Oct-21	0:00	1,440	320.08	17		65.5%	65.5%	11.9				
13-Oct-21	0:00	1,440	338.00	12		65.5%	65.5%	19.3				
14-Oct-21	0:00	1,440	367.07	20		65.5%	65.5%	15.9				
15-Oct-21	0:00	1,440	391.12	17		65.5%	65.5%	12.5				
16-Oct-21	0:00	1,440	409.96	13		65.5%	65.5%	11.7				
17-Oct-21	0:00	1,440	427.64	12		65.5%	65.5%	20.9				
18-Oct-21	0:00	1,440	459.20	22		65.5%	65.5%	13.9				
19-Oct-21	0:00	1,440	480.23	15		65.5%	65.5%	20.1				
20-Oct-21	0:00	1,440	510.55	21		65.5%	65.5%	12.9				
21-Oct-21	0:00	1,440	530.03	14		65.5%	65.5%	15.6				
22-Oct-21	0:00	1,440	553.63	16		65.5%	65.5%	17.3				
23-Oct-21	0:00	1,440	579.70	18		65.5%	65.5%	19.8				
24-Oct-21	0:00	1,440	609.56	21		65.5%	65.5%	9.2				
25-Oct-21	0:00	1,440	623.40	10		65.5%	65.5%	26.2				
26-Oct-21	0:00	1,440	662.88	27		65.5%	65.5%	16.4				
27-Oct-21	0:00	1,440	687.63	17		65.5%	65.5%	12.9				
28-Oct-21	0:00	1,440	707.16	14		65.5%	65.5%	24.9				
29-Oct-21	0:00	1,440	744.78	26		65.5%	65.5%	6.3				
30-Oct-21	0:00	1,440	754.35	7		65.5%	65.5%	22.5				
31-Oct-21	0:00	1,440	788.28	24		65.5%	65.5%	13.5				
1-Nov-21	0:00	1,440	808.70	14	748.70	66.5%	66.5%	13.7	494.7	65.3	17	21.9
2-Nov-21	0:00	1,440	826.42	12		66.4%	66.5%	11.9				
3-Nov-21	0:00	1,440	868.39	29		66.7%	66.4%	28.3				
4-Nov-21	0:00	1,440	888.32	14		67.0%	66.7%	13.5				
5-Nov-21	0:00	1,440	908.86	14		67.1%	67.0%	13.9				
6-Nov-21	0:00	1,440	940.32	22		66.8%	67.1%	21.3				
7-Nov-21	0:00	1,440	962.66	16		66.8%	66.8%	15.1				
8-Nov-21	0:00	1,440	983.46	14		66.7%	66.8%	14.1				
9-Nov-21	0:00	1,440	1,012.65	20		66.5%	66.7%	19.7				
10-Nov-21	0:00	1,440	1,036.68	17		66.7%	66.5%	16.2				
11-Nov-21	0:00	1,440	1,061.05	17		66.4%	66.7%	16.4				
12-Nov-21	0:00	1,440	1,080.16	13		66.4%	66.4%	12.8				

Energy Biogas Flow Rate from SCADA												
		Minutes	Totalizer Reading,	scfm	Tot KSCF	% Methane		Heat valued per time period,	Tot Heat value in month,	Average methane content,	Biogas flow rate,	Biogas flow rate 50% methane,
Date	Time	in Period	KSCF		in month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
13-Nov-21	0:00	1,440	1,102.25	15		66.4%	66.4%	14.8				
14-Nov-21	0:00	1,440	1,122.77	14		66.4%	66.4%	13.8				
15-Nov-21	0:00	1,440	1,158.20	25		66.8%	66.4%	23.9				
16-Nov-21	0:00	1,440	1,184.54	18		66.8%	66.8%	17.8				
17-Nov-21	0:00	1,440	1,210.22	18		66.7%	66.8%	17.3				
18-Nov-21	0:00	1,440	1,230.66	14		66.7%	66.7%	13.8				
19-Nov-21	0:00	1,440	1,255.65	17		66.7%	66.7%	16.9				
20-Nov-21	0:00	1,440	1,286.23	21		66.7%	66.7%	20.6				
21-Nov-21	0:00	1,440	1,308.31	15		66.7%	66.7%	14.9				
22-Nov-21	0:00	1,440	1,335.20	19		65.5%	66.7%	18.0				
23-Nov-21	0:00	1,440	1,365.73	21		66.8%	65.5%	20.4				
24-Nov-21	0:00	1,440	1,388.20	16		66.8%	66.8%	15.2				
25-Nov-21	0:00	1,440	1,407.09	13		66.8%	66.8%	12.8				
26-Nov-21	0:00	1,440	1,433.62	18		66.8%	66.8%	17.9				
27-Nov-21	0:00	1,440	1,462.39	20		66.8%	66.8%	19.4				
28-Nov-21	0:00	1,440	1,493.31	21		65.5%	66.8%	20.7				
29-Nov-21	0:00	1,440	1,510.53	12		65.5%	65.5%	11.4				
30-Nov-21	0:00	1,440	1,543.38	23		66.5%	65.5%	21.9				
1-Dec-21	0:00	1,440	1,571.83	20	763.13	66.7%	66.5%	19.2	514.1	66.6	18	23.5
2-Dec-21	0:00	1,440	1,584.51	9		66.5%	66.7%	8.5				
3-Dec-21	0:00	1,440	1,609.20	17		66.7%	66.5%	16.6				
4-Dec-21	0:00	1,440	1,634.74	18		66.7%	66.7%	17.2				
5-Dec-21	0:00	1,440	1,654.85	14		66.6%	66.7%	13.6				
6-Dec-21	0:00	1,440	1,682.76	19		66.5%	66.6%	18.8				
7-Dec-21	0:00	1,440	1,709.73	19		66.4%	66.5%	18.1				
8-Dec-21	0:00	1,440	1,734.51	17		66.8%	66.4%	16.7				
9-Dec-21	0:00	1,440	1,755.35	14		66.5%	66.8%	14.1				
10-Dec-21	0:00	1,440	1,781.76	18		66.7%	66.5%	17.8				
11-Dec-21	0:00	1,440	1,804.04	15		66.5%	66.7%	15.0				
12-Dec-21	0:00	1,440	1,819.55	11		66.5%	66.5%	10.4				
13-Dec-21	0:00	1,440	1,849.55	21		66.5%	66.5%	20.2				
14-Dec-21	0:00	1,440	1,871.94	16		66.7%	66.5%	15.1				
15-Dec-21	0:00	1,440	1,897.58	18		66.4%	66.7%	17.3				
16-Dec-21	0:00	1,440	1,911.82	10		66.5%	66.4%	9.6				
17-Dec-21	0:00	1,440	1,934.11	15		66.7%	66.5%	15.0				
18-Dec-21	0:00	1,440	1,959.48	18		66.6%	66.7%	17.1				
19-Dec-21	0:00	1,440	1,985.90	18		66.6%	66.6%	17.8				

Energy Biogas Flow Rate from SCADA												
		Minutes	Totalizer Reading,	scfm	Tot KSCF	% Methane		Heat valued per time period,	Tot Heat value in month,	Average methane content,	Biogas flow rate,	Biogas flow rate 50% methane,
Date	Time	in Period	KSCF		in month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
20-Dec-21	0:00	1,440	2,008.48	16		66.5%	66.6%	15.2				
21-Dec-21	0:00	1,440	2,040.43	22		66.7%	66.5%	21.5				
22-Dec-21	0:00	1,440	2,064.31	17		66.4%	66.7%	16.1				
23-Dec-21	0:00	1,440	2,085.74	15		66.5%	66.4%	14.4				
24-Dec-21	0:00	1,440	2,101.56	11		66.5%	66.5%	10.6				
25-Dec-21	0:00	1,440	2,143.16	29		66.7%	66.5%	28.0				
26-Dec-21	0:00	1,440	2,167.71	17		66.5%	66.7%	16.5				
27-Dec-21	0:00	1,440	2,185.73	13		66.4%	66.5%	12.1				
28-Dec-21	0:00	1,440	2,211.25	18		66.4%	66.4%	17.1				
29-Dec-21	0:00	1,440	2,233.26	15		66.7%	66.4%	14.8				
30-Dec-21	0:00	1,440	2,259.08	18		66.4%	66.7%	17.4				
31-Dec-21	0:00	1,440	2,274.73	11		66.4%	66.4%	10.5				
1-Jan-22	0:00	1,440	2,290.00	11	718.17	66.4%	66.4%	10.3	483.7	66.6	16	21.4

EMERGENCY GENERATOR LOG SHEET

PRIOR TO RUNNING

AFTER SHUTTING DOWN

1-Feb-21	1930	354.4	2-Feb-21	1015	369.4	Utility outage / Snowstorm
13-Jul-21	750	369.4	15-Jul-21	1210	421.8	Eversource Work
2-Aug-21	1600	421.8	3-Aug-21	600	436.1	Eversource Work
27-Aug-21	805	436.1	27-Aug-21	1015	438.8	Wellfield work
29-Aug-21	1035	438.8	29-Aug-21	1530	442.6	Utility Trip
19-Sep-21	2335	442.6	20-Sep-21	1045	453.1	Utility Trip/Loss of communication
30-Sep-21	1245	453.1	30-Sep-21	1430	454.4	Wellfield work
3-Dec-21	1015	454.4	3-Dec-21	1158	456.1	E4 Breaker Work
23-Dec-21	1042	456.1	23-Dec-21	1112	456.6	Testrun
29-Dec-21	1020	456.6	29-Dec-21	1038	457	Testrun
					87.6	Run Hours between Apr 1-Dec 31,2021

TYPE A39SM
REG TYPE A34GV

Pkh _____ VTR _____ :1
Mult. by _____ CTR _____ :5



SERIAL # **08128229** **Honeywell**

9S

Cell W/KYZ
Multifunction

CL20



KZG08128229UBC33

CL20, 120 TO 480V, 4W, 60Hz

Kh 1.8

FM 9S Watthour Meter

ZD3213M10LL-81

P/R 24

R3.05.01-2010QM-038681

TA 2.5A

FCC ID: A7LE910SV

This device complies with Part 15 of the FCC Rules

RESET

ALT



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Usage History

Select an Account :

300 SAMUEL-BARNET BLV CGN, NEW BEDFRD MA 02745

Meter Number: 8128229

[Download my secure data](#)[Email My Data](#)

View Data From :

[Usage Data](#)[Usage Graph](#)

Read Date	Usage (kWh)	Number of Days	Usage Per Day	Cost Per Day	Total Charge
12/17/2021	0	30	0	\$0.19	\$5.70
11/17/2021	0	30	0	\$0.19	\$5.70
10/18/2021	0	32	0	\$0.18	\$5.70
09/16/2021	0	30	0	\$0.19	\$5.70
08/17/2021	0	29	0	\$0.20	\$5.70
07/19/2021	0	32	0	\$0.18	\$5.70
06/17/2021	0	30	0	\$0.19	\$5.70
05/18/2021	0	32	0	\$0.18	\$5.70
04/16/2021	0	30	0	\$0.20	\$5.88
03/17/2021	0	28	0	\$0.20	\$5.70

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Exhibit 6

Calibration of the LFG and biogas flow rates, composition meters, other instrumentation for the periods.

Landfill Gas Flow Calculation											
Crapo Hill Landfill, New Bedford/Dartmouth, Massachusetts											
Note: Calculation of volumetric flow of LFG through a pipe using a pitot tube and m.											
		Engine 1, kW	-	710	-	700	700	-	570	640	825
		Engine 2, kW	673	-	700	680	690	673	-	640	825
		Engine 3, kW	750	700	660	650	650	750	700	640	-
		Engine 4, kW	680	660	660	-	-	680	670	-	825
		Gross, kW	2,103	2,070	2,020	2,030	2,040	2,103	1,940	1,920	2,475
MEASURING INSTRUMENT:		Pitot Tube:	166	166	166	166	166	166	166	166	166
		Manometer:	Dwyer Mark II	Dwyer Mark II	Dwyer Mark II	Dwyer Mark II	Dwyer Mark II	Dwyer Mark II	Dwyer Mark II	Dwyer Mark II	Dwyer Mark II
DATE OF MEASUREMENT:			22-Apr-21	7-May-21	8-Jun-21	7-Jul-21	4-Aug-21	1-Sep-21	7-Oct-21	4-Nov-21	20-Dec-21
TIME OF MEASUREMENT:			13:20	12:00	14:00	11:30	11:30	11:20	12:00	13:00	10:00
PARAMETERS		UNITS	VALUES	VALUES	VALUES	VALUES	VALUES	VALUES	VALUES	VALUES	VALUES
Pipe dimensions											
Inside Diameter		inches	10.420	10.420	10.420	10.420	10.420	10.420	10.420	10.420	10.420
Area of cross section		square feet	0.5922	0.5922	0.5922	0.5922	0.5922	0.5922	0.5922	0.5922	0.5922
Flow Calculation											
Kp	pitot tube constant	ft/sec((lb/lb-mole)(in. Hg)/(R)(in H2O))^1/2	85.49	85.49	85.49	85.49	85.49	85.49	85.49	85.49	85.49
Cp	Pitot tube coefficient	dimensionless	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
dP	Average velocity pressure of stack gas	in H2O	0.138	0.138	0.138	0.139	0.139	0.162	0.161	0.161	0.198
Blow er Inlet											
Ts	Stack temperature	Degrees Fahrenheit	57	68	74	84	86	81	79	72	61.5
		Degrees Rankine	517	528	534	544	546	541	539	532	521.5
Pg	Stack static pressure	inch H2O	-62	-60	-60	-61	-61	-62	-62	-62	-58
		inch Hg	(4.56)	(4.41)	(4.41)	(4.49)	(4.49)	(4.56)	(4.56)	(4.56)	(4.27)
Ps	Absolute stack gas pressure	inch Hg	24.92	25.52	25.61	25.40	25.64	25.19	25.59	25.74	25.90
Blow er Outlet											
Ts	Stack temperature	Degrees Fahrenheit	114	118	120	120	120	115	116	118	119
		Degrees Rankine	574	578	580	580	580	575	576	578	579
Pg	Stack static pressure	inch H2O	52.6	55.4	54.0	55.4	58.1	61.7	60.3	52.6	53.1
		inch Hg	3.87	4.07	3.97	4.07	4.28	4.54	4.44	3.87	3.91
		psig	1.90	2.00	1.95	2.00	2.10	2.23	2.18	1.90	1.92
Pbar	Barometric pressure	inch Hg	29.48	29.93	30.02	29.89	30.13	29.75	30.15	30.30	30.17
Ps	Absolute stack gas pressure	inch Hg	33.35	34.00	33.99	33.96	34.41	34.29	34.59	34.17	34.08
Ms	Molecular weight of stack gas, wet	lb/lb-mole	27.31	27.21	27.14	27.20	27.72	27.46	27.28	27.47	27.11
Vs	Average stack gas velocity	feet per second	27.7	27.7	27.8	28.3	27.9	30.5	30.2	29.8	32.8
Qact	Volumetric Flow	actual cubic feet per minute	983	983	988	1,005	992	1,082	1,071	1,058	1,164
Qstd	Volumetric Flow at actual methane content	standard cubic feet per minute *	836	838	836	828	822	889	898	903	1,020
Qstd corr	Volumetric Flow at 50% methane	standard cubic feet per minute **	923	927	915	861	822	877	909	912	1,055
Ht HHV	Heat input	MMBtu per hour HHV	28.02	28.15	27.78	26.14	24.97	26.61	27.61	27.69	32.04
Ht LHV	Heat input	MMBtu per hour LHV	25.22	25.34	25.00	23.53	22.47	23.96	24.86	24.93	28.84
	Methane Content	%, vol/vol wet	55.20%	55.30%	54.70%	52.00%	50.00%	49.30%	50.66%	50.50%	51.70%
Diff. between pitot tube and orifice reading:			2.1%	1.1%	0.9%	-0.8%	-0.5%	4.5%	4.6%	-0.4%	4.5%

Landfill Gas Flow Measurements									
Crapo Hill Landfill, New Bedford/Dartmouth									
Measurements by	TY, RB	TY, RB	TY, RB	TY, RB	TY, RB	TY, RB	TY, EN	TY, EN	TY, EN
Date	22-Apr-21	7-May-21	8-Jun-21	7-Jul-21	4-Aug-21	1-Sep-21	7-Oct-21	4-Nov-21	20-Dec-21
Time	13:20	12:00	14:00	11:30	11:30	11:20	12:00	13:00	10:00
Flow valve									
Pipe inside diameter, inches	10.42	10.42	10.42	10.42	10.42	10.42	10.42	10.42	10.42
Ambient Temperature, F	38	53	76	80	72	68	69	50	69
Barometric Pressure, In Hg	29.48	29.93	30.02	29.89	30.13	29.75	30.15	30.30	30.17
Blower Inlet Temperature, F	57	68	74	84	86	81	79	72	61.5
Outlet Temperature, F	114	118	120	120	120	115	116	118	119
Blower Inlet Pressure (SP), In H2O	-62	-60	-60	-61	-61	-62	-62	-62	-58
Blower Outlet Pressure, PSIG	1.90	2.00	1.95	2.00	2.10	2.23	2.18	1.90	1.92
Blower Outlet Pressure, In H2O	52.59	55.36	53.98	55.36	58.13	61.73	60.34	52.59	53.15
Measurement									
Manometer									
Pitot Tube									
Velocity Pressure (dP)									
Point									
1	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.20
2	0.14	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.20
3	0.14	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.21
4	0.14	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.21
5	0.14	0.14	0.14	0.15	0.15	0.17	0.17	0.17	0.21
6	0.14	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.21
7	0.14	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.20
8	0.14	0.14	0.14	0.14	0.14	0.17	0.15	0.15	0.19
9	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.15
Average	0.138	0.138	0.138	0.139	0.139	0.162	0.161	0.161	0.198
Gas Composition									
Compound, %v/v									
Methane (CH4)	55.2%	55.3%	54.7%	52.0%	50.0%	49.3%	50.7%	50.5%	51.7%
Carbon dioxide (CO2)	37.8%	37.8%	37.2%	36.2%	35.5%	35.5%	34.9%	36.0%	36.0%
Oxygen (O2)	0.84%	0.80%	0.90%	1.10%	1.00%	1.27%	1.22%	0.90%	0.12%
Balance gas	6.20%	6.10%	7.20%	10.70%	13.50%	13.99%	13.26%	12.60%	11.20%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.1%	100.0%	100.0%	99.0%
Moisture (H2O) (included in balance gas)	1.6%	2.3%	2.8%	4.0%		3.7%	2.7%	2.7%	1.8%
Molecular weight, lb/lb-mole wet	27.31	27.21	27.14	27.20	27.72	27.46	27.28	27.47	27.11
H2S, PPMV									
Pre-calibration LFG flow, scfm	818	829	829	835	827	849	857	906	975
Post-calibration LFG flow, scfm	No Adjustment	No Adjustment	No Adjustment	No Adjustment	No Adjustment	889	898	No Adjustment	1,020

Measurement confirmation/calibration for pressure and temperature

Measurements by Date Time	TY, RB 22-Apr-21 13:20	TY, RB 7-May-21 12:00	TY, RB 8-Jun-21 14:00	TY, RB 7-Jul-21 11:30	TY, RB 4-Aug-21 11:30	TY, RB 1-Sep-21 11:20	TY, EN 7-Oct-21 12:00	TY, EN 4-Nov-21 13:00	TY, EN 20-Dec-21 10:00
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Pressure and Temperature Measurements

Facility Flow Measurement Point

Facility Pressure monitor, inches WG		1.90	2.00	1.95	2.00	2.10	2.23	2.18	1.90	1.92
Measurement Type	Gauge									
Independent Pressure monitor, inches WG		1.90	2.00	1.95	2.00	2.10	2.24	2.18	1.90	1.92
Measurement Type	Manometer									
Difference in Pressure, %		0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%
Adjusted Pressure, in WG		1.90	2.00	1.95	2.00	2.10	2.23	2.18	1.90	1.92
Facility Temperature monitor, F		114	118	120	120	120	115	116	118	119
Facility Temperature monitor, R		574	578	580	580	580	575	576	578	579
Measurement Type	Gauge									
Independent Temperature monitor, F		114	118	120	120	120	115	116	118	119
Facility Temperature monitor, R		574	578	580	580	580	575	576	578	579
Measurement Type	Thermometer									
Difference in Temperature, %		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adjusted Temperature, F		114	118	120	120	120	115	116	118	119

Calibration Flow Measurement Point

Facility Pressure monitor, inches WG		-62	-60	-60	-61	-61	-62	-62	-62	-58
Measurement Type	Transducer									
Independent Pressure monitor, inches WG		-62	-60	-60	-61	-61	-62	-62	-62	-58
Measurement Type	Manometer									
Difference in Pressure, %		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adjusted Pressure, in WG		-62	-60	-60	-61	-61	-62	-62	-62	-58
Facility Temperature monitor, F		57	68	74	84	86	81	79	72	61.5
Facility Temperature monitor, R		517	528	534	544	546	541	539	532	521.5
Measurement Type	Gauge									
Independent Temperature monitor, F		57	68	74	84	86	81	78.6	72	62
Facility Temperature monitor, R		517	528	534	544	546	541	538.6	532	522
Measurement Type	thermometer									
Difference in Temperature, %		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%
Adjusted Temperature, F		57	68	74	84	86	81	79	72	61.5

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‘California Analytical’ Analyzer Calibration Results
California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: Apr-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
3/28/21	4/2/21	55 Deg F	47.2%	46.90%	53.76%	0.06%	47.74%	53.75%
4/4/21	4/9/21	56 Deg F	47.2%	46.93%	53.57%	-0.06%	46.06%	53.88%
4/11/21	4/16/21	56 Deg F	47.2%	46.93%	55.80%	0.00%	47.22%	55.53%
4/18/21	4/23/21	57 Deg F	47.2%	46.92%	54.64%	0.06%	48.39%	54.32%
4/25/21	4/30/21	59 Deg F	47.2%	46.90%	55.50%	-0.11%	46.73%	55.68%

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‘California Analytical’ Analyzer Calibration Results
California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: May-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
5/2/21	5/7/21	62 Deg F	47.2%	46.87%	54.55%	0.06%	47.70%	54.27%
5/9/21	5/14/21	61 Deg F	47.2%	46.88%	53.88%	0.01%	47.20%	54.04%
5/16/21	5/21/21	63 Deg F	47.2%	46.86%	53.92%	-0.02%	47.15%	53.86%
5/23/21	5/28/21	64 Deg F	47.2%	46.85%	53.51%	0.02%	46.85%	53.41%

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‘California Analytical’ Analyzer Calibration Results
California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: Jun-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
5/30/21	6/4/21	64 Deg F	47.20%	46.85%	56.12%	-0.06%	46.53%	55.99%
6/6/21	6/11/21	68 Deg F	47.20%	46.80%	54.36%	0.04%	46.98%	54.07%
6/13/21	6/18/21	70 Deg F	47.20%	46.77%	53.61%	0.01%	46.89%	53.48%
6/20/21	6/25/21	73 Deg F	47.20%	46.73%	54.26%	-0.07%	47.24%	54.16%

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‘California Analytical’ Analyzer Calibration Results
California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: Jul-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
6/27/21	7/2/21	70 Deg F	47.20%	46.77%	52.24%	0.00%	46.70%	52.36%
7/4/21	7/9/21	73 Deg F	47.20%	46.73%	53.57%	-0.02%	46.42%	53.54%
7/11/21	7/16/21	75 Deg F	47.20%	46.70%	50.86%	0.03%	46.80%	51.12%
7/18/21	7/23/21	75 Deg F	47.20%	46.70%	51.29%	0.02%	47.15%	51.01%
7/25/21	7/30/21	76 Deg F	47.20%	46.69%	51.30%	0.00%	46.47%	50.88%

CommonWealth New Bedford Energy, LLC
 Greater New Bedford LFG Utilization Project
 300 Samuel Barnett Blvd.
 New Bedford, Massachusetts
 (508) 985-0923

‘California Analytical’ Analyzer Calibration Results
California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: Aug-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
8/1/21	8/6/21	75 Deg F	47.20%	46.70%	50.13%	-0.03%	46.66%	49.91%
8/8/21	8/13/21	77 Deg F	47.20%	46.67%	50.13%	0.00%	46.86%	49.72%
8/15/21	8/20/21	76 Deg F	47.20%	46.69%	50.14%	-0.01%	47.16%	49.62%
8/22/21	8/25/21	76 Deg F	47.20%	46.69%	49.19%	-0.03%	46.76%	49.35%

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California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: Sep-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
8/29/21	9/3/21	78 Deg F	47.20%	46.65%	49.13%	0.07%	46.53%	48.82%
9/5/21	9/10/21	78 Deg F	47.20%	46.65%	50.60%	-0.01%	46.67%	50.23%
9/12/21	9/16/21	76 Deg F	47.20%	46.69%	47.54%	-0.02%	46.68%	47.77%
9/19/21	9/24/21	76 Deg F	47.20%	46.69%	49.41%	-0.01%	47.85%	48.60%
9/26/21	10/1/21	76 Deg F	55.00%	54.40%	49.60%	0.03%	53.92%	50.58%

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California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: Sep-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
10/3/21	10/8/21	75.26F	55.00%	54.40%	51.12%	0.00%	54.12%	51.12%
10/10/21	10/15/21	74.27F	55.00%	54.44%	50.89%	0.01%	53.95%	50.96%
10/17/21	10/22/21	73.45F	55.00%	54.46%	50.76%	0.01%	53.90%	50.69%
10/24/21	10/29/21	71 Deg F	55.00%	54.49%	50.41%	0.04%	55.15%	50.19%

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Month: Nov-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
11/1/21	11/5/21	73.45 F	55.00%	54.46%	50.51%	0.02%	55.24%	50.30%
11/8/21	11/12/21	74.45 F	55.00%	54.44%	51.48%	-0.02%	54.54%	51.46%
11/15/21	11/19/21	68.3 F	55.00%	54.53%	53.00%	0.00%	54.95%	51.83%
11/22/21	11/24/21	66.2 F	55.00%	54.56%	50.41%	0.08%	54.80%	50.44%

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 Greater New Bedford LFG Utilization Project
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 New Bedford, Massachusetts
 (508) 985-0923

‘California Analytical’ Analyzer Calibration Results
California Analytical Instrument, Model 602P NDIR, Serial #S07002

Month: Dec-21		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
11/29/21	12/3/21	65.14 F	55.00%	54.58%	50.58%	-0.03%	53.94%	50.88%
12/5/21	12/10/21	66 Deg F	55.00%	54.56%	52.94%	0.00%	54.77%	52.53%
12/12/21	12/17/21	65 Deg F	55.00%	54.58%	52.00%	0.00%	54.46%	52.44%
12/19/21	12/23/21	69 Deg F	55.00%	54.52%	51.58%	0.06%	55.08%	51.33%
12/26/21	12/30/21	64 Deg F	55.00%	54.59%	52.52%	-0.06%	53.84%	51.97%

Biogas Flow Measurements									
Q =sqrt(dP/[Ss *(T + 460)/(K ² *D ⁴ * P * 16590)]									
		SCADA Reading				SCADA Reading	P	P	
		Pre-calibration	Measured	Measured	Difference between	Post-calibration	static	static	T
Month	Date	flow rate, scfm	dP, inch WG	flow rate, scfm	Measured and SCADA, %	flow rate, scfm	pressure	pressure	temperature
							inch WG	psia	F
Apr-21	22-Apr-21	21	0.09	21	1.6%	21	6	14.92	85
May-21	7-May-21	18	0.07	18	-1.2%	18	6	14.92	85
Jun-21	8-Jun-21	15	0.05	15	-2.7%	15	6	14.92	85
Jul-21	7-Jul-21	14	0.04	14	1.6%	14	6	14.92	85
Aug-21	4-Aug-21	0	0	0	0.0%	0	2	14.77	85
Sep-21	1-Sep-21	15	0.05	15	-2.7%	15	6	14.92	85
Oct-21	7-Oct-21	17	0.06	17	0.8%	17	6	14.92	85
Nov-21	4-Nov-21	14	0.04	14	1.6%	14	6	14.92	85
Dec-21	20-Dec-21	16	0.05	15	3.8%	15	6	14.92	85

CRMC Bioenergy LLC							
Biogas Calibrations							
METHANE CONFIRMATIONS/CALIBRATIONS							
		SCADA Reading		Measured		SCADA Reading	
		Pre-calibration	Calibration	Calibration	Difference between	Post-calibration	
Month	Date	Methane, %	Methane, %	Methane, %	Measured and SCADA, %	Methane, %	
Apr-21	22-Apr-21	65.0%	50.0%	50.1%	-0.2%	65.0%	
May-21	7-May-21	65.0%	50.0%	50.2%	-0.4%	65.0%	
Jun-21	8-Jun-21	45.0%	50.0%	49.8%	0.4%	45.0%	
Jul-21	7-Jul-21	25.0%	50.0%	50.0%	0.0%	25.0%	
Aug-21	4-Aug-21	65.0%	50.0%	50.0%	0.0%	65.0%	
Sep-21	1-Sep-21	65.0%	50.0%	49.7%	0.6%	65.0%	
Oct-21	7-Oct-21	65.5%	50.0%	49.8%	0.4%	65.5%	
Nov-21	4-Nov-21	67.0%	50.0%	51.0%	-2.0%	67.0%	
Dec-21	20-Dec-21	65.5%	50.0%	50.5%	-1.0%	65.5%	
PRESSURE AND TEMPERATURE CONFIRMATION/CALIBRATION							
		P	P			T	
		static	calibration		T	calibration	
		pressure	static pressure		temperature	temperature	
Month	Date	inch WG	inch WG	Adjustment	F	F	Adjustment
Apr-21	22-Apr-21	6	6	None	85	85	None
May-21	7-May-21	6	6	None	85	85	None
Jun-21	8-Jun-21	6	6	None	85	85	None
Jul-21	7-Jul-21	6	6	None	85	85	None
Aug-21	4-Aug-21	2	2	None	85	85	None
Sep-21	1-Sep-21	6	6	None	85	85	None
Oct-21	7-Oct-21	6	6	None	85	85	None
Nov-21	4-Nov-21	6	6	None	85	85	None
Dec-21	20-Dec-21	6	6	None	85	85	None

Exhibit 7

Attestation Statement

Attestation Statement

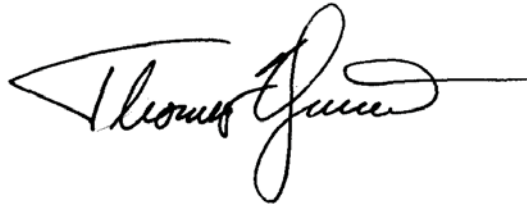
As an officer of Commonwealth New Bedford Energy LLC (CNBE) I hereby certify that the verified carbon units (VCUs) verified under the verified carbon standard (VCS) for the period April 1, 2021 through December 31, 2021 from the Project Activity will be registered on the VERRA Registry only.

Thomas Yeransian

Name

Principal of Commonwealth Resource Management Corporation,
Member of Commonwealth New Bedford Energy LLC

Title

A handwritten signature in black ink, appearing to read "Thomas Yeransian", with a long horizontal flourish extending to the right.

Signature

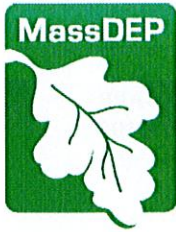
Date: January 14, 2022

Exhibit 8

Permits and Other Regulatory Documentation

Final Air Quality Operation Permit (Renewal) Issued July 23, 2020. March 26, 2019

NMOC Emission Rate Report, May 3, 2021. The NMOC Emission Report demonstrates that the NMOCs emissions continue to be below the NSPS applicability threshold and therefore the Crapo Hill Landfill is not subject to the requirements of NSPS.



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

July 23, 2020

Mr. Patrick Bird, Manager
Air Permits, Toxics and Indoor Air Unit
EPA-New England, Region 1
5 Post Office Square, Suite 100
Mail Code OEP05-2
Boston, MA 02109-3912

RE: **FINAL AIR QUALITY OPERATING PERMIT (RENEWAL)**

Application for: BWP AQ 14/12 Operating Permit Renewal
310 CMR 7.00: Appendix C
Application No.: 17-AQ14/12-000003-APP
Authorization No.: AQ-14-0000105
Source No. 1200624

AT: Commonwealth New Bedford Energy, LLC
300 Samuel Barnet Boulevard
Dartmouth, MA

Dear Mr. Bird:

In accordance with 310 CMR 7.00: Appendix C(6) of the Air Pollution Control Regulations ("the Regulations"), the Massachusetts Department of Environmental Protection ("MassDEP" or "Department"), is forwarding to the United States Environmental Protection Agency ("EPA") the attached Final Air Quality Operating Permit for Commonwealth New Bedford Energy, LLC, 300 Samuel Barnet Boulevard, Dartmouth, Massachusetts.

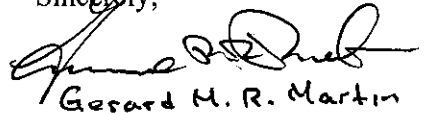
Public notice of the Draft Air Quality Operating Permit was published by the MassDEP in the Environmental Monitor on December 23, 2019 and in the New Bedford Standard-Times also on December 23, 2019, in accordance with the requirements of 310 CMR 7.00: Appendix C. As such, the public comment period ended on January 22, 2020. During that period, no comments were received, and no public hearing was requested pursuant to 310 CMR 7.00: Appendix C(6)(f).

On January 31, 2020, MassDEP forwarded to EPA Region 1, via electronic mail, the Proposed Operating Permit for this facility. EPA did not object to or comment on the Proposed Operating Permit, nor did EPA receive a petition to object to the Proposed Operating Permit within the regulatory deadlines. Therefore, MassDEP is issuing the Final Air Quality Operating Permit.

The attached Final Air Quality Operating Permit contains all of the Federal and State Air Pollution Control Requirements the facility is subject to, and the terms and conditions for compliance with such applicable requirements.

Should you have any questions concerning this Final Operating Permit, please contact Dan Kamieniecki, at (508) 946-2717.

Sincerely,



For: Thomas Cushing, Chief
Permit Section
Bureau of Air and Waste

C/DK

Enclosure

Enclosure – Final Air Quality Operating Permit Renewal Authorization No. AQ14-0000105 (copy)

cc: CommonWealth New Bedford Energy, LLC – Thomas Yeransian, Principal
7 Winslow Way, Mansfield, MA. 02048
(w/encl. – Original Final Air Quality Operating Permit Renewal Auth. No. AQ14-0000105)

ecc: Undine Kipka, U.S. EPA Region 1
Marc Wolman, MassDEP/Boston
Yi Tian, MassDEP/Boston
Seth Pickering, MassDEP/BAW-SERO
Thomas Cushing, MassDEP/BAW-SERO
Mark Poudrier, MassDEP/BAW-SERO
Daniel Kamieniecki, MassDEP/BAW-SERO
Lisa Ramos, MassDEP/BAW-SERO
Thomas Yeransian, CommonWealth New Bedford Energy, LLC



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Secretary

Martin Suuberg
Commissioner

FINAL AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection ("Department" or "MassDEP") pursuant to its authority under M.G.L. c. 111, §142B and §142D, 310 CMR 7.00 et seq., and in accordance with the provisions of 310 CMR 7.00: Appendix C.

ISSUED TO ["the Permittee"]:

CommonWealth New Bedford Energy, LLC
7 Winslow Way
Mansfield, MA 02048

INFORMATION RELIED UPON:

Application No. 17-AQ14/12-000003-APP
Application No. 4B04015
Approval No. SE-13-020
ePlace Authorization No.: AQ-14-0000105

FACILITY LOCATION:

CommonWealth New Bedford Energy, LLC
300 Samuel Barnett Boulevard
Dartmouth, MA

FACILITY IDENTIFYING NUMBERS:

AQ ID: 1200624
FMF FAC No.: 402936
FMF RO No.: 402937

NATURE OF BUSINESS:

Electric Power Generation

Standard Industrial Classification (SIC): 4911
North American Industrial Classification System (NAICS): 221117

RESPONSIBLE OFFICIAL:

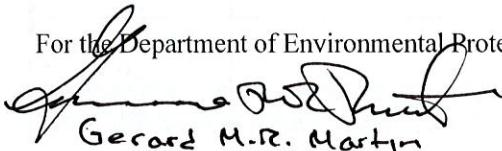
Name: Mr. Thomas Yeransian
Title: Principal of Commonwealth Resource Management Corporation, Managing Member of Commonwealth New Bedford Energy

FACILITY CONTACT PERSON:

Name: Mr. Thomas Yeransian
Title: Principal
Phone: (508) 339-3074
Fax: 508-339-1326
Email: tyeransian@crmcx.com

This Operating Permit shall expire on July 23, 2025.

For the Department of Environmental Protection



Gerard M.R. Martin

Permit Chief, Bureau of Air and Waste

July 23, 2020

Date

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SPECIAL CONDITIONS FOR OPERATING PERMIT

1. PERMITTED ACTIVITIES

In accordance with the provisions of 310 CMR 7.00:Appendix C and applicable rules and regulations, the Permittee is authorized to operate air emission units as shown in Table 1 and exempt, and insignificant activities as described in 310 CMR 7.00:Appendix C(5)(h) and (i). The units described in Table 1 are subject to the terms and conditions shown in Sections 4, 5, and 6 and to other terms and conditions as specified in this Permit. Emissions from the exempt activities shall be included in the total facility emissions for the emission-based portion of the fee calculation described in 310 CMR 4.00 and this Permit.

A. DESCRIPTION OF FACILITY AND OPERATIONS

CommonWealth New Bedford Energy, LLC, (CNBE) operates the Greater New Bedford LFG Utilization Project, a landfill gas (LFG) to energy, electric power generation facility ("Facility") located at the Crapo Hill Landfill in Dartmouth, Massachusetts, with a United States Postal Service mailing address of 300 Samuel Barnet Boulevard, New Bedford MA 02745. The facility is a Major Source, as defined in 310 CMR 7.00: Appendix C, of Carbon Monoxide (CO), and therefore subject to the 310 CMR 7.00: Appendix C: Operating Permit and Compliance Program, and the requirement to obtain an Operating Permit. The approved operation consists of up to five (5) identical LFG-fired reciprocating engine/generator sets. The reciprocating engines are Caterpillar Model 3516 engines. Each engine/generator set has a nominal output rating of approximately 825 kW of electricity, and a maximum output rating of 900 kW of electricity. The engines are housed in a generation building. Each engine has a separate exhaust stack, which discharges through the generation building roof at an exhaust height of 30 feet above ground.

The primary fuel supplied to the Facility is LFG generated from the Crapo Hill Landfill, which is owned and operated by the Greater New Bedford Regional Refuse Management District (District). A small quantity of digester gas supplements the LFG fuel supplied to the Facility. CRMC Bioenergy LLC owns and operates an anaerobic digestion facility that is located adjacent to the Facility and supplies the digester gas to CNBE. The anaerobic digestion facility operates in accordance with MassDEP Air Quality Plan Approval SE-13-020, Transmittal X254662, dated September 26, 2013. Both the Facility and anaerobic digestion facility are located on property leased from the District.

As part of the Operating Permit (OP) renewal process, MassDEP evaluated the relationship between the District and CNBE, to determine if the parties were under common control for purposes of implementing the Title V Operating Permit program. Based on a review of the case-specific facts, factors, and circumstances, and informal guidance documents and determination letters from the United States Environmental Protection Agency, MassDEP determined that the District and CNBE do not meet the criteria for common control, and therefore, the two entities should continue to be considered separate sources.

MassDEP also evaluated the relationship between CRMC Bioenergy LLC and CNBE and has determined that CRMC Bioenergy LLC and CNBE meet the criteria for common control for purposes of implementing the Title V Operating Permit program. This anaerobic digester system is identified as Emission Unit No. 8 (EU-8) in this Operating Permit.

Other equipment associated with Emission Unit Nos. 1 through 5 (EU-1 through EU-5) includes a LFG production system which conditions the LFG with a knockout drum, 2 (redundant) blowers, a cooler, and a coalescing filter. The condensate from the conditioned LFG drains into the Landfill's leachate collection system for disposal. The engines are serviced by a closed-loop lubricating oil system that consists of a 2,000-gallon virgin oil tank and a 2,000-gallon waste oil tank. Each engine is cooled by a glycol/water mix that is run through a radiator outside of the building.

The key parameters that govern the facility operation are monitored and recorded through a supervisory control and data acquisition (SCADA) system. This electronic operator interface system allows for remote access to facility operations and is the main monitoring/recordkeeping tool. In addition, the operation of the engine-generators is controlled by General Electric Fanuc programmable logic controllers (PLCs) located in the switchgear for each engine. Controls include air-to-fuel ratio control, load control, electric generation controls and protective relays. The operation and control of the motors are by variable frequency drives (VFDs). The VFDs operate motors that drive the LFG blowers, the cooler, the engine room ventilation fans, and the radiators.

The facility also maintains a cold cleaning degreaser-parts washer identified as Emission Unit No. 6 (EU-6). The parts washer is subject to and operated in accordance with 310 CMR 7.03(8) and 310 CMR 7.18(8)(a).

The OP renewal application includes the addition of Emission Unit No. 7 (EU-7). EU7 is an emergency reciprocating internal combustion engine (RICE) which operates an emergency engine generator, fires No.2 fuel oil, and is rated at 150 kilowatts of power generation output. The unit was installed on November 13, 2014, and is subject to the requirements of 310 CMR 7.26(42) Emergency Engines and Turbines, 40 CFR 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

CNBE is considered an Area Source for Hazardous Air Pollutants (HAPs). The facility has proposed to restrict facility-wide HAP emissions to less than twenty-five (25) tons per year (aggregate total HAPs) and less than ten (10) tons per year (any Single HAP). The four (4) existing engines (EU-1, EU-2, EU-3, and EU-4) were installed prior to June 12, 2006. EU-1, EU-2, EU-3, EU-4 are subject to requirements for existing, non-emergency, non-black start, LFG-fired, stationary, spark ignited, reciprocating internal combustion engines (RICE) at 40 CFR Part 63, Subpart ZZZZ. The facility is approved for the installation of one (1) additional engine (EU-5). At the time of installation of EU-5, the Permittee shall notify MassDEP, evaluate the installation according to applicable State and Federal regulations (such as, but not limited to 40 CFR Part 63 Subpart ZZZZ, and 40 CFR Part 60 Subpart JJJJ), and propose to modify the Operating Permit as necessary. The facility does not currently have any emission units subject to requirements at 40 CFR Part 64, Compliance Assurance Monitoring (CAM).

A list of any exempt activities shall be maintained as indicated in Section 3, Table 2. Operating Permit Section 4, Tables 3, 4, 5, and 6 list the facility emission limits along with monitoring, testing, recordkeeping and reporting requirements. Operating Permit Section 4, Table 7 lists regulations that are not applicable to the facility at this time.

The Permittee is subject to the requirements of Greenhouse Gas Emissions Reporting as defined by MassDEP in 310 CMR 7.71(3)(a).

2. EMISSION UNIT IDENTIFICATION

The following emission units (Table 1) are subject to and regulated by this Operating Permit:

Table 1			
EU	Description of EU	EU Design Capacity	Pollution Control Device (PCD)
EU-1 through EU-5 ^(note 1)	Caterpillar Model No. 3516, Internal Combustion Engine	10.07 MMBtu/hr (maximum energy input) 900 kilowatts (maximum generator output)	None
EU-6	Parts Washer (Cold Cleaning Degreaser)	Meets design specifications at 310 CMR 7.18(8)(a)3.	None
EU-7	Emergency Generator Kohler Model 150REOZJF Date of Installation: 2014	Maximum heat rate input 1.725MMBtu/hr Fuel: No. 2 Fuel Oil	None
EU-8	Anaerobic Digestion System	100,000 gallon digester capacity	None

Table 1 Key:

MMBtu/hr = Million British thermal units per hour
 CMR = Code of Massachusetts Regulations

EU = Emission Unit
 No. = number

Table 1 Note:

(1) Facility currently consists of four (4) identical Caterpillar Engines which are identified in this Operating Permit as EU-1, EU-2, EU-3 and EU-4. EU-5 has not yet been installed.

3. IDENTIFICATION OF EXEMPT ACTIVITIES

The following are considered exempt activities in accordance with the criteria contained in 310 CMR 7.00: Appendix C(5)(h):

Table 2	
Description of Current Exempt Activities	Reason
The list of current exempt activities is contained in the Operating Permit application and shall be updated by the Permittee to reflect changes at the facility over the Permit term. An up-to-date copy of exempt activities list shall be kept on-site at the facility and a copy shall be submitted to the MassDEP's Regional Office. Emissions from these activities shall be reported on the annual emissions statement pursuant to 310 CMR 7.12.	310 CMR 7.00: Appendix C(5)(h)

Table 2 Key:

MassDEP = Massachusetts Department of Environmental Protection
 CMR = Code of Massachusetts Regulations

4. APPLICABLE REQUIREMENTS

A. OPERATIONAL AND/OR PRODUCTION EMISSION LIMITS AND RESTRICTIONS

The Permittee is subject to the limits/restrictions as contained in Table 3 below:

Table 3					
EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards	Applicable Regulation and/or Approval No.
1,2,3,4,5 (per engine) (Note 2)	Landfill Gas/ Digester Gas	NO _x	N/A	0.166 lb/MMBtu	4B04015 SE-13-020
				0.60 g/bhp-hr	
				0.62 TPM	
				7.32 TPY (Note 1)	
		CO	N/A	0.83 lb/MMBtu	
				3.11 TPM	
				36.61 TPY (Note 1)	
		NMOC	N/A	0.083 lb/MMBtu	
				0.31 TPM	
				3.66 TPY (Note 1)	
		VOC	N/A	0.083 lb/MMBtu	
				0.31 TPM	
				3.66 TPY (Note 1)	
		PM/PM ₁₀ /PM _{2.5}	N/A	0.06 lb/MMBtu	
				0.21 TPM	
				2.40 TPY (Note 1)	
1,2,3,4	Landfill Gas/ Digester Gas	SO ₂	LFG H ₂ S ≤ 200 ppm _v	0.064 lb/MMBtu	40 CFR Part 63, Subpart ZZZZ §§ 63.6603(a), 63.6625(j) and Table 2d
				0.24 TPM	
				2.81 TPY (Note 1)	
1,2,3,4	Landfill Gas/ Digester Gas	HAP (Note 6)	Change oil and filter every 1440 hours of operation or annually (Note 3), whichever comes first; Inspect spark plugs every 1440 hours of operation or annually, whichever comes first; and Inspect all hoses and belts every 1440 hours of operation or annually, whichever comes first, and replace as necessary.		40 CFR Part 63, Subpart ZZZZ § 63.6605(a) and (b)
			At all times operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.		

Table 3

EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards	Applicable Regulation and/or Approval No.
1,2,3,4	Landfill Gas/ Digested Gas	HAP (Note 6)	i. Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.		40 CFR Part 63, Subpart ZZZZ § 63.6625(e) and Table 6
			Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.		40 CFR Part 63, Subpart ZZZZ § 63.6625(h) and Table 2d
1,2,3,4,5 (Combined) (Note 4)	Landfill Gas/ Digester Gas	NO _x	See heat input limit below	3.10 TPM 36.6 TPY (Note 1)	4B04015 SE-13-020
		CO	See heat input limit below	15.5 TPM 183.0 TPY (Note 1)	
		VOC	See heat input limit below	1.55 TPM 18.3 TPY (Note 1)	
		NMOC	See heat input limit below	1.55 TPM 18.3 TPY (Note 1)	
			Operate each EU at all times when the collected LFG is routed to the EU	Each EU shall reduce NMOC emissions by 98% by weight, or reduce the stack NMOC concentration to < 20 ppm _{vd} , as hexane, at 3% O ₂	
		PM/PM ₁₀ /PM _{2.5}	See heat input limit below	1.05 TPM 12.2 TPY (Note 1)	
		SO ₂	See heat input limit below	1.20 TPM 14.0 TPY (Note 1)	
		All	Maximum heat input of LFG/DG shall not exceed 37,460 MMBtu per month	N/A	
			Maximum heat input of LFG/DG shall not exceed 440,925 MMBtu in any consecutive 12 month period	N/A	
1,2,3,4,5	Landfill Gas/ Digester Gas	Visible Emissions	Stack emissions shall not exceed 0% opacity (no visible emissions), with the exception of up to five (5) minutes during startup. During startup visible emissions shall comply with the provisions of 310 CMR 7.06.		4B04015 SE-13-020
6	Non-halogenated solvent	VOC	Solvent consumption < 100 gallons per month per unit	Operating procedures identified at 310 CMR 7.18(8)(e); and design features and specifications identified at 310 CMR 7.18(8)(a)	310 CMR 7.03(8) 310 CMR 7.18(8)(a) 310 CMR 7.18(8)(e)

Table 3

EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards	Applicable Regulation and/or Approval No.
7	No 2. Fuel Oil	All	≤ 100 hours per calendar year for maintenance and testing as recommended by the manufacturer; and As part of the above, ≤ 50 hours per calendar year for non-emergency situations; and During an emergency		310 CMR 7.26(42)(d)1.a.
			Affected source must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII, for compression ignition engines		40 CFR Part 63, Subpart ZZZZ § 63.6590(c) 310 CMR 7.26(42)(d)1.b.
		NMHC + NO _x	As noted below	4.0 g/kW-hr	40 CFR Part 60, Subpart IIII § 60.4211(a) and (c) § 60.4205(b) § 60.4202(a)(2)
		CO	As noted below	3.5 g/kW-hr	
		PM	As noted below	0.20 g/kW-hr	
		Sulfur in fuel	N/A	≤ 0.0015 percent	310 CMR 7.26(42)(c) 310 CMR 7.05(1)(a)1.: Table 1
		All	N/A	Shall comply with applicable Emission limits set by US EPA for non-road engines (40 CFR 89).	310 CMR 7.26(42)(b)
			Operate and maintain engine and control device according to manufacturer's emission-related written instructions. <i>See Table 4, Proviso No. 19</i>		40 CFR Part 60, Subpart IIII § 60.4211(a)(1) and (2)
			Limited to operation as noted at § 60.4211(f) for emergency stationary ICE. <i>See Table 4, Provisos Nos. 16, 17, & 18</i>		40 CFR Part 60 Subpart IIII 310 CMR 7.26(42)(d)1.
		Smoke	N/A	$< \text{No. 1 of Chart}^{(1)}$, except $\geq \text{No. 1 to } < \text{No. 2 of Chart}$ for ≤ 6 minutes during any one hour, no time to equal or exceed No. 2 of the Chart.	310 CMR 7.26(42)(d)5. 310 CMR 7.06(1)(a)

Table 3					
EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emissions Limits/Standards	Applicable Regulation and/or Approval No.
7	No 2. Fuel Oil	Opacity	N/A	≤ 20 % except >20% to ≤ 40 % for ≤ 2 minutes during any 1 hour	310 CMR 7.26(42)(d)5. 310 CMR 7.06(1)(b)
		Sound		Constructed, located, operated and maintained to comply with 310 CMR 7.10	310 CMR 7.26(42)(d)2. 310 CMR 7.10 (State Only Requirement)
		All	Limited to stack height and Emission dispersion requirements. <i>See Table 4 Proviso No. 21</i>	N/A	310 CMR 7.26(42)(d)3.a.
8	Digester Gas	N/A	3,000 gallons of feedstock per day based on a 90 day rolling average	N/A	SE-13-020
Facility-wide	All	Greenhouse Gas (Note 5)	N/A	N/A	310 CMR 7.71 (State Only Requirement)
	All	Any Single HAP	N/A	< 10 TPY	17-AQ14/12-000003-APP
		Total HAP		< 25 TPY	

Table 3 Key:

Btu = British thermal units
CFR = Code of Federal Regulations
CMR = Code of Massachusetts Regulations
CO = Carbon Monoxide
DG = Digester Gas
EU = Emission Unit
g/bhp-hr = grams per brake horsepower for one hour (engine output)
g/kW-hr = grams per kilowatt for one hour (engine output)
HAP = Hazardous Air Pollutant as listed in the 1990 Clean Air Act Amendments, Section 112(b)
H₂S = Hydrogen Sulfide
HAP = Hazardous Air Pollutant(s)
ICE = Internal Combustion Engine
lb/MMBtu = pound per Million British thermal units
LFG = Landfill Gas
MMBtu = Million Btu
N/A = Not Applicable
No. = Number
Nos. = Numbers
NMHC = Non-Methane HydroCarbons
NMOC = Non-Methane Organic Compounds

NO_x = Nitrogen Oxides
O₂ = Oxygen
PM = Total Particulate Matter
PM_{2.5} = Particulate Matter less than or equal to 2.5 microns in diameter
PM₁₀ = Particulate Matter less than or equal to 10 microns in diameter
ppm_v = Parts per million, by volume
ppm_{vd} = parts per million, by volume, dry basis
RICE = Reciprocating Internal Combustion Engine
SO₂ = Sulfur Dioxide
TPM = Tons Per Month
TPY = Tons Per consecutive 12-month period ¹
VOC = Volatile Organic Compound
% = Percent
≥ = Greater than or equal to
< = Less than
≤ = Less than or equal to
+ = added to
§ = Section
§§ = Sections

Table 3 Foot Notes:

1. To calculate the amount of a consecutive 12 month rolling period take the current calendar month amount and add it to the previous 11 calendar months total amount.
2. Emission limits listed are for individual emission units.
3. Sources have the option to utilize an oil analysis program as described in § 63.6625(j) in order to extend the specified oil change requirement in Table 2d of this subpart.
4. Emission limits and Heat Input limits represent a combined total for up to five emission units.
5. Greenhouse Gas means any chemical or physical substance that is emitted into the air and that MassDEP may reasonably anticipate will cause or contribute to climate change including, but not limited to: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).
6. Hazardous Air Pollutants are as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b).
7. Chart means the Ringelmann Scale for grading the density of smoke, as published by the United States Bureau of Mines and as referred to in the Bureau of Mines Information Circular No. 8333, or any smoke inspection guide approved by the MassDEP.

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to the monitoring/testing, record keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10) and applicable requirements contained in Table 3:

Table 4	
EU	Monitoring And Testing Requirements
EU-1 EU-2 EU-3 EU-4	1. In accordance with Plan Approval No. 4B04015, one operable oxygen analyzer shall be maintained on-site and record shall be maintained of the stack outlet oxygen (O ₂) levels at least once per week on each engine.
	2. As applicable, and in lieu of oil change required in Table 3, analyze engine oil for Total Acid Number, viscosity, and percent water content as specified at 40 CFR §63.6625(j).
	3. In accordance with Plan Approval No. 4B04015, each engine/generator set shall be continuously monitored for run time and kW produced.
	4. In accordance with Plan Approval No. 4B04015, a LFG flow recorder shall be maintained so that an on-site record of the total volume of LFG (scf) fired by the five (5) engine/generator sets will be available by date and time period.
	5. In accordance with Plan Approval No. 4B04015, the heat input of LFG (Btu) fired in each EU shall be determined by gas chromatograph and/or field measurements for each month and for each consecutive 12-month period.
	6. In accordance with 310 CMR 7.00: Appendix C(9)(b)2., monitor the H ₂ S concentration (ppm _v) of the LFG to be combusted on a monthly basis. The sampling shall be conducted using a protocol and test method(s) that are approved by MassDEP.
	7. In accordance with 310 CMR 7.00: Appendix C(9)(b)2., perform monthly visible emissions observations of each engine exhaust, in accordance with 40 CFR Part 60, Appendix A, Method 22, for a time period no less than fifteen (15) minutes while the engines are in operation.
	8. In accordance with Plan Approval No. 4B04015, the ability of the facility to maintain emission rates at or below approved levels shall be demonstrated to the MassDEP in the future if deemed necessary. Compliance testing, if requested by MassDEP, shall be conducted in accordance with MassDEP's "Guideline for Source Emission Testing" and test methods and procedures contained in 40 CFR Part 60, Appendix A.
EU-5	9. In accordance with Plan Approval No. 4B04015, the facility shall be constructed to accommodate the emission testing requirements contained in 40 CFR Part 60, Appendix A.
	10. In accordance with Plan Approval No. 4B04015, emission testing shall be performed to determine compliance with approved CO, NMOC and NO _x emission limits. Emission testing shall be completed within ninety (90) days from the date the engine commences LFG burning after startup of the facility.
	11. Upon installation the Permittee shall conduct, as applicable, monitoring and performance testing required at 40 CFR Part 60 and 40 CFR Part 63.
	12. In accordance with Plan Approval No. 4B04015, a NO _x /CO optimization/minimization diagnostic emission test program shall be conducted prior to emission testing.

Table 4	
EU	Monitoring And Testing Requirements
EU-6	13. In accordance with 310 CMR 7.18(8)(h), Persons subject to 310 CMR 7.18(8) shall, upon request of the MassDEP, perform or have performed test to demonstrate compliance. Testing shall be conducted in accordance with a method approved by the MassDEP and USEPA.
EU-7	14. In accordance with 40 CFR 60.4206, the Permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205(b) and 60.4202(a)(2) over the entire life of the engine. 15. In accordance with 310 CMR 7.26(42)(d)1.c., and 40 CFR 60.4209(a), the Permittee must install a non-turn-back hour counter. The non-turn-back hour counter shall be operated and maintained in good working order. 16. In accordance with 40 CFR 60.4211(f)(1), the Permittee may operate the emergency stationary ICE for emergency situations with no time limit. 17. In accordance with 40 CFR 60.4211(f)(2)(i), the Permittee may operate the emergency stationary ICE for any combination of the purposes specified below for a maximum of 100 hours per calendar year. (i) Emergency Stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
	18. In accordance with 40 CFR 60.4211(f)(3), the Permittee may operate the Emergency stationary ICE for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2)(i) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per year for nonemergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (i) The 50 hours per year for nonemergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: <i>A. The Engine is dispatched by the local balancing authority or local transmission and distribution system operator;</i> <i>B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.</i> <i>C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or Guidelines.</i> <i>D. The power is provided only to the facility itself or to support the local transmission and distribution system.</i> <i>E. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.</i>

Table 4

EU	Monitoring And Testing Requirements
EU-7	19. In accordance with 310 CMR 7.26(42)(e)2., MassDEP may require emission or other monitoring to assure compliance with the requirements of 310 CMR 7.26(42).
	20. In accordance with 310 CMR 7.26(42)(e)3., any testing when required shall comply with the following: a) Tests to certify compliance with emission limitations must be performed in accordance with EPA reference Methods, California Air Resources Board Methods approved by EPA, or equivalent methods as approved by MassDEP and EPA. b) Particulate matter from liquid fuel reciprocating engines shall be determined using Method 8178 D2 of the International Organization for Standardization. c) MassDEP may require emission or other testing to assure compliance with the emission limitations or fuel requirements.
	21. In accordance with 310 CMR 7.26(42)(d)3.a., the engine shall utilize an exhaust stack that discharges so as to not cause a condition of air pollution (310 CMR 7.01(1)). Exhaust stacks shall be configured to discharge the combustion gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted combustion gases. Any emission impacts of exhaust stacks upon sensitive receptors including, but not limited to, people, windows and doors that open, and building fresh air intakes shall be minimized by employing good air pollution control engineering practices. Such practices include without limitation: i) Avoiding locations that may be subject to downwash of the exhaust; and ii) Installing stack(s) of sufficient height in locations that will prevent and minimize flue gas impacts upon sensitive receptors.
EU-8	22. In accordance with Plan Approval SE-13-020, the Permittee shall continuously monitor the pressure in the Blending and Mixing tank to ensure it is maintained at a negative pressure at all times.
	23. In accordance with Plan Approval SE-13-020, the Permittee shall continuously monitor the biogas production rate of the anaerobic digestion system.
	24. In accordance with Plan Approval SE-13-020, if and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13.
Facility-wide	25. In accordance with Plan Approval No. 4B04015 and 310 CMR 7.12, monitor operations such that information may be compiled for the annual preparation of a Source Registration/Emission Statement.
	26. In accordance with AQ14/12-000003-APP, the Permittee shall monitor so that comprehensive and accurate records are maintained onsite to demonstrate compliance with the facility-wide HAP emission limits contained in Table 3. Monitor so that records are compiled for actual emissions of all HAPs emitted for each calendar month and for each consecutive twelve-month period and compiled no later than the 15 th day following each month.
	27. In accordance with 310 CMR 7.13(1) Any person owning, leasing, operating or controlling a facility for which the MassDEP has determined that stack testing is necessary to ascertain compliance with the MassDEP's regulations or design approval provisos shall cause such stack testing: a) to be conducted by a person knowledgeable in stack testing, b) to be conducted in accordance with procedures contained in a test protocol which has been approved by the MassDEP, c) to be conducted in the presence of a representative of the MassDEP when such is deemed necessary, and d) to be summarized and submitted to the MassDEP with analysis and report within such time as agreed to in the approved test protocol.

Table 4	
EU	Monitoring And Testing Requirements
Facility-wide	28. In accordance with 310 CMR 7.13(2) Any person having control of a facility relative to which the MassDEP determines that stack testing (to ascertain the mass emission rates of air contaminants emitted under various operating conditions) is necessary for the purposes of regulatory enforcement or determination of regulatory compliance shall cooperate with the MassDEP to provide: a) entrance to a location suitable for stack sampling, b) sampling ports at locations where representative samples may be obtained, c) tagging and ladders to support personnel and equipment for performing the tests, d) a suitable power source at the sampling location for the operation of sampling equipment, and e) such other reasonable facilities as may be requested by the MassDEP.
	29. In accordance with 310 CMR 7.00: Appendix C (9)(b), the Permittee shall; a) comply with all emissions monitoring and analysis procedures or test methods required under the applicable requirements, including those promulgated pursuant to 42 U.S.C. 7401, §§ 504(a) and 504(b) or 114(a)(3); b) if the applicable requirement does not require periodic testing or instrumental or non-instrumental monitoring (which may consist of record keeping designed to serve as monitoring), then the Permittee shall perform periodic monitoring sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit. Such monitoring requirements shall assure the use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Record keeping provisions may be sufficient to meet the requirements; and c) comply with requirements concerning the use, maintenance and installation of monitoring equipment or methods as the MassDEP deems appropriate.
	30. In accordance with 310 CMR 7.71(1) and Appendix C(9), the Permittee shall establish and maintain data systems or record keeping practices (e.g. fuel use records, SF₆ usage documentation, Continuous Emissions Monitoring System) for greenhouse gas emissions to ensure compliance with the reporting provisions of M.G.L. c. 21N, the Climate Protection and Green Economy Act, St. 2008, c. 298, § 6. (State Only Requirement)

Table 4 Key:

Btu= British thermal units
 c. = chapter
 CFR = Code of Federal Regulations
 CMR = Code of Massachusetts Regulations
 CO = Carbon Monoxide
 e.g. = for example
 EU = Emission Unit
 HAP = Hazardous Air Pollutant, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)
 H₂S = Hydrogen Sulfide
 ICE = Internal Combustion Engine
 kW = kiloWatt
 LFG = Landfill Gas
 M.G.L. = Massachusetts General Law
 NERC = North American Electric Reliability Corporation
 NMOC = Non-Methane Organic Compound
 NO_x = Nitrogen Oxides
 No. = Number
 O₂ = Oxygen
 ppm_v = parts per million, by volume
 scf = standard cubic foot
 SF₆ = Sulfur Hexafluoride
 SI = Spark Ignition
 U.S.C. = United States Code
 USEPA = United States Environmental Protection Agency
 § = Section
 §§ = Sections

Table 5	
EU	Record Keeping Requirements
EU-1 EU-2 EU-3 EU-4 EU-5	1. In accordance with Plan Approval No. 4B04015, a record of stack oxygen levels, as determined at least weekly during operation, shall be maintained for each engine.
	2. In accordance with Plan Approval No. 4B04015, a copy of the NO _x /CO optimization/minimization program report for each engine shall be maintained on-site.
	3. In accordance with Plan Approval No. 4B04015, a record of the volume of LFG (scf) fired in each engine/generator set for each month and for each consecutive 12 month period shall be maintained on-site. This record shall take into account the total volume of LFG fired by the combined engine/generator sets, and the individual engine/generator set run time and amount of electricity produced.
	4. In accordance with Plan Approval No. 4B04015, the heat input of LFG (Btu) fired in the engine/generator sets for each month and consecutive 12 month period shall be maintained on-site.
	5. In accordance with Plan Approval No. 4B04015, a record of NO _x , CO, NMOC, VOC, PM, and SO ₂ monthly and consecutive 12 month period emission rate records for each engine/generator set shall be maintained on-site.
	6. In accordance with Plan Approval No. 4B04015, a copy of the Standard Operating and Maintenance Procedures for all subject equipment shall be maintained on-site.
	7. In accordance with Plan Approval No. 4B04015, an operation log, or other record keeping system, shall be maintained on-site at a level of detail sufficient to document that the Operation and Emission Limits in Table 3 are not exceeded.
	8. In accordance with 310 CMR 7.00: Appendix C(10)(b), maintain records of the monthly H ₂ S monitoring results to include H ₂ S concentration (ppm _v) in LFG and the corresponding SO ₂ emission calculations.
	9. In accordance with 310 CMR 7.00: Appendix C(10)(b), maintain records of the monthly visible emissions observations to include date and time period of the observations, the result of observations with respect to visible emissions, and a description of the facility operations at the time of the observation.
	10. In accordance with Plan Approval No. 4B04015, all operating and monitoring records, including emission test reports, shall be maintained for the life of the facility; the five most recent years of data/records shall be maintained on-site.
	11. In accordance with 40 CFR 63.6655(a)(2), maintain records of the occurrence and duration of each malfunction of operation or the air pollution control and monitoring equipment.
	12. In accordance with 40 CFR 63.6655(a)(5), maintain records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
	13. In accordance with 40 CFR 63.6655(d), maintain records of manufacturer's emission-related operation and maintenance instructions; or the facility maintenance plan, if developed as allowed at 40 CFR 63, Subpart ZZZZ, Table 6.

Table 5	
EU	Record Keeping Requirements
EU-1 EU-2 EU-3 EU-4 EU-5	14. In accordance with 40 CFR 63.6655(d) and (e), maintain records of the maintenance (and monitoring as specified at §63.6625(j), if applicable) conducted on the stationary RICE in order to demonstrate that the RICE was operated and maintained according the requirements of 40 CFR 63, Subpart ZZZZ, Table 2d and Table 6.
EU-6	15. In accordance with 310 CMR 7.03(6) and 7.18(8)(g), prepare and maintain records sufficient to demonstrate continuous compliance as stated in 310 CMR 7.18(8)(f) and with the monthly solvent usage restriction in 310 CMR 7.03(8). Records shall include, but are not limited to: identity, quantity, formulation and density of solvent(s) used and waste solvent(s) generated.
EU-7	16. In accordance with 310 CMR 7.26(42)(f), the Permittee shall maintain records described in 310 CMR 7.26(42)(f)1. through 4. Such records shall be maintained on site or for remote locations, at the closest facility where records can be maintained and shall be made available to MassDEP or its designee upon request. The owner or operator shall certify that records are accurate and true in accordance with 310 CMR 7.01(2)(a) through (c). 1) Information on equipment type, make and model, and rated power output; 2) A log of operations, including date, time and duration of operation and reason for each start per 310 CMR 7.26(42)(d)1., fuel type and supplier; 3) Purchase orders, invoices, and other documents to substantiate information in the log; 4) Copies of certificates and documents from the manufacturer related to certificates.
EU-8	17. In accordance with Plan Approval SE-13-020, the Permittee shall continuously record the pressure in the Blending and Mixing tank to document it is maintained at negative pressure at all times.
	18. In accordance with Plan Approval SE-13-020, the Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. These records shall be compiled no later than the 15 th day following each month.
	19. In accordance with Plan Approval SE-13-020, the Permittee shall maintain records of monitoring and testing as required by Table 4.
	20. In accordance with Plan Approval SE-13-020, the Permittee shall maintain a copy of the most up-to-date SOMP for the EU(s) approved herein on-site.
	21. In accordance with Plan Approval SE-13-020, the Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	22. In accordance with Plan Approval SE-13-020, the Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
Facility-wide	23. In accordance with 310 CMR 7.71 (6) (b) and (c), the Permittee shall keep on site at the facility documents of the methodology and data used to quantify emissions for a period of 5 years from the date the document is created. The Permittee shall make these documents available to MassDEP upon request. (State Only Requirement).

Table 5	
EU	Record Keeping Requirements
Facility-wide	24. In accordance with AQ14/12-000003-APP, the Permittee shall maintain comprehensive and accurate records onsite to demonstrate compliance with the facility-wide HAP emission limits contained in Table 3. A record of all HAPs emitted for each calendar month and for each consecutive twelve-month period shall be maintained on-site. These records shall be compiled no later than the 15 th day following each month.
	25. In accordance with Plan Approval No. 4B04015, a record keeping system shall be established and maintained on-site. All records shall be maintained up-to-date such that the year-to-date information is readily available for MassDEP examination. Record keeping shall, at a minimum, include: a) a record of routine maintenance activities performed on emission unit control and monitoring equipment including, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed; and b) a record of all malfunctions on emission unit control and monitoring equipment shall include, at a minimum: the date and time the malfunctions occurred; a description of the malfunctions and the corrective actions taken; the date and time corrective actions were initiated; and the date and time corrective actions were completed and the emission unit returned to compliance. All records shall be kept on-site for five (5) years and shall be made available to MassDEP personnel upon request.
	26. In accordance with 310 CMR 7.12, maintain records to facilitate compilation of data for the required Source Registration submittal.
	27. In accordance with 310 CMR 7.12(3)(c), copies of Source Registration and other information supplied to MassDEP, to comply with 310 CMR 7.12, shall be retained by the facility owner/operator for five years from the date of submittal.
	28. In accordance with Plan Approval SE-13-020, the Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 5 Key:

Btu = British thermal units
 CFR= Code of Federal Regulations
 CMR = Code of Massachusetts Regulations
 CO = Carbon Monoxide
 EU = Emission Unit
 HAP = Hazardous air pollutant, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)
 H₂S = Hydrogen Sulfide
 LFG = Landfill Gas
 MassDEP = Massachusetts Department of Environmental Protection
 NMOC = Non-Methane organic compounds
 NO_x = Nitrogen Oxides
 No. = Number
 PM = Particulate Matter
 ppm_v = parts per million, by volume
 RICE = Reciprocating Internal Combustion Engine
 scf = standard cubic foot
 SO₂ = Sulfur Dioxide
 VOC = Volatile Organic Compounds
 § = Section

Table 6	
EU	Reporting Requirements
EU-1	1. In accordance with Plan Approval No. 4B04015, revisions to the Final Standard Operating and Maintenance Procedures shall be submitted to the MassDEP within seven (7) days from their initial use.
EU-2	2. In accordance with Plan Approval No. 4B04015, the MassDEP's Permit Chief for the Bureau of Air and Waste at this office must be notified by telephone or electronic mail within 24 hours, and with written notification within ten (10) days, after occurrence of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and/or a condition of air pollution.
EU-3	
EU-4	
EU-5	
EU-5	3. In accordance with Plan Approval No. 4B04015, notification to the MassDEP, in writing, shall be made within 10 days from the date that EU-5 commences LFG or digester gas burning.
Facility-wide	4. In accordance with Plan Approval 4B04015 and 310 CMR 7.12, the Permittee shall submit a Source Registration/Emission Statement Form to MassDEP on an annual basis.
	5. In accordance with Plan Approval No. 4B04015, a stack test protocol shall be submitted to the MassDEP at least 30 days prior to the commencing of compliance testing. The final emission report shall be submitted to the MassDEP within 30 days from completion of on-site testing.
	6. In accordance with 310 CMR 7.13(1) and 7.13(2), if determined by MassDEP that stack testing is necessary to ascertain compliance with the Department's regulations or design approval provisos, the Permittee shall cause such stack testing to be summarized and submitted to MassDEP as prescribed in the agreed to pretest protocol.
	7. In accordance with 310 CMR 7.00: Appendix C(10)(c), the Permittee shall report a summary of all monitoring data and related supporting information to MassDEP at least every six months (January 30 and July 30 of each calendar year).
	8. In accordance with General Condition 10 of this Permit, the Permittee shall submit the Annual Compliance report to MassDEP and USEPA by January 30 of each year.
	9. In accordance with 310 CMR 7.00: Appendix C (10)(f), the Permittee shall promptly report to the MassDEP all instances of deviations from permit requirements. This report shall include the deviation itself, including those attributable to upset conditions as defined in the permit, the probable cause of the deviation, and any corrective actions or preventative measures taken.
	10. Submit Annual Compliance report to MassDEP and USEPA by January 30 of each year and as required by General Condition 10 of this Permit.
	11. In accordance with 310 CMR 7.00: Appendix C (10)(h), all required reports must be certified by a responsible official consistent with 310 CMR 7.00: Appendix C (5)(c).
	12. Unless otherwise noted ^(Note 1) , all notifications and reporting required by this Operating Permit shall be sent to: Department of Environmental Protection Bureau of Air and Waste Southeast Regional Office 20 Riverside Drive Lakeville, MA 02347 ATTN: Chief, Air Permitting Telephone: (508) 946-2770 Electronic mail address: sero.air@mass.gov
	13. In accordance with 310 CMR 7.71(5), the Permittee shall electronically submit and certify by April 15 th of each year a greenhouse gas emissions report to MassDEP. (State Only Requirement).

Table 6 Key:

EU = Emission Unit
CMR = CMR = Code of Massachusetts Regulations
MassDEP = Massachusetts Department of Environmental Protection
USEPA = United States Environmental Protection Agency
No. = Number
LFG = Landfill Gas

Table 6 Note:

(1) The annual Source Registration/Emission Statement shall be submitted to the MassDEP office specified in the instructions.

C. GENERAL APPLICABLE REQUIREMENTS

The Permittee shall comply with all generally applicable requirements contained in 310 CMR 7.00 et seq. and 310 CMR 8.00 et. seq., when subject.

D. REQUIREMENTS NOT CURRENTLY APPLICABLE

The Permittee is currently not subject to the following requirements:

Table 7	
Regulation	Reason
310 CMR 7.16: Reduction of Single Occupant Commuter Vehicle Use	Facility is below employee threshold.
40 CFR Part 64: Compliance Assurance Monitoring	Facility has no subject emission units

Table 7 Key:

CFR = Code of Federal Regulations

CMR = Code of Massachusetts Regulations

5. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to and shall comply with the following special terms and conditions that are not contained in Table 3, 4, 5, and 6:

Table 8	
EU	Special Terms and Conditions
EU-5	1. In accordance with AQ14/12-000003-APP, at the time of installation of EU-5, the Permittee shall notify MassDEP, evaluate the installation according to applicable State and Federal regulations (such as, but not limited to 40 CFR Part 63 Subpart ZZZZ, and 40 CFR Part 60 Subpart JJJJ), and propose to modify the Operating Permit as necessary.
EU-7	2. In accordance with 310 CMR 7.26(42)(b)3., the Permittee shall obtain from the supplier a statement that a certificate of conformity has been obtained from the USEPA. Pursuant to 40 CFR 89.105 as in effect October 23, 1998, any engine certified under the USEPA non-road standards is automatically certified to operate as an emergency engine pursuant to 310 CMR 7.26(42).
EU-8	3. In accordance with Plan Approval SE-13-020, in the event that the engines at the facility are not operational, all digested gas from the anaerobic digester system shall be routed to the flare.
Facility-wide	4. Emission Units EU-1 through EU-5 construction shall be consistent with the Equipment and Design Schedule in Plan Approval Nos. 4B04015 and SE-13-020 as follows: <u>Engine/Electric Generator Sets</u> Manufacturer Caterpillar (or equiv.) Model No. 3516 (or equiv.) Max. Heat Input 10.07 MMBtu/hr/engine @ 900 kW Fuel Landfill Gas / Digester Gas Maximum Output 900 kW/generator Nominal Output 825 kW/generator Max. Stack Exit Temperature 960 °F Stack Material Steel Stack Height 30 feet above ground Stack Exit Diameter 12 inches Silencer Manufacturer EM Products (or equiv.) Silencer Model No. JCS12-X2608 (or equiv.) <u>Approximate Facility Location</u> UTM Coordinates 334925 East, 4620880 North (Zone 19) Latitude/Longitude North 41° 43' 28", West 70° 59'
	5. Emission units EU-1 through EU-4 are subject to the requirements of 40 CFR 63.1-15, Subpart A, "General Provisions" [as indicated in Table"8" to Subpart ZZZZ of 40 CFR 63] except §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), 63.9(g) and 63.9(h) as specified at § 63.6645(a)(5). Compliance with all applicable provisions therein is required.
	6. In accordance with Plan Approval No. 4B04015, there shall be no direct release or bypass of landfill gas from the facility to the ambient air.
	7. In accordance with Plan Approval No. 4B04015, sound impacts shall not exceed 10 dB(A) above background and shall not cause a puretone condition as defined in the MassDEP's DAQC Policy No. 90-001. (State Only Requirement)

Table 8	
EU	Special Terms and Conditions
Facility-wide	8. In accordance with Plan Approval No. 4B04015, MassDEP personnel shall be provided immediate access to the plant site, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
	9. In accordance with Plan Approval No. 4B04015, if any nuisance condition(s) should be generated by the operation of this facility, immediate appropriate steps shall be taken to abate the nuisance condition(s).

Table 8 Key:

CFR = Code of Federal Regulations
 dB(A) = decibels weighted for the "A" scale
 hr = hour
 MMBtu = Million British Thermal Units
 ° = degrees
 ' = minutes
 " = seconds
 °F = degrees Fahrenheit
 @ = at
 equiv. = equivalent

DAQC = Division of Air Quality Control
 EU = Emission Unit
 kW = kilowatt
 No. = Number
 UTM = Universal Transverse Mercator
 § = Section
 §§ = Sections
 USEPA = United States Environmental Protection Agency
 CMR = Code of Massachusetts Regulations
 max. = maximum

6. ALTERNATIVE OPERATING SCENARIOS

The Permittee did not request alternative operating scenarios in its Operating Permit application.

7. EMISSIONS TRADING

A. INTRA-FACILITY EMISSION TRADING

The Permittee did not request intra-facility emissions trading in its Operating Permit application.

B. INTER-FACILITY EMISSION TRADING

The Permittee did not request inter-facility emissions trading in its Operating Permit application.

8. COMPLIANCE SCHEDULE

The Permittee has indicated that the Facility is in compliance and shall remain in compliance with the applicable requirements contained in Sections 4 and 5.

In addition, the Permittee shall comply with any applicable requirements that become effective during the Permit term.

GENERAL CONDITIONS FOR OPERATING PERMIT

9. FEES

The Permittee has paid the permit application processing fee and shall pay the annual compliance fee in accordance with the fee schedule pursuant to 310 CMR 4.00.

10. COMPLIANCE CERTIFICATION

All documents submitted to the MassDEP shall contain certification by the responsible official of truth, accuracy, and completeness. Such certification shall be in compliance with 310 CMR 7.01(2) and contain the following language:

"I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

The "Operating Permit Reporting Kit" contains instructions and the Annual Compliance Report and Certification and the Semi-Annual Monitoring Summary Report and Certification. The "Operating Permit Reporting Kit" is available to the Permittee via the MassDEP's web site, <http://www.mass.gov/dep/air/approvals/aqforms.htm#op>.

A. Annual Compliance Report and Certification

The Responsible Official shall certify, annually for the calendar year, that the facility is in compliance with the requirements of this Operating Permit. The report shall be postmarked or delivered by January 30 to the MassDEP and to the Air Compliance Clerk, U.S. Environmental Protection Agency - New England Region. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- 1) the terms and conditions of the Permit that are the basis of the certification;
- 2) the current compliance status and whether compliance was continuous or intermittent during the reporting period;
- 3) the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and
- 4) any additional information required by the MassDEP to determine the compliance status of the source.

B. Semi-Annual Monitoring Summary Report and Certification

The Responsible Official shall certify, semi-annually on the calendar year, that the Facility is in compliance with the requirements of this Permit. The report shall be postmarked or delivered by January 30 and July 30 to MassDEP. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- 1) the terms and conditions of the Permit that are the basis of the certification;
- 2) the current compliance status during the reporting period;
- 3) the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
- 4) whether there were any deviations during the reporting period;
- 5) if there are any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;
- 6) whether deviations in the reporting period were previously reported;
- 7) if there are any outstanding deviations at the time of reporting, the proposed date of return to compliance;
- 8) if the deviations in the reporting period have returned to compliance and date of such return to compliance; and
- 9) any additional information required by the MassDEP to determine the compliance status of the source.

11. NONCOMPLIANCE

Any noncompliance with a permit condition constitutes a violation of 310 CMR 7.00: Appendix C and the Clean Air Act, and is grounds for enforcement action, for Permit termination or revocation, or for denial of an Operating Permit renewal application by the MassDEP and/or EPA. Noncompliance may also be grounds for assessment of administrative or civil penalties under M.G.L. c.21A, §16 and 310 CMR 5.00; and civil penalties under M.G.L. c.111, §142A and 142B. This Permit does not relieve the Permittee from the obligation to comply with any other provisions of 310 CMR 7.00 or the Act, or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or Local rules and regulations, not addressed in this Permit.

12. PERMIT SHIELD

- A. This Facility has a permit shield provided that it operates in compliance with the terms and conditions of this Permit. Compliance with the terms and conditions of this Permit shall be deemed compliance with all applicable requirements specifically identified in Sections 4, 5, 6, and 7, for the emission units as described in the Permittee's application and as identified in this Permit.

Where there is a conflict between the terms and conditions of this Permit and any earlier approval or Permit, the terms and conditions of this Permit control.

- B. The MassDEP has determined that the Permittee is not currently subject to the requirements listed in Section 4, Table 7.
- C. Nothing in this Permit shall alter or affect the following:
- 1) the liability of the source for any violation of applicable requirements prior to or at the time of Permit issuance.
 - 2) the applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or
 - 3) the ability of EPA to obtain information under 42 U.S.C. §7401, §114 or §303 of the Act.

13. ENFORCEMENT

The following regulations found at 310 CMR 7.02(8)(h) Table 6 for wood fuel, 7.04(9), 7.05(8), 7.09 (odor), 7.10 (noise), 7.18(1)(b), 7.70, 7.71, 7.72, 7.74, 7.75 and any condition(s) designated as "state only" are not federally enforceable because they are not required under the Act or under any of its applicable requirements. These regulations and conditions are not enforceable by the EPA. Citizens may seek equitable or declaratory relief to enforce these regulations and conditions pursuant to Massachusetts General Law Chapter 214, Section 7A

All other terms and conditions contained in this Permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the MassDEP, EPA and citizens as defined under the Act.

A Permittee shall not claim as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

14. PERMIT TERM

This Permit shall expire on the date specified on the cover page of this Permit, which shall not be later than the date 5 years after issuance of this Permit.

Permit expiration terminates the Permittee's right to operate the facility's emission units, control equipment or associated equipment covered by this Permit, unless a timely and complete renewal application is submitted at least 6 months before the expiration date.

15. PERMIT RENEWAL

Upon the MassDEP's receipt of a complete and timely application for renewal, this Facility may continue to operate subject to final action by the MassDEP on the renewal application.

In the event the MassDEP has not taken final action on the Operating Permit renewal application prior to this Permit's expiration date, this Permit shall remain in effect until the MassDEP takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: Appendix C(13).

16. REOPENING FOR CAUSE

This Permit may be modified, revoked, reopened, and reissued, or terminated for cause by the MassDEP and/or EPA. The responsible official of the Facility may request that the MassDEP terminate the facility's Operating Permit for cause. The MassDEP will reopen and amend this Permit in accordance with the conditions and procedures under 310 CMR 7.00: Appendix C(14).

The filing of a request by the Permittee for an Operating Permit revision, revocation and reissuance, or termination, or a notification of a planned change or anticipated noncompliance does not stay any Operating Permit condition.

17. DUTY TO PROVIDE INFORMATION

Upon the MassDEP's written request, the Permittee shall furnish, within a reasonable time, any information necessary for determining whether cause exists for modifying, revoking and reissuing, or terminating the Permit, or to determine compliance with the Permit. Upon request, the Permittee shall furnish to the MassDEP copies of records that the Permittee is required to retain by this Permit.

18. DUTY TO SUPPLEMENT

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the Facility after the date a complete renewal application was submitted but prior to release of a draft permit.

The Permittee shall promptly, on discovery, report to the MassDEP a material error or omission in any records, reports, plans, or other documents previously provided to the MassDEP.

19. TRANSFER OF OWNERSHIP OR OPERATION

This Permit is not transferable by the Permittee unless done in accordance with 310 CMR 7.00: Appendix C(8)(a). A change in ownership or operation control is considered an administrative permit amendment if no other change in the Permit is necessary and provided that a written agreement containing a specific date for transfer of Permit responsibility, coverage and liability between current and new Permittee, has been submitted to the MassDEP.

20. PROPERTY RIGHTS

This Permit does not convey any property rights of any sort, or any exclusive privilege.

21. INSPECTION AND ENTRY

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow authorized representatives of the MassDEP, and EPA to perform the following:

- A. Enter upon the Permittee's premises where an operating permit source activity is located or emissions-related activity is conducted, or where records must be kept under the conditions of this Permit;
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- D. Sample or monitor at reasonable times any substances or parameters for the purpose of assuring compliance with the Operating Permit or applicable requirements as per 310 CMR 7.00 Appendix C(3)(g)(12).

22. PERMIT AVAILABILITY

The Permittee shall have available at the Facility, at all times, a copy of the materials listed under 310 CMR 7.00: Appendix C(10)(e) and shall provide a copy of the Operating Permit, including any amendments or attachments thereto, upon request by the MassDEP or EPA.

23. SEVERABILITY CLAUSE

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

24. EMERGENCY CONDITIONS

The Permittee shall be shielded from enforcement action brought for noncompliance with technology based¹ emission limitations specified in this Permit as a result of an emergency². In order to use emergency as an affirmative defense to an action brought for noncompliance, the Permittee shall demonstrate the affirmative defense through properly signed, contemporaneous operating logs, or other relevant evidence that:

- A. an emergency occurred and that the Permittee can identify the cause(s) of the emergency;
- B. the permitted Facility was at the time being properly operated;
- C. during the period of the emergency, the Permittee took all reasonable steps as expeditiously as possible, to minimize levels of emissions that exceeded the emissions standards, or other requirements in this Permit; and
- D. the Permittee submitted notice of the emergency to the MassDEP within two (2) business days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

If an emergency episode requires immediate notification to the Bureau of Waste Site Cleanup/Emergency Response, immediate notification to the appropriate parties should be made as required by law.

25. PERMIT DEVIATION

Deviations are instances where any permit condition is violated and not reported as an emergency pursuant to section 24 of this Permit. Reporting a permit deviation is not an affirmative defense for action brought for noncompliance. Any reporting requirements listed in Table 6 of this Operating Permit shall supersede the following deviation reporting requirements, if applicable.

The Permittee shall report to the MassDEP's Regional Bureau of Air and Waste the following deviations from permit requirements, by telephone, by fax or by electronic mail (e-mail), within three (3) days of discovery of such deviation:

- A. Unpermitted pollutant releases, excess emissions or opacity exceedances measured directly by CEMS/COMS, by EPA reference methods or by other credible evidence, which are ten percent (10%) or more above the emission limit.

¹ Technology based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain health based air quality standards.

² An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation would require immediate corrective action to restore normal operation, and that causes the source to exceed a technology based limitation under the Permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operations, operator error or decision to keep operating despite knowledge of any of these things.

- B. Exceedances of parameter limits established by this Operating Permit or other approvals, where the parameter limit is identified by the Permit or approval as surrogate for an emission limit.
- C. Exceedances of Permit operational limitations directly correlated to excess emissions.
- D. Failure to capture valid emissions or opacity monitoring data or to maintain monitoring equipment as required by statutes, regulations, this Operating Permit, or other approvals.
- E. Failure to perform QA/QC measures as required by this Operating Permit or other approvals for instruments that directly monitor compliance.

For all other deviations, three (3) day notification is waived and is satisfied by the documentation required in the subsequent Semi-Annual Monitoring Summary and Certification. Instructions and forms for reporting deviations are found in the MassDEP Bureau of Air and Waste Air Operating Permit Reporting Kit, which is available to the Permittee via the MassDEP's web site, <http://www.mass.gov/dep/air/approvals/aqforms.htm#op>.

This report shall include the deviation, including those attributable to upset conditions as defined in the Permit, the probable cause of such deviations, and the corrective actions or preventative measures taken.

Deviations that were reported by telephone, fax or electronic mail (e-mail) within 3 days of discovery, said deviations shall also be submitted in writing via the Operating Permit Deviation Report to the regional Bureau of Air and Waste within ten (10) days of discovery. For deviations, which do not require 3-day verbal notification, follow-up reporting requirements are satisfied by the documentation required in the aforementioned Semi-Annual Monitoring Summary and Certification.

26. OPERATIONAL FLEXIBILITY

The Permittee is allowed to make changes at the Facility consistent with 42 U.S.C. §7401, §502(b)(10) not specifically prohibited by the Permit and in compliance with all applicable requirements provided the Permittee gives the EPA and the MassDEP written notice fifteen (15) days prior to said change; notification is not required for exempt activities listed at 310 CMR 7.00: Appendix C(5)(h) and (i). The notice shall comply with the requirements stated at 310 CMR 7.00: Appendix C(7)(a) and will be appended to the Facility's Permit. The permit shield allowed for at 310 CMR 7.00: Appendix C(12) shall not apply to these changes.

27. MODIFICATIONS

- A. Administrative Amendments - The Permittee may make changes at the Facility which are considered administrative amendments pursuant to 310 CMR 7.00: Appendix C(8)(a)1., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(b).
- B. Minor Modifications - The Permittee may make changes at the Facility which are considered minor modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)2., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(d).

- C. Significant Modifications - The Permittee may make changes at the Facility which are considered significant modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)3., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(c).
- D. No permit revision shall be required, under any approved economic incentives program, marketable permits program, emission trading program and other similar programs or processes, for changes that are provided in this Operating Permit. A revision to the Permit is not required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program under Title IV of the Act, provided that such increases do not require an Operating Permit revision under any other applicable requirement.

28. OZONE DEPLETING SUBSTANCES

This section contains air pollution control requirements that are applicable to this Facility, and the United States Environmental Protection Agency enforces these requirements.

- A. The Permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - 1) All containers containing a class I or class II substance that is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to 40 CFR 82.106.
 - 2) The placement of the required warning statement must comply with the requirements of 40 CFR 82.108.
 - 3) The form of the label bearing the required warning statement must comply with the requirements of 40 CFR 82.110.
 - 4) No person may modify, remove or interfere with the required warning statement except as described in 40 CFR 82.112.
- B. The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVAC) in Subpart B:
 - 1) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices of 40 CFR 82.156.
 - 2) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment of 40 CFR 82.158.
 - 3) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - 4) Persons disposing of small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152) must comply with recordkeeping requirements of 40 CFR 82.166.
 - 5) Persons owning commercial or industrial process refrigeration equipment must comply with the

leak repair equipment requirements of 40 CFR 82.156.

- 6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- C. If the Permittee manufactures, transforms, imports or exports a class I or class II substance, the Permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, "Production and Consumption Controls".
- D. If the Permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the Permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, "Servicing of Motor Vehicle Air Conditioners". The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.
- E. The Permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program".

29. PREVENTION OF ACCIDENTAL RELEASES

This section contains air pollution control requirements that are applicable to this Facility and the United States Environmental Protection Agency enforces these requirements.

This Facility is subject to the requirements of the General Duty Clause, under 112(r)(1) of the CAA Amendments of 1990. This clause specifies that owners or operators of stationary sources producing, processing, handling or storing a chemical in any quantity listed in 40 CFR Part 68 or any other extremely hazardous substance have a general duty to identify hazards associated with these substances and to design, operate and maintain a safe facility, in order to prevent releases and to minimize the consequences of accidental releases which may occur.

APPEAL CONDITIONS FOR OPERATING PERMIT

This Permit is an action of the MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing within 21 days of issuance of this Permit. In addition, any person who participates in any public participation process required by the Federal Clean Air Act, 42 U.S.C. §7401, §502(b)(6) or under 310 CMR 7.00: Appendix C(6), with respect to the MassDEP's final action on operating permits governing air emissions, and who has standing to sue with respect to the matter pursuant to federal constitutional law, may initiate an adjudicatory hearing pursuant to Chapter 30A, and may obtain judicial review, pursuant to Chapter 30A, of a final decision therein.

If an adjudicatory hearing is requested, the Facility must continue to comply with all existing federal and state applicable requirements to which the Facility is currently subject, until a final decision is issued in the case or the appeal is withdrawn. During this period, the application shield shall remain in effect, and the Facility shall not be in violation of the Act for operating without a Permit.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the Permit is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to The Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

The Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency) county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

The MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

NMOC Emission Rate Report May 3, 2021.

1 Tech Drive, Suite 310
Andover, MA 01810

T: 978-794-0336

May 3, 2021



Mr. Patrick Bird
Director, Air Branch
USEPA Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: NMOC Emission Rate Report for 2020 and 2021
Crapo Hill Landfill, Dartmouth, Massachusetts
MassDEP Regulated Object Account #172448

Dear Mr. Bird:

On behalf of the Greater New Bedford Regional Refuse Management District (the District), Brown and Caldwell (BC) submits this letter report in accordance with the New Source Performance Standards (NSPS) for municipal solid waste (MSW) landfills contained in 40 CFR Part 60, Subpart XXX. Specifically, this letter report provides the uncontrolled emission rate of non-methane organic compounds (NMOCs) from the Crapo Hill Landfill for calendar years 2020 and 2021.

The NMOCs emission rate was determined in accordance with the methodology contained in 40 CFR Part 60, Subpart XXX. These NSPS regulations require calculation of the annual uncontrolled NMOCs emission rate for landfills that have a maximum landfill design capacity for waste disposal of greater than or equal to 2.5 million megagrams (Mg). The Crapo Hill Landfill triggered this threshold as shown in the design report submitted to USEPA and MassDEP by BC on behalf of the District dated March 26, 2019, provided as Attachment 1. The NSPS provides a three-tiered procedure for calculating uncontrolled NMOC emission rates. If the landfill is calculated to generate less than 35 Mg per year of uncontrolled NMOCs under any of the tiered procedures, then the landfill is not subject to the control, monitoring and most reporting requirements under the NSPS. Both Tier 1 and Tier 2 procedures were followed as described below.

In accordance with the Tier 1 methodology, the uncontrolled NMOC emission rate is calculated using a first order decay equation with default parameters, combined with site-specific waste acceptance rates, to estimate uncontrolled or pre-control NMOC emissions from the landfill. BC used the model developed by the USEPA called "Landfill Gas Emissions Model" (LandGEM), which incorporates the decay equation and default parameters with site-specific waste acceptance values input by the user. The default value for NMOCs concentration contained in landfill gas corrected to 50% methane content is 4,000 ppmv as hexane. The result of the Tier 1 procedure was a calculated quantity of uncontrolled NMOCs of 320 Mg for 2020 and 326 Mg for 2021, which are greater than the 35 Mg threshold. Based upon the Tier 1 result, BC elected to proceed to the Tier 2 calculation that allows for measured site-specific NMOC concentrations to be input to the LandGEM model to estimate the landfill's emissions.

In accordance with the Tier 2 methodology under 40 CFR Part 60, Subpart XXX, the following was performed.

- **Sampling:** In accordance with EPA Methods 3C and 25C, three samples of landfill gas were collected on September 18, 2019 from the landfill gas (LFG) collection system. The collection site is located prior to control, upstream of the flare station and LFG power generating facility. Three six-liter Summa canisters each at an initial vacuum of 25 inches of mercury were connected to a sampling port in the main LFG header. LFG samples were extracted at a flow rate of approximately 350 milliliters per minute over a 5-minute period. The Summa canisters were sent to Atmospheric Analysis & Consulting, Inc. (AAC) in Ventura, California for laboratory analysis.
- **Analyses:** AAC conducted EPA method 3C analysis to determine the concentration of fixed gases including hydrogen, oxygen, nitrogen, carbon monoxide, carbon dioxide, and methane, and EPA Method 25C analysis to determine NMOCs (as carbon) concentration contained in the LFG prior to control.
- **Calculations:**
 - The site specific NMOC concentration results from EPA Method 25C were converted from carbon to hexane basis in accordance with 40 CFR Part 60.764 – “Test methods and procedures”.
 - The site-specific NMOC concentration results were used in the LandGEM Model, together with the USEPA recommended input values to calculate uncontrolled NMOC quantities contained in LFG in 2020 and 2021. The USEPA recommended input values included waste input rates from 1995 through 2020, methane generation rate (k) of 0.05 year⁻¹, potential methane generation capacity (L₀) of 170 cubic meters of methane per Mg waste, and the site specific NMOC concentrations in landfill gas of 83 ppmv as hexane, and a methane content of LFG of 50%.

The results of the measurement, analyses and calculations are as follows:

- The uncontrolled NMOC emissions for 2020 are 6.64 Mg and for 2021 are 6.76 Mg as shown in the LandGEM report provided as Attachment 2.
- The average of three samples show uncontrolled NMOCs concentration is 83 ppmv, as hexane, corrected to 50-percent methane content in LFG, as also presented in the calculation in Attachment 2. The fixed gases were used to correct the concentrations of NMOCs to 50-percent methane content in LFG. The uncorrected NMOC and fixed gases for each of the three samples are shown in the analytical laboratory report provided by AAC, which was previously provided in our October 2019 Tier 2 Report.

As noted previously, because the uncontrolled NMOC emissions are below the 35 Mg per year threshold as calculated by the Tier 2 methodology, the Crapo Hill Landfill is not subject to the controls, monitoring and most of the reporting requirements under the NSPS for MSW landfills contained in 40 CFR Part 60, Subpart XXX. However, the District is subject to the requirement under the NSPS to recalculate and

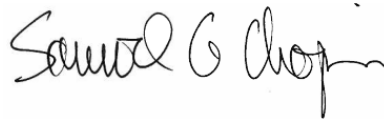
report the uncontrolled NMOC mass emission rate annually as provided in §60.767(b)(1) and retest the site-specific uncontrolled NMOC concentration every 5 years as required thereafter.

The site-specific uncontrolled NMOC concentration is scheduled to be re-determined through sampling of the LFG in 2024.

Please contact me directly at 508-728-3005 with any questions.

Very truly yours,

Brown and Caldwell

A handwritten signature in black ink, reading "Samuel G. Chapin". The signature is written in a cursive, flowing style.

Samuel G. Chapin, P.E.
Senior Principal

cc: Scott Alfonse, Executive Director, Greater New Bedford Regional Refuse
Management District
Thomas Yeransian, Commonwealth Resource Management Corporation
Mark Dakers, MassDEP Solid Waste
Thomas Cushing, MassDEP Air Quality

Attachments

Attachment 1

March 26, 2019 NSPS Design Report

101 Industrial Park Road, Suite 205
Taunton, MA 02780
T: 508.923.0879

March 26, 2019



Director, Office of Ecosystem Protection
U. S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: Amended Design Capacity Report, Crapo Hill Landfill, Dartmouth, MA
40 CFR Part 60, Subparts WWW and XXX

Dear Sir or Madam:

The Greater New Bedford Regional Refuse Management District has recently received an operating permit (Authorization to Operate) from the Massachusetts Department of Environmental Protection that increases the design capacity of the Crapo Hill Sanitary Landfill. Identifying information is as follows:

Name and address of Landfill:

Crapo Hill Sanitary Landfill
300 Samuel Barnet Boulevard
New Bedford, MA 02745
508-998-5674

(Note: Landfill is located in Dartmouth, MA but the mail address is New Bedford, MA)

Name and address of Landfill owner and operator:

Greater New Bedford Regional Refuse Management District
300 Samuel Barnet Boulevard
New Bedford, MA 02745
508-763-5924
Scott Alfonse, Executive Director

Permits issued by the Massachusetts Department of Environmental Protection for the construction and operation of the Crapo Hill Landfill include the following:

- Solid Waste Facility Permit and Authorization to Construct Phase 1, January 26, 1993, approving 69.8 acres of sanitary landfill and specifically authorizing construction of 18.6 acre Phase 1.
- Authorization to Operate Phase 1, December 28, 1994.
- Landfill Major Modification, Phase 1 Grades, February 3, 2000, authorizing a re-configuration of the Phase 1 final elevations.
- Authorization to Construct New Phase of Permitted Landfill, July 12, 2000, authorizing construction of 10 acre Phase 2, Cells #1 and #2.
- Authorization to Operate Phase 2 Cells #1 and #2, April 22, 2002.
- Authorization to Construct New Phase of Permitted Landfill, December 15, 2006, authorizing construction of 9.5 acre Phase 2, Cells #3 and #4.
- Authorization to Operate Phase 2 Cells #3 and #4, September 8, 2008.

- Renewal of Authorization to Operate Phase 2, Cells #3 and #4, June 18, 2013
- Authorization to Construct New Phase of Permitted Landfill, October 23, 2014, authorizing construction of 12.13 acre Phase 2, Cells #5 and #6.
- Authorization to Operate Phase 2 Cell #5, March 8, 2016
- Authorization to Operate Phase 2 Cell #6, February 12, 2019

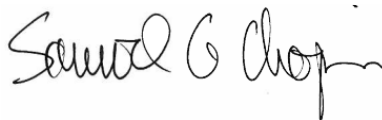
The total permitted waste disposal capacity of the landfill is 2,809,271 cubic meters. A calculation of this permitted capacity is attached. Also attached is a site locus map.

The Crapo Hill Landfill is currently provided with an active landfill gas collection and control system comprising 64 vertical extraction wells, approximately 30,000 feet of horizontal gas collectors, a 2,000 scfm open flare, and a landfill gas-fueled electric power generating plant. In addition, passive vent flares are used on the Landfill to provide localized landfill gas control. The landfill gas collection and control system is fully permitted by the Massachusetts Department of Environmental Protection.

Please contact Scott Alfonse, Executive Director, Greater New Bedford Regional Refuse Management District, or me at 508-819-1431 if you have any questions.

Very truly yours,

Brown and Caldwell

A handwritten signature in black ink that reads "Samuel G. Chapin". The signature is fluid and cursive, with a horizontal line extending from the end.

Samuel G. Chapin, P.E.
Managing Engineer

SGC

cc: Greater New Bedford Regional Refuse Management District

Attachments:
Site Locus Map
Design Capacity Calculation

Crapo Hill Landfill					
Dartmouth, MA					
Design Capacity					
Landfill Area	Volumes in cubic yards	Notes/Data Source			
Phase 1					
Gross Volume	1,286,000	Camp, Dresser & McKee Permit Documents			
Final Cover	63,243	2 foot thick over 19.6 acre slope area			
Net Usable Volume	1,222,757				
Daily and Intermediate Cover	330,144	Average 27% by volume over life of landfill			
Net Waste Volume	892,613				
Phase 1 Permit Modification					
Gross Volume	275,000	CGK Environmental calculation			
Final Cover		no increase in final cover			
Net Usable Volume	275,000				
Daily and Intermediate Cover	74,250	Average 27% by volume over life of landfill			
Net Waste Volume	200,750				
Phase 2 Cells #1 and #2					
Gross Volume	977,638	Brown and Caldwell digital modeling			
Final Cover	33,880	2 foot thick over 10.5 acre slope area			
Net Usable Volume	943,758				
Daily and Intermediate Cover	254,815	Average 27% by volume over life of landfill			
Net Waste Volume	688,943				
Phase 2 Cells #3 and #4					
Gross Volume	971,500	Brown and Caldwell digital modeling			
Final Cover	32,423	2 foot thick over 10.0 acre slope area			
Net Usable Volume	939,077				
Daily and Intermediate Cover	253,551	Average 27% by volume over life of landfill			
Net Waste Volume	685,526				
Phase 2 Cell #5					
Gross Volume	455,587	Brown and Caldwell digital modeling			
Final Cover	27,689	2 foot thick over 8.58 acre slope area			
Net Usable Volume	427,898				
Daily and Intermediate Cover	106,975	Average 25% by volume over life of landfill			
Net Waste Volume	320,924				
Phase 2 Cell #6					
Gross Volume	1,198,713	Brown and Caldwell digital modeling			
Final Cover	18,160	2 foot thick over 5.63 acre slope area			
Net Usable Volume	1,180,553				
Daily and Intermediate Cover	295,138	Average 25% by volume over life of landfill			
Net Waste Volume	885,415				
Total Waste Volume					
(Design Capacity)	3,674,170				
Waste Volume in cubic meters					
(Design Capacity)	2,809,271	1 cu. yd. = 0.7646 cu. meter			
Gross Volume, cubic yards	5,164,438				
Gross Volume, cubic meters	3,948,729				



BROWN AND CALDWELL

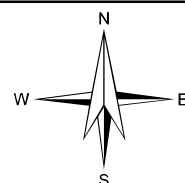
101 Industrial Park Road, Suite 205
Taunton, Massachusetts, 02780
Tel. (508) 923-0879 Fax. (508) 923-0894

Note: USGS Quad Maps obtained from MassGIS scanned 5-CDset, dated July 1996. All other data from MassGIS Data Viewer software, updated May 2009.

FIGURE 1 SITE LOCATION MAP

Crape Hill Sanitary Landfill
Dartmouth, Massachusetts

Prepared for:
Greater New Bedford Regional
Refuse Management District



0 500 1,000 2,000
Feet

Date: 05/2014

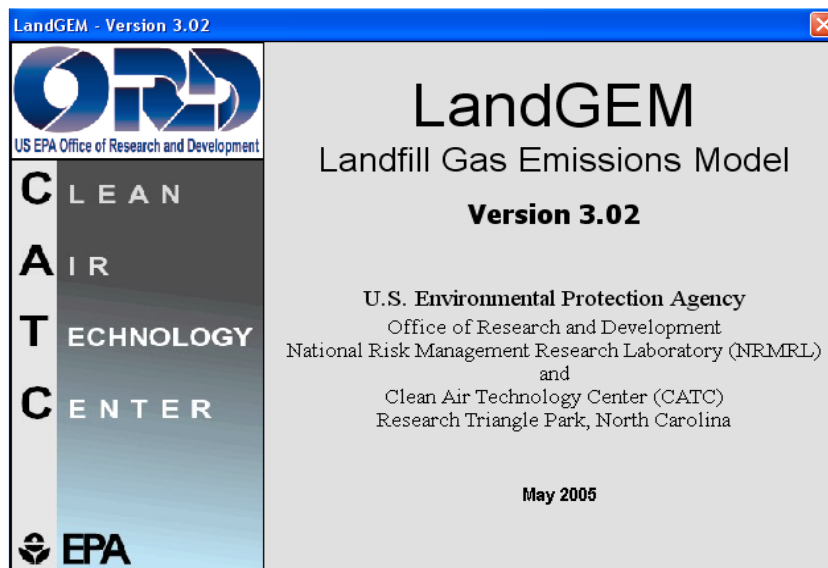
Project: 144674

Scale: 1" = 2000'

File: Site locus

Attachment 2

USEPA LandGEM Report and Calculations



Summary Report

Landfill Name or Identifier: Crapo Hill Landfill

Date: Monday, May 03, 2021

Description/Comments:

About LandGEM:

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^n \sum_{j=0.1}^1 k L_o \left(\frac{M_i}{10} \right) e^{-k t_{ij}}$$

Where,

Q_{CH_4} = annual methane generation in the year of the calculation ($m^3/year$)

i = 1-year time increment

n = (year of the calculation) - (initial year of waste acceptance)

j = 0.1-year time increment

k = methane generation rate ($year^{-1}$)

L_o = potential methane generation capacity (m^3/Mg)

M_i = mass of waste accepted in the i^{th} year (Mg)

t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (decimal years, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at <http://www.epa.gov/ttnatw01/landfill/landflpg.html>.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for conventional landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review**LANDFILL CHARACTERISTICS**

Landfill Open Year	1995	
Landfill Closure Year (with 80-year limit)	2020	
Actual Closure Year (without limit)	2020	
Have Model Calculate Closure Year?	No	
Waste Design Capacity	2,275,992	<i>megagrams</i>

MODEL PARAMETERS

Methane Generation Rate, k	0.050	<i>year⁻¹</i>
Potential Methane Generation Capacity, L ₀	170	<i>m³/Mg</i>
NMOC Concentration	83	<i>ppmv as hexane</i>
Methane Content	50	<i>% by volume</i>

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	NMOC
Gas / Pollutant #2:	
Gas / Pollutant #3:	
Gas / Pollutant #4:	

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-In-Place	
	<i>(Mg/year)</i>	<i>(short tons/year)</i>	<i>(Mg)</i>	<i>(short tons)</i>
1995	86,851	95,536	0	0
1996	99,742	109,716	86,851	95,536
1997	100,430	110,472	186,593	205,252
1998	104,169	114,585	287,022	315,724
1999	98,743	108,617	391,191	430,310
2000	105,423	115,966	489,934	538,927
2001	102,923	113,216	595,357	654,893
2002	104,326	114,758	698,280	768,108
2003	101,223	111,345	802,606	882,867
2004	103,152	113,467	903,829	994,212
2005	103,715	114,087	1,006,981	1,107,679
2006	96,234	105,858	1,110,696	1,221,766
2007	92,011	101,212	1,206,931	1,327,624
2008	85,929	94,522	1,298,942	1,428,836
2009	85,157	93,672	1,384,870	1,523,357
2010	89,291	98,220	1,470,027	1,617,030
2011	71,357	78,493	1,559,318	1,715,249
2012	90,124	99,136	1,630,674	1,793,742
2013	88,383	97,221	1,720,798	1,892,878
2014	84,675	93,143	1,809,181	1,990,099
2015	96,915	106,607	1,893,856	2,083,242
2016	92,629	101,892	1,990,772	2,189,849
2017	96,735	106,409	2,083,401	2,291,741
2018	95,786	105,365	2,180,136	2,398,150
2019	90,538	99,592	2,275,922	2,503,514
2020	89,306	98,237	2,366,460	2,603,106
2021	0	0	2,455,766	2,701,343
2022	0	0	2,455,766	2,701,343
2023	0	0	2,455,766	2,701,343
2024	0	0	2,455,766	2,701,343
2025	0	0	2,455,766	2,701,343
2026	0	0	2,455,766	2,701,343
2027	0	0	2,455,766	2,701,343
2028	0	0	2,455,766	2,701,343
2029	0	0	2,455,766	2,701,343
2030	0	0	2,455,766	2,701,343
2031	0	0	2,455,766	2,701,343
2032	0	0	2,455,766	2,701,343
2033	0	0	2,455,766	2,701,343
2034	0	0	2,455,766	2,701,343

Results

Year	NMOC					
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
1995	0	0	0	0	0	0
1996	4.295E-01	1.198E+02	8.051E-03	0.000E+00	0.000E+00	0.000E+00
1997	9.019E-01	2.516E+02	1.691E-02	0.000E+00	0.000E+00	0.000E+00
1998	1.355E+00	3.779E+02	2.539E-02	0.000E+00	0.000E+00	0.000E+00
1999	1.804E+00	5.032E+02	3.381E-02	0.000E+00	0.000E+00	0.000E+00
2000	2.204E+00	6.149E+02	4.131E-02	0.000E+00	0.000E+00	0.000E+00
2001	2.618E+00	7.304E+02	4.907E-02	0.000E+00	0.000E+00	0.000E+00
2002	2.999E+00	8.368E+02	5.622E-02	0.000E+00	0.000E+00	0.000E+00
2003	3.369E+00	9.399E+02	6.315E-02	0.000E+00	0.000E+00	0.000E+00
2004	3.705E+00	1.034E+03	6.946E-02	0.000E+00	0.000E+00	0.000E+00
2005	4.035E+00	1.126E+03	7.563E-02	0.000E+00	0.000E+00	0.000E+00
2006	4.351E+00	1.214E+03	8.156E-02	0.000E+00	0.000E+00	0.000E+00
2007	4.615E+00	1.287E+03	8.650E-02	0.000E+00	0.000E+00	0.000E+00
2008	4.845E+00	1.352E+03	9.081E-02	0.000E+00	0.000E+00	0.000E+00
2009	5.033E+00	1.404E+03	9.435E-02	0.000E+00	0.000E+00	0.000E+00
2010	5.209E+00	1.453E+03	9.764E-02	0.000E+00	0.000E+00	0.000E+00
2011	5.397E+00	1.506E+03	1.012E-01	0.000E+00	0.000E+00	0.000E+00
2012	5.486E+00	1.531E+03	1.028E-01	0.000E+00	0.000E+00	0.000E+00
2013	5.664E+00	1.580E+03	1.062E-01	0.000E+00	0.000E+00	0.000E+00
2014	5.825E+00	1.625E+03	1.092E-01	0.000E+00	0.000E+00	0.000E+00
2015	5.960E+00	1.663E+03	1.117E-01	0.000E+00	0.000E+00	0.000E+00
2016	6.149E+00	1.715E+03	1.153E-01	0.000E+00	0.000E+00	0.000E+00
2017	6.307E+00	1.759E+03	1.182E-01	0.000E+00	0.000E+00	0.000E+00
2018	6.478E+00	1.807E+03	1.214E-01	0.000E+00	0.000E+00	0.000E+00
2019	6.635E+00	1.851E+03	1.244E-01	0.000E+00	0.000E+00	0.000E+00
2020	6.760E+00	1.886E+03	1.267E-01	0.000E+00	0.000E+00	0.000E+00
2021	6.872E+00	1.917E+03	1.288E-01	0.000E+00	0.000E+00	0.000E+00
2022	6.937E+00	1.824E+03	1.225E-01	0.000E+00	0.000E+00	0.000E+00
2023	6.218E+00	1.735E+03	1.165E-01	0.000E+00	0.000E+00	0.000E+00
2024	5.914E+00	1.650E+03	1.109E-01	0.000E+00	0.000E+00	0.000E+00
2025	5.626E+00	1.570E+03	1.055E-01	0.000E+00	0.000E+00	0.000E+00
2026	5.352E+00	1.493E+03	1.003E-01	0.000E+00	0.000E+00	0.000E+00
2027	5.091E+00	1.420E+03	9.542E-02	0.000E+00	0.000E+00	0.000E+00
2028	4.842E+00	1.351E+03	9.077E-02	0.000E+00	0.000E+00	0.000E+00
2029	4.606E+00	1.285E+03	8.634E-02	0.000E+00	0.000E+00	0.000E+00
2030	4.382E+00	1.222E+03	8.213E-02	0.000E+00	0.000E+00	0.000E+00
2031	4.168E+00	1.163E+03	7.813E-02	0.000E+00	0.000E+00	0.000E+00
2032	3.965E+00	1.106E+03	7.432E-02	0.000E+00	0.000E+00	0.000E+00
2033	3.771E+00	1.052E+03	7.069E-02	0.000E+00	0.000E+00	0.000E+00
2034	3.587E+00	1.001E+03	6.724E-02	0.000E+00	0.000E+00	0.000E+00
2035	3.412E+00	9.520E+02	6.396E-02	0.000E+00	0.000E+00	0.000E+00
2036	3.246E+00	9.056E+02	6.084E-02	0.000E+00	0.000E+00	0.000E+00
2037	3.088E+00	8.614E+02	5.788E-02	0.000E+00	0.000E+00	0.000E+00
2038	2.937E+00	8.194E+02	5.505E-02	0.000E+00	0.000E+00	0.000E+00
2039	2.794E+00	7.794E+02	5.237E-02	0.000E+00	0.000E+00	0.000E+00
2040	2.658E+00	7.414E+02	4.982E-02	0.000E+00	0.000E+00	0.000E+00
2041	2.528E+00	7.052E+02	4.739E-02	0.000E+00	0.000E+00	0.000E+00
2042	2.405E+00	6.709E+02	4.507E-02	0.000E+00	0.000E+00	0.000E+00
2043	2.287E+00	6.381E+02	4.288E-02	0.000E+00	0.000E+00	0.000E+00
2044	2.176E+00	6.070E+02	4.079E-02	0.000E+00	0.000E+00	0.000E+00

NMOC Results
 2020 6.76 Mg/Yr
 2021 6.87 Mg/Yr

Methane and Non-methane Organic Compounds Analysis Results
Crapo Hill Landfill
3-Oct-19

Sample #	NMOCs concentration in landfill gas		
	as carbon ppmv	as hexane ppmv	as hexane ppmv corrected to 50 % methane
1	544	76	77
2	566	79	80
3	660	92	93
Average			83

Component in landfill gas Sample #	Fixed gases concentration in landfill gas					
	Methane, %	Carbon dioxide, %	Carbon monoxide %	Nitrogen %	Oxygen %	Hydrogen %
1	49.5	35.2	<0.2	14.0	1.3	<2.4
2	49.6	35.3	<0.3	13.8	1.3	<2.2
3	49.7	35.3	<0.4	13.7	1.2	<2.3
Landtec GEM readings	49.6	36.4		13.8	0.3	

Exhibit 9

RECs Agreements

Exhibit 9

RECs Agreements

CONFIDENTIAL

**Vitol Inc.**

2925 Richmond Ave., 11th Floor
Houston, Tx 77098-3105 United Stat.
Tel. 001 713-230-1000

DATE: 31 OCTOBER 2019

TO: COMMONWEALTH NEW BEDFORD ENERGY LLC
ATTN: THOMAS YERANSIAN
EMAIL: TYERANSIAN@CRM CX.COM

CONFIDENTIAL

BROKER: TJM INSTITUTIONAL SERVICES, LLC

VITOL INC. REF: 4274413

THIS CONFIRMATION CONFIRMS THE TERMS OF THE AGREEMENT MADE BETWEEN VITOL INC. AND COMMONWEALTH NEW BEDFORD ENERGY LLC ("COUNTERPARTY") ON THE TRADE DATE REFERENCED BELOW CONCERNING THE PURCHASE AND SALE OF NE REC (AS DEFINED BELOW) (THE "TRANSACTION"). VITOL INC. AND COUNTERPARTY ARE SOMETIMES REFERRED TO INDIVIDUALLY AS A "PARTY" OR COLLECTIVELY AS THE "PARTIES." THE TERMS ARE AS FOLLOWS, AS SUPPLEMENTED WITH THE GENERAL TERMS AND CONDITIONS OF SUCH TRANSACTIONS AS SET FORTH ON THE ATTACHED ANNEX A:

PLEASE NOTE THAT RENEWABLE ENERGY CERTIFICATES MAY ALSO BE REFERENCED AS "REC" AND SOLAR RENEWABLE ENERGY CERTIFICATES AS "SREC" THROUGHOUT THE ENTIRE AGREEMENT AS REFERENCED BELOW.

TRADE DATE:	16 OCTOBER 2019
SELLER:	COMMONWEALTH NEW BEDFORD ENERGY LLC
PURCHASER:	VITOL INC.
COMMODITY:	NE REC MA "CLASS 1" RENEWABLE ENERGY CERTIFICATES
VINTAGE:	CALENDAR YEAR(S) 2020
GENERATION PERIOD:	JANUARY 01, 2020 – DECEMBER 31, 2020
CONTRACT QUANTITY:	RECS FOR CALENDAR YEAR(S) 2020
PURCHASE PRICE:	PER REC FOR CALENDAR YEAR(S) 2020 TOTAL
REC TRACKING SYSTEM:	NEPOOL GIS
PAYMENT AND TRANSFER:	POST-TRANSFER. UPON NOTIFICATION TO THE PURCHASER FROM THE SELLER OF THE TRANSFER OF THE CONTRACT QUANTITY, SELLER SHALL INVOICE THE PURCHASER FOR THE PURCHASE PRICE AND PURCHASER SHALL REMIT PAYMENT FOR THE FULL AMOUNT OF SUCH INVOICE WITHIN FIVE (5) BUSINESS DAYS OF RECEIPT THEREOF.
COMMONWEALTH NEW BEDFORD ENERGY LLC ACCOUNT INFORMATION FOR PAYMENTS:	AS INVOICED
DELIVERY:	SELLER SHALL DELIVER THROUGH THE REC TRACKING SYSTEM: NEPOOL GIS TO PURCHASER ON OR BEFORE: 01 JUNE 2021 FOR CALENDAR YEAR(S) 2020

COMMONWEALTH NEW BEDFORD ENERGY LLC'S CONTACT INFORMATION:

DEPARTMENT	CONTACT	PHONE	FAX	EMAIL
TRADER:	THOMAS YERANSIAN	508-339-3074		TYERANSIAN@CRM CX.COM
OPERATIONS:				

**Vitol Inc.**

2925 Richmond Ave., 11th Floor
Houston, Tx 77098-3105 United Stat.
Tel. 001 713-230-1000

CREDIT:				
PAYMENTS:				
LEGAL:				
CONTRACTS:				

VITOL INC'S CONTACT INFORMATION:

DEPARTMENT	CONTACT	PHONE	FAX	EMAIL
TRADER:	ERIC WINTER	713-230-1000		EMW@VITOL.COM
OPERATIONS:	LEN MESSINA	713-230-1319	713-230-1111	LXM@VITOL.COM
CREDIT:	TOM MORAN	713-230-1437	713-652-9599	TAM@VITOL.COM
PAYMENTS:	CASH DESK	713-230-1008		CASHCONFIRMSHOU@VITOL.COM
INVOICES:				XHOUACCOUNTSINVOICES@VITOL.COM
LEGAL:	BOB VIOLA	713-230-1449	713-230-1111	RFV@VITOL.COM
CONTRACTS:				EMISSIONSLCFSCONTRACTS@VITOL.COM

THIS CONFIRMATION MEMORIALIZES A VERBAL AGREEMENT BETWEEN THE PARTIES AND BECOMES BY REFERENCE PART OF AND SUBJECT TO THE TERMS AND CONDITIONS OF THE GENERAL TERMS AND CONDITIONS ATTACHED HERETO AS ANNEX A. ALTHOUGH WE WOULD PREFER THAT YOU SIGN AND RETURN A COPY OF THIS CONFIRMATION BY EMAIL TO EMISSIONSLCFSCONTRACTS@VITOL.COM.

VITOL INC.

BY:

NAME: ERIC WINTER

TITLE: TRADER

DATE: 11/6/19**COMMONWEALTH NEW BEDFORD ENERGY LLC**

BY:

NAME: Thomas YeramsianTITLE: Principal CRMC, Managing Member of CNBEDATE: November 4, 2019



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Annex A

General Terms and Conditions

- 1) **Payment.** The Purchase Price shall be paid in accordance with the selection contained on the cover page of the Confirmation. All funds to be paid to Seller shall be rendered in the form of immediately available funds (U.S. Dollars) by wire transfer or in such other form as agreed to by the Parties. If either Party fails to remit any amount payable by it when due, interest on such unpaid portion shall accrue at a rate equal to the prime interest rate in effect at the time as published by Citibank, N.A. plus two percent (2%) (the "Interest Rate") from the date payment is due to the date of payment.
- 2) **Taxes.** Each Party shall be responsible for any taxes or other fees associated with its respective transfer and receipt of the RECs.
- 3) **a) Transfer.** If a REC Tracking System is selected on the cover page for this Transaction, Seller shall Transfer the Contract Quantity in accordance with the following terms utilizing the REC Tracking System specified on the cover sheet, including its regulations and procedures, for recording transfers of RECs among various entities, persons and accounts. Seller shall Transfer to the Purchaser the Contract Quantity from Seller's REC Account to Purchaser's REC Account pursuant to the selection contained on the cover page of the Confirmation. Seller shall inform the Purchaser of the transfer within a commercially reasonable time after such transfer. Seller and Purchaser shall each cooperate fully and assist each other in complying with any and all regulatory obligations relating to recording and tracking of the transfer of the RECs. Seller and Purchaser shall cooperate in good faith and undertake reasonable efforts to consummate recognition in the REC Tracking System; provided, however, that Purchaser acknowledges that such transfer will not be recognized unless and until Purchaser confirms such transfer in accordance with the applicable requirements of the REC Tracking System. Upon a notification by the administrator or operator of such tracking system that the transfer of the RECs contemplated by this Confirmation will not be recorded due to deficiency in the transaction or documentation, the parties shall promptly confer and cooperate in taking all reasonable actions necessary to cure any defects in the proposed transfer, so that the transfer can be recorded at the earliest possible date.

If no REC Tracking System is selected on the cover page for this Transaction, the Seller shall Transfer the Contract Quantity in accordance with the terms specified on the cover sheet and ownership of the RECs shall transfer, accrue to and be assigned exclusively to Purchaser and shall not be claimed, assigned or used by any other entity for any use.
- b) Failure to Transfer or Receive.** If Seller fails to timely Transfer the Contract Quantity set forth in this Confirmation as described in Section 3 a), Purchaser shall be the Performing Party entitled to calculate the Transaction Settlement Amount as liquidated damages. If Purchaser fails to receive a Transfer of the Contract Quantity set forth in this Confirmation as described in Section 3 a), Seller will be the Performing Party entitled to calculate the Transaction Settlement Amount as liquidated damages. For purposes of this Section 3 b) and establishing the Market Price used to determine a Transaction Settlement Amount hereunder, Early Termination Date shall mean the date the Transfer was supposed to occur. The Party owed the Transaction Settlement Amount shall invoice the other Party, which invoice shall be paid within five (5) Business Days of receipt.
- c) Not an Event of Default.** A failure by Seller to Transfer or Purchaser to receive a Transfer of any or all of the Contract Quantity described in this Section 3 shall not be an Event of Default under this Confirmation, unless the Party owing the Transaction Settlement Amount payment fails to pay it within the time period for payments set forth in the definition of Events of Default.
- 4) **Remedies Upon Event of Default.** Upon an Event of Default, the non-defaulting Party ("Performing Party") may do one or more of the following with respect to the defaulting Party ("Defaulting Party"):
 - a) Withhold or suspend all payments to the Defaulting Party required under this Confirmation and/or withhold or suspend all deliveries of the RECs to the Defaulting Party required thereunder;
 - b) By giving not more than twenty (20) days notice, designate in such written notice a date for the termination of the Parties' obligations under this Confirmation ("Early Termination Date"); and
 - c) Liquidate the Transaction existing under this Confirmation as of such Early Termination Date.



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- 5) **Net Settlement Amount and Setoff.** In the event of termination and liquidation upon the occurrence or designation of an Early Termination Date pursuant to Section 4, the Performing Party shall compute and shall notify the Defaulting Party of the Net Settlement Amount. Payment of the Net Settlement Amount shall be due within one (1) Business Day after the Defaulting Party's receipt of notice of the Net Settlement Amount. The Performing Party may from time to time set off any or all amounts which the Defaulting Party owes to it against any or all amounts which it owes to the Defaulting Party (in either case, under any agreement and whether or not then due), provided that any amount not then due which is included in such set-off shall be discounted to present value as determined by the Performing Party in any commercially reasonable manner.
- 6) **Limitations of Liability.** NOTWITHSTANDING THE FOREGOING, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY UNDER THIS OR ANY OTHER APPLICABLE AGREEMENT FOR CONSEQUENTIAL, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES, PENALTIES OR FINES INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS OR REVENUE OR THE LOSS OF USE OF EITHER, COSTS OF REPLACEMENT RECS OR OF CAPITAL, OR CLAIMS OF CUSTOMERS OF THE OTHER PARTY RELATING TO LOSS OF USE EXCEPT AS EXPRESSLY PROVIDED IN SECTIONS 3, 4 AND 5 OF THIS CONFIRMATION.
- 7) **Mutual Representations and Warranties.** Each Party represents and warrants to the other Party as of the date of this Confirmation, and each Transaction hereunder and of the Confirmation therefore, and of each Transfer of the RECs that:
- a) **Legal Status.** It is duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing;
 - b) **Legal Capacity.** It has the corporate, governmental and/or other legal capacity, authority and power to execute this Confirmation or other document relating hereto, to enter into any Transaction pursuant to this Confirmation, and to perform its obligations under this Confirmation, and has taken all necessary action to authorize such execution, delivery and performance;
 - c) **Approvals.** All governmental and other authorizations, approvals, consents, notices and filings that are required to have been obtained or submitted by it with respect to this Confirmation to which it is a party have been obtained or submitted and are in full force and effect and all conditions of any such authorizations, approvals, consents, notices and filings have been complied with;
 - d) **Binding Obligations.** Its obligations under this Confirmation constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application regardless of whether enforcement is sought in a proceeding in equity or at law);
 - e) **Eligible Contract Participants.** It is an "Eligible Contract Participant" as defined in Section 1a(12) of the Commodity Exchange Act, as amended, 7 U.S.C. § 1a(12);
 - f) **No Reliance.** It is not relying upon any advice, reports, analyses, or representations of the other Party other than those expressly set forth in this Confirmation;
 - g) **Principal-To-Principal Transactions.** It has entered into this Confirmation as principal and for its own account (and not as advisor, agent, broker or in any other capacity, fiduciary or otherwise), with a full understanding of, and the ability to assume, the material terms and risks of the same, and has made its trading and investment decisions (including regarding the suitability thereof) based upon its own judgment and any advice from such advisors as it has deemed necessary and not in reliance upon any view expressed by the other Party and all Transactions are entered into on an arm's-length basis;
 - h) **No Assurances of Financial Performance.** The other Party has not given to it any assurance or guarantee as to the expected financial performance or result of this Confirmation or any other Transactions.
- 8) **Warranties of Seller.**

Seller further agrees, represents, and warrants to Buyer that:

(i) at the time of Delivery and Transfer of the RECs hereunder, Seller will convey good title to the RECs to Buyer free and clear of any taxes, claims, security interests, liens, or other encumbrances or title defects;

(ii) (a) the RECs Transferred by Seller hereunder will vest in Buyer and Buyer will have the exclusive rights to make all claims as to the RECS. (b) the RECs used to satisfy the delivery obligations of Seller to Buyer as set forth herein have not otherwise been, nor will they be, sold, retired, claimed, or represented as part of electricity output or sales, and (iii) at the time of Transfer



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to Buyer, the RECs, or electricity from which the RECs derived, have not been used to satisfy any renewable energy or emissions obligations in any other jurisdiction, including any state goal or voluntary program, or in connection with a present or future domestic, international, or foreign law, regulation, registry or program;

(iii) Seller has the legal right to claim, sell, transact to sell, and transfer to Buyer all RECs and accompanying environmental attributes, as set forth herein, and in accordance with this Confirmation; and

(iv) the RECs were generated during the applicable specified Reporting Year(s) and comply with applicable renewable energy statute(s) or regulation(s) governing the REC product described as the Commodity.

- 9) **Limitation of Warranties.** ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE, ARE DISCLAIMED.
- 10) **Governing Law.** THIS CONFIRMATION SHALL BE THE GOVERNING AGREEMENT BETWEEN THE PARTIES AND SHALL BE GOVERNED BY, CONSTRUED, AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. BOTH PARTIES WAIVE ANY RIGHT TO TRIAL BY JURY IN ANY JUDICIAL ACTION ARISING OUT OF, RESULTING FROM OR IN ANY WAY RELATING TO THIS CONFIRMATION
- 11) **Confidentiality.** The Parties agree to keep confidential the existence and terms of this Agreement ("Confidential Information"), save that each Party may disclose the Confidential Information pursuant to an order of any court of competent jurisdiction, or as may be required by any applicable law, regulation, or by any governmental or other regulatory authority having jurisdiction over the Parties, or to any of its affiliates, professional advisors, auditors, insurers, agents and/or brokers or in connection with any dispute or court or arbitration proceedings. The confidentiality obligations contained in this Agreement shall survive the termination or expiry of this Agreement for a period of two years. Each Party enters into this Agreement as principals on an arm's-length basis (and not as agents or in another capacity, fiduciary or otherwise). The Parties acknowledge and agree that (i) Vitol is in the commodity trading business, (ii) Vitol's trading activities may, from time-to-time, be adverse to the trading or market positions of the other Party, (iii) Vitol may disclose the Confidential Information to its employees, including traders, who may discuss such Confidential Information internally in consideration of the Agreement and who may retain mental impressions thereof, (v) such retained mental impressions will not limit Vitol's ability to engage in any trading or other related activities or work on projects related to the Agreement (including any hedging arrangements), and (vi) such retained mental impressions shall not preclude Vitol from developing internal pricing and valuation models relating to the Agreement or otherwise..
- 12) **Credit Assurances.** If a Party ("Party A") has reasonable grounds to believe that the other Party's ("Party B") creditworthiness or performance under this Agreement has become unsatisfactory, Party A will provide Party B with written notice requesting Performance Assurance in an amount determined by Party A in a commercially reasonable manner. Upon receipt of such notice, Party B shall have three (3) Business Days to remedy the situation by providing such Performance Assurance to Party A. In the event that Party B fails to provide such Performance Assurance, or a guaranty or other credit assurance acceptable to Party A within three (3) Business Days of receipt of notice, then an Event of Default will be deemed to have occurred and Party A will be entitled to the remedies set forth in Section 4, Remedies Upon Event of Default.
- 13) **Assignment.** Neither Party may transfer or assign this agreement or Confirmation, in whole or in part, without the other Party's prior written consent.
- 14) **Force Majeure.** Neither Party shall be liable for any failure or delay in the performance of its respective obligations hereunder if and to the extent that such delay or failure is due to a cause or circumstance beyond the reasonable control of such Party, including acts of God or the public enemy, expropriation or confiscation of land or facilities, compliance with any law, order or request of any Federal, State, municipal or local governmental authority, acts of war, rebellion or sabotage or damage resulting therefrom, fires, floods, storms, explosions, accidents, riots, or strikes. Variability in the frequency or force of the wind, of rainfall, or of water levels will in no event constitute force majeure events.
- 15) **Waiver.** Either Party may waive compliance with any of the agreements or conditions of the other Party contained herein. Any such extension or waiver shall be valid only if set forth in an instrument in writing signed by the Party to be bound thereby. Any waiver of any term or condition shall not be construed as a waiver of any subsequent breach or a subsequent waiver of the same term or condition, or a waiver of any other term or condition, of this Agreement. No provision of this Agreement will be deemed to have been waived unless the waiver is in writing; no delay by Purchaser or Seller in exercising its rights hereunder, including the right to terminate this Agreement, shall be deemed to constitute or evidence any waiver by Purchaser or Seller of any right hereunder. The rights granted in this Agreement are cumulative of every other right or remedy that the enforcing Party may otherwise have at law or in equity or by statute.
- 16) **Severability.** If any article, section, phrase or portion of the Agreement is, for any reason, held or adjudged to be invalid, illegal or unenforceable by any court of competent jurisdiction or by any jurisdictional regulatory agency or deemed unlawful



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because of a statutory change ("Change of Law"), such article, section, phrase, or portion so adjudged will be deemed separate, severable and independent and the remainder of the Agreement shall remain in full force and effect and shall not be invalidated or rendered illegal or unenforceable or otherwise affected by such adjudication, provided that the basic purpose of the Agreement and the reciprocal economic benefits to the Parties thereunder are not substantially impaired.

17) Forward Contract. Each Party is a "forward contract merchant" within the meaning of the United States Bankruptcy Code, this Agreement is a "forward contract" within the meaning of the United States Bankruptcy Code, and that the remedies identified in this Agreement shall be "contractual rights" as provided for in 11 U.S.C. § 556 as that provision may be amended from time to time.

18) Notices. All notices, demands and other communications (other than the transmittal of this confirmation upon execution, which shall be provided in accordance with instructions on the cover sheet) hereunder shall be effective only if given in writing and shall be deemed given when (a) delivered in person, (b) delivered by private courier (with confirmation of delivery), (c) transmitted by facsimile (with confirmation of transmission) or (d) five Business Days after being deposited in the United States mail, first-class, registered or certified, return receipt requested, with postage paid. For purposes hereof, notices, demands and other communications shall be sent to the names and addresses listed on the cover page to this Confirmation (or to such other address as the Seller or Purchaser shall have finished to the other party in writing).

19) Change of Law Reformation: Should there be, prior to the Delivery of the REC Product under this Agreement, a Change of Law or any other change in statutory or regulatory law that has the effect of (i) materially changing the definition of the REC Product set forth in the Product Schedule; (ii) materially altering or discontinuing the transferability and deliverability of such REC Product; or (iii) substantially impairing the commercial value of this Agreement, the Parties agree to negotiate in good faith and use best efforts to reform this Agreement to give effect to the original intent of the Parties. If the Parties are unable to reach agreement as how to reform the Agreement within ten (10) days of the first Party's notice initiating such negotiation, either Party may terminate this Agreement effective as of the effective date of such Change in Law or other statutory or regulatory change, with neither Party having any further liability hereunder except reimbursement for any prepayments made by Buyer to Seller for the REC Product not delivered and subject to survival of obligations and rights specified elsewhere in this Agreement.

20) Definitions. Terms used, but not otherwise defined herein shall have the meanings as set forth below:

"Business Day" means a 24-hour period ending at 5:00 p.m. Eastern prevailing time on a weekday on which banks are open for general commercial business in New York City.

"Contract Quantity" means that number of RECs that Seller agrees to sell to (or if applicable, exchange with) Purchaser, and that Purchaser agrees to purchase from (or if applicable, exchange with) Seller, pursuant to a Transaction.

"Event of Default" (a) Either Party fails to make payment as required under this Confirmation (which Event of Default shall not include a delay in payment that is cured within two (2) Business Days of a demand for payment), other than a payment obligation that is the subject of a good faith dispute as to whether such payment is due, (b) a failure to provide Performance Assurance in accordance with Section 12, (c) any other failure of performance that is not cured within ten (10) Business Days of a demand for cure or other corrective action deemed satisfactory by the Performing Party in its sole discretion, (d) the making of a materially incorrect or misleading representation or warranty under this Confirmation, or (e) a Party i) makes a general assignment for the benefit of its creditors; ii) commences a voluntary case under the Bankruptcy Code or any other law relating to bankruptcy, insolvency, reorganization, winding-up, or composition or readjustment of debts; or iii) has a proceeding filed against it without its consent seeking relief under any law relating to bankruptcy, insolvency or composition of debts if such proceeding is not dismissed within sixty (60) days after the filing is made.

"Letter(s) of Credit" means one or more irrevocable, non-transferable standby letters of credit issued by a U.S. commercial bank or a U.S. branch of a foreign bank in a form acceptable to Party A and with the costs of such Letter of Credit to be borne by Party B, provided that such bank satisfies the following conditions: (1) a credit rating of at least A- from Standard & Poor's Rating Group or its successor ("S&P") and A3 from Moody's Investor Services, Inc. or its successor ("Moody's"), and (2) if rated A- by S&P or A3 by Moody's, the affected rating shall be without a "credit watch", "negative outlook" or other rating decline alert.

"Market Price" means the market price per unit at the close of trading on the Early Termination Date for comparable transactions as determined by the Performing Party in a commercially reasonable manner.

"Net Settlement Amount" means the single liquidated amount payable by one Party to the other, following the occurrence or designation of an Early Termination Date, after netting all Transaction Settlement Amounts, and any other direct damages, losses or expenses incurred by the Performing Party as a result of the close-out and liquidation due to the occurrence or designation of an Early Termination Date, including, without limitation, any direct damages, losses and expenses incurred in obtaining, maintaining or



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liquidating commercially reasonable hedges relating to the Transactions that are being liquidated, all as determined in a commercially reasonable manner by the Performing Party.

"Performance Assurance" means collateral in the form of either cash, Letter(s) of Credit, or other security acceptable to Party A.

"Purchase Price" means the price in U.S. Dollars (unless otherwise provided for in the relevant Confirmation) to be paid by Purchaser to Seller for the purchase of RECs or any other payment to be made by Purchaser to Seller in connection with a Transaction. The Purchase Price may be stated in either a per-REC purchase price or the total purchase price for all RECs pursuant to a Transaction.

"REC Account" means an active account with the REC Tracking System.

"REC Tracking System" means the generation information system, generation attribute tracking system or other system that records generation from renewable energy facilities in any particular geographical region.

"Transaction" means the transaction as defined in the preamble to the Confirmation.

"Transaction Settlement Amount" means, with respect to a Transaction: (a) in which a Performing Party is the Seller, the Contract Quantity of RECs which the Parties committed to transfer or take and remaining undelivered on the Early Termination Date multiplied by the positive difference, if any, between (i) the Purchase Price minus (ii) the Market Price, both as determined on the Early Termination Date; and (b) in which a Performing Party is the Purchaser, the Contract Quantity of RECs which the Parties committed to transfer or take on and remaining undelivered on the Early Termination Date multiplied by the positive difference, if any, between (i) the Market Price minus (ii) the Purchase Price, both as determined on the Early Termination Date.

"Vintage" means the calendar year or quarter in which the energy associated with the RECs was generated.

DEFINITIONS APPLICABLE TO ERCOT REC TRANSFERS:

"Administrator" means the entity approved by the PUCT that is responsible for carrying out the administrative responsibilities related to the Texas RECs Tracking System as set forth in the PUCT Substantive Rule §25.173, or any successor thereto.

"ERCOT" means the Electric Reliability Council of Texas or any successor thereto.

"PUCT" means the Public Utility Commission of Texas, a governmental agency of the State of Texas, or any successor agency.

"Texas REC Account" means a program participant account maintained by the Administrator under the TEXAS RECs Tracking System.

"TEXAS RECs Tracking System" means the system established by ERCOT for the production, sale, transfer, purchase, and retirement of RECs among various entities, persons and accounts, as specified in the ERCOT protocols.

"Transfer" means Seller's submission of a valid Texas REC transfer request to the Administrator by electronic means.

"REC" or "Renewable Energy Credits" means a certificate, verified by the State of Texas, representing the environmental attributes associated with one megawatt hour of electricity generated from a renewable source has been generated in Texas in the vintage year of issue, as defined in PUCT Substantive Rule §25.173(c), or any successor thereto.

DEFINITIONS APPLICABLE TO M-RETS REC TRANSFERS:

"Administrator" means the entity with the authority to administer or oversee the administration and implementation of the M-RETS Operating Procedures.

"M-RETS" means the Midwest Renewable Energy Tracking System, which includes a generation information database and certificate system that accounts for the generation attributes of renewable generation located within the state and provincial boundaries of Minnesota, Iowa, North Dakota, South Dakota, Illinois, and Manitoba, as well as Renewable Resource Credits for the State of Wisconsin.

"M-RETS OPERATING PROCEDURES" means the M-RETS Operating Procedures, as may be amended from time to time.

"REC" or "Renewable Energy Credits" means a Certificate as defined in the Glossary of the M-RETS Operating Procedures.



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"Renewable Resource Credit" or "RRC" means a credit in the State of Wisconsin, calculated in accordance with rules promulgated subject to Wis. Stat. § 196.378(3)(a)1 and 2.

"Transfer" means when the M-RETS posts the recordation of the transfer of RECs or RRCs, as the case may be, from Seller's M-RETS account to the M-RETS account of the Purchaser.

DEFINITIONS APPLICABLE TO NEPOOL GIS REC TRANSFERS:

"NEPOOL" means the New England Power Pool or any successor entity.

"NEPOOL Agreement" means the Restated New England Power Pool Agreement dated as of December 1, 1996, as amended or accepted by the Federal Energy Regulatory Commission and as may be amended and/or restated from time to time and the tariffs, rules and procedures adopted by NEPOOL, including the NEPOOL Rules, adopted by NEPOOL or the ISO, as the case may be, as may be amended, modified or supplemented from time to time.

"New England Power Pool Generation Information System" or "NEPOOL-GIS" means New England Power Pool Generation Information System, which includes a generation information database and certificate system, operated by NEPOOL, its designee or successor entity, that accounts for the generation attributes of electricity generated within New England.

"NEPOOL-GIS Operating Rules" means the New England Power Pool Generation Information System Operating Rules as may be amended from time to time pursuant to the NEPOOL Agreement.

"REC" or "Renewable Energy Credits" means the electronic certificates as defined in Rule 2.1 of the NEPOOL-GIS Operating Rules which are derived from a generator in NEPOOL that has a Renewable Portfolio Standard Eligibility.

"Renewable Portfolio Standard Eligibility" means the eligibility of a generating unit to produce certificates that satisfy statutory and regulatory requirements as are listed on Part 2 of Appendix 2.4 of the NEPOOL-GIS Operating Rules.

"Transfer" means when the NEPOOL-GIS posts the recordation of the transfer of RECs from Seller's NEPOOL-GIS account to the NEPOOL-GIS account of the Purchaser.

DEFINITIONS APPLICABLE TO PJM GATS REC TRANSFERS:

"GATS" means the Generation Attribute Tracking System established by PJM for the production, sale, transfer, purchase, and retirement of RECs among various entities, persons and accounts, as specified in the GATS Operating Rules.

"GATS Operating Rules" means the Generation Attribute Tracking System Operating Rules established by PJM, as may be amended from time to time.

"PJM" means PJM Interconnection, L.L.C. or any successor entity thereto.

"PJM EIS GATS" means the PJM Environmental Services, Inc. Generation Attribute Tracking System.

"REC" or "Renewable Energy Credits" means a Certificate as defined in Section 2 of the GATS Operating Rules.

"SREC" or "Solar REC" Means a certificate which meets the Solar Renewable Energy Certificate requirement, as set forth in the New Jersey Renewable Portfolio Standards, Subchapter 8, N.J.A.C. 14:8-1.2, 14:8-2, et seq, as of the Reporting Year(s) transferred hereunder

"Transfer" means when GATS posts the recordation of the transfer of RECs from Seller's GATS (GIS) account to the GATS (GIS) account of the Purchaser.

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AGREEMENT FOR THE PURCHASE AND SALE OF RENEWABLE ENERGY CERTIFICATES

CONFIRMATION LETTER

From: Dan Heim
EXELON GENERATION COMPANY, LLC
1310 Point Street 8th Floor
Baltimore, MD 21231

To: COMMONWEALTH NEW BEDFORD ENERGY LLC
199 Corey Street
Boston, MA 02132

The purpose of this letter (this "Confirmation Letter") is to confirm the terms and conditions of the oral transaction between EXELON GENERATION COMPANY, LLC ("Buyer") and COMMONWEALTH NEW BEDFORD ENERGY LLC ("Seller") as of the Effective Date (the "Transaction"). Seller and Buyer are each referred to as a "Party" and, collectively, as the "Parties." This Confirmation Letter, including the attached General Terms and Conditions, shall constitute the entire agreement ("Agreement") between the Parties related to the subject matter hereof and supersedes and replaces any prior oral or written confirmation, including broker confirmations, regarding this Transaction.

The terms of the transaction to which this Confirmation Letter relates are as follows:

Trade Date:	06/23/2020
Effective Date:	07/14/2020
Seller:	COMMONWEALTH NEW BEDFORD ENERGY LLC
Buyer:	EXELON GENERATION COMPANY, LLC
Product:	Massachusetts "RPS Class I Renewable Generation Attributes" represented by NEPOOL GIS Certificates ("RECs")
Applicable Standard:	Massachusetts Alternative Renewable Energy Portfolio Standard, M.G.L. ch. 25A § 11F, et seq., and regulations promulgated with respect thereto, 225 CMR 14.00, in each case as applicable to the Calendar Year(s) transferred hereunder
Applicable Tracking System:	NEPOOL GIS
Facility:	Greater New Bedford LFG Utilization Facility at the Crapo Hill Landfill, a 3.3 MW landfill gas-to-energy generating facility in Dartmouth, Massachusetts.

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Deal ID	Calendar Year	Contract Price	Contract Quantity	Delivery Date	Delivery Obligation
4042691	CY2020		Up to [REDACTED] RECs	6/1/2021	Unit Contingent
4042691	CY2021		Up to [REDACTED] RECs	6/1/2022	Firm
4042691	CY2022		Up to [REDACTED] RECs	6/1/2023	Firm

Capitalized terms used but not defined herein shall have the meaning given to them in the General Terms and Conditions.

1. **Product.**

Seller represents that the Product sold hereunder meets the "RPS Class I Minimum Standard," as set forth in the Applicable Standard, as applicable to the Calendar Year(s) transferred hereunder; provided, however, that the Product does not include: (i) state and federal production tax credits, investment tax credits, and any other tax credits or tax benefits, (ii) cash payments or outright grants of money (except any cash payments or grants related to any environmental greenhouse gas or emissions cap and trade program), (iii) other financial incentives which, if achieved, will result in cash payments by the party providing such incentives and which are specific to project development or project operation and (iv) any item that would otherwise be an environmental benefit or attribute under this definition, but (a) cannot be transferred by Seller in accordance with applicable law or (b) cannot be transferred by Seller without incurring material expenses.

2. **Product Delivery.**

For each deal set forth above, Seller shall initiate a transfer order for the applicable Contract Quantity of Product to Buyer's NEPOOL GIS account on or before the applicable Delivery Date set forth in the table above. Upon receiving written, facsimile or electronic confirmation from NEPOOL GIS that a transfer order has been initiated by Seller, Buyer shall confirm such transfer order in NEPOOL GIS within five (5) Business Days.

3. **Payment.**

Within five (5) Business Days of Buyer's receipt of written, facsimile or electronic confirmation from NEPOOL GIS that the transfer order has been completed, Buyer shall pay Seller the Contract Price for the Product delivered. Buyer shall make such payment by wire transfer of immediately available United States dollars to an account designated by Seller or as otherwise reasonably requested by Seller. If payment is not made within the time specified, without limiting Seller's rights and remedies, the past due amount shall carry interest at the Interest Rate.

4. **Payment Netting.**

If Buyer and Seller are each required to pay amounts in respect of purchases/sales hereunder or under any other forward commodity contract between the Parties on the same day, then, upon notice from one Party to the other, such amounts with respect to each Party shall be aggregated and the Parties shall discharge their obligations to pay through netting, in which case the Party, if any, owing the greater aggregate amount shall pay to the other Party the difference between the amounts owed.

5. **Term.**

This Agreement shall commence on the Effective Date and shall terminate on the date on which both Parties have completed the performance of their obligations hereunder, unless earlier terminated pursuant to the terms hereof.

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IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed as of the Effective Date.

Very truly yours,

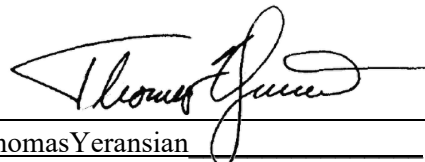
EXELON GENERATION COMPANY, LLC

By: 
Name: Phil Priolo
Title: Vice President, Commercial Risk

Legal Approval by Allyson Pait

Accepted and Agreed:

COMMONWEALTH NEW BEDFORD ENERGY LLC

By: 
Name: Thomas Yeransian
Title: Managing Member

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AGREEMENT FOR THE PURCHASE AND SALE OF RENEWABLE ENERGY CERTIFICATES

GENERAL TERMS AND CONDITIONS

1. DEFINITIONS

1.1 **Definitions.** In addition to any other terms defined in the Confirmation Letter or these General Terms and Conditions, the following terms shall have the meaning ascribed to them as set forth below:

“Adequate Assurances” shall have the meaning given in Section 8.7.

“Business Day” means a day on which Federal Reserve member banks in New York City are open for business; and a Business Day shall open at 8:00 a.m. and close at 5:00 p.m. Eastern Prevailing Time.

“Calendar Year” means the period beginning January 1 of the period year and continuing until December 31 of the subject year (e.g. Calendar Year 2017 means January 1, 2017 through December 31, 2017).

“Confidential Information” means all oral and written information exchanged between the Parties with respect to the subject matter of this Agreement. The following information does not constitute Confidential Information for purposes of this Agreement: (a) information that is or becomes generally available to the public other than as a result of a disclosure by either Party in violation of this Agreement; (b) information that was already known by either Party on a non-confidential basis prior to this Agreement; and (c) information that becomes available to either Party on a non-confidential basis from a source other than the other Party if such source was not subject to any prohibition against disclosing the information to such Party.

“Costs” means, with respect to a Non-Defaulting Party, the present value of brokerage fees, commission, attorney’s fees, and other similar third party transactions costs and expenses reasonably incurred by such Party either in terminating or replacing any arrangement pursuant to which it has hedged its obligations; and any charges, penalties, fines or fees imposed or assessed against the Non-Defaulting Party under the Applicable Standard on account of Delivery not occurring on the Delivery Date, as determined by the Non-Defaulting Party in a commercially reasonable manner.

“Default” shall have the meaning specified in Article 7.

“Defaulting Party” shall have the meaning specified in Article 8.2.

“Delivery Date” shall have the meaning set forth in the Confirmation Letter.

“Early Termination Date” shall have the meaning given in Article 8.2.

“Effective Date” shall have the meaning set forth in the Confirmation Letter.

“Firm” means that if either Party fails to perform its obligation to sell and deliver or purchase and receive the Contract Quantity of Product, such a failure would be deemed to be an Event of Default under Section 7(a) below. Force Majeure affecting Seller's supply shall not excuse performance of a Firm RECs Transaction.

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“Force Majeure” means an event or circumstance which materially adversely affects the ability of a Party to perform its obligations under this Agreement, which event or circumstance was not reasonably anticipated as of the Trade Date and which is not within the reasonable control of, or the result of the negligence of, the Party claiming Force Majeure, and which the claiming Party is unable to overcome or avoid or cause to be avoided, by the exercise of reasonable care. Force Majeure may not be based on (i) the loss or failure of Buyer’s markets; (ii) Buyer’s inability economically to use or resell the Product; (iii) Seller’s ability to sell the Product to another at a price greater than the Contract Price; (iv) Buyer’s ability to produce Product; or (v) Buyer’s ability to purchase product similar to the Product at a price less than the Contract Price. Force Majeure may include a change in applicable law and may, to the extent such a change falls under Section 6, require a negotiated amendment to this Agreement. In the case of a Party’s obligation to make payments hereunder, Force Majeure will be only an event or act of a governmental authority that on any day disables the banking system through which a Party makes such payments.

“Gains” means, with respect to any Party, an amount equal to the present value of the economic benefit to it, if any (exclusive of Costs), resulting from the termination of a Terminated Transaction, determined in a commercially reasonable manner.

“Interest Rate” means a per annum rate of interest equal to two (2%) percent over the prime lending rate as published from time to time in the Wall Street Journal under "Money Rates" on such due date (or if not published on such day on the most recent preceding day on which published), but in no event to exceed the maximum lawful rate.

“Losses” means, with respect to any Party, an amount equal to the present value of the economic loss to it, if any (exclusive of Costs), resulting from termination of a Terminated Transaction, determined in a commercially reasonable manner.

“NEPOOL GIS” means Seller’s transfer within NEPOOL GIS of the RECs into Buyer’s NEPOOL GIS Account, and Buyer’s confirmation of such transfer, in accordance with NEPOOL GIS Operating Rules. "Delivery" will be deemed to occur on the date that the transfer has been registered in the NEPOOL GIS and Buyer has received confirmation, by electronic means or otherwise, that the RECs have been transferred into Buyer’s NEPOOL GIS Account.

“Non-Defaulting Party” shall have the meaning given in Article 8.2.

“Settlement Amount” means, with respect to a transaction and the Non-Defaulting Party, the Losses or Gains, and Costs, including those which such Party incurs as a result of the liquidation of a Terminated Transaction pursuant to Article 8.2.

“Termination Payment” shall have the meaning given in Article 8.3.

“Terminated Transaction” shall have the meaning given in Article 8.2.

“Unit Contingent” means Seller’s obligation to deliver the Contract Quantity of Product may be excused on account of the failure of the Facility(ies) to generate such Contract Quantity of RECs during the applicable 2020 Year, due to a Force Majeure event affecting the Facility(ies), or limited available landfill gas quantities supplied to the Facility or such other disruptions in supply from the Facility(ies).

2. REPRESENTATIONS AND WARRANTIES

2.1 Representations and Warranties of Both Parties. As of the Effective Date, each Party hereby represents and warrants to the other Party that:

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(a) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

(b) it has all regulatory authorizations necessary for it to legally perform its obligations under this Agreement;

(c) the execution, delivery and performance of this Agreement is within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it;

(d) this Agreement and each other document executed and delivered in accordance with this Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with its terms; subject to any equitable defenses, bankruptcy principles, or the like;

(e) no Event of Default (as defined in Article 7 below) with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its obligations under this Agreement;

(f) it is acting for its own account, has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing the merits of and understanding, and understands and accepts, the terms, conditions and risks of this Agreement;

(g) it is a "forward contract merchant" within the meaning of the United States Bankruptcy Code;

(h) it has entered into this Agreement in connection with the conduct of its business and it has the capacity or ability to make or take delivery of all Products referred to in the Agreement to which it is a Party; and

(i) with respect to this Agreement, it is a producer, processor, commercial user or merchant handling the Product, and it is entering into such Agreement for purposes related to its business as such.

2.2 Representations and Warranties of Seller. As of the Delivery Date, Seller hereby represents and warrants to Buyer that:

(a) it has the right to sell the Product;

(b) the Product has never been sold for any other purpose or use;

(c) the Product is free and clear of all liens or other encumbrances; and

(d) the Product was generated during the eligible Calendar Year.

2.3 Limitation on Warranties. EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, SELLER EXPRESSLY DISCLAIMS ANY OTHER REPRESENTATIONS OR WARRANTIES, WHETHER WRITTEN OR ORAL, AND WHETHER EXPRESS OR IMPLIED, INCLUDING,

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WITHOUT LIMITATION, ANY REPRESENTATION OR WARRANTY WITH RESPECT TO CONFORMITY TO MODELS OR SAMPLES, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, SELLER MAKES NO REPRESENTATION OR WARRANTY HEREUNDER REGARDING ANY ACTION OR FAILURE TO ACT, OR APPROVAL OR FAILURE TO APPROVE, OF ANY AGENCY OR GOVERNMENTAL ENTITY.

3. TAXES AND FEES

Each Party shall be responsible for any taxes or other fees associated with its respective purchase and sale hereunder. As used herein “taxes” means, but is not limited to, any or all ad valorem, property, occupation, severance, first use, conservation, gross receipts, privilege, sales, use, consumption, excise, lease, transaction, and other taxes, governmental charges, licenses, fees, permits and assessments, or increases therein, other than taxes based on net income or net worth. A tax is not a penalty or a fine.

4. ASSIGNMENT

Neither Buyer nor Seller shall assign this Agreement nor delegate any of its duties hereunder without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that either Party, without the consent of the other Party, may assign this Agreement to any of its affiliates provided such assigning Party shall not be released from its liabilities and obligations under this Agreement; and provided further that Seller may assign this Agreement without the consent of Buyer as collateral security to any lender (and in connection therewith, Buyer shall execute and deliver to such lender a consent agreement in a form reasonably acceptable to Buyer).

5. FORCE MAJEURE

If either Party is rendered unable, wholly or in part, by Force Majeure to carry out its obligations with respect to this Agreement, that upon such Party’s giving notice and full particulars of such Force Majeure as soon as reasonably possible after the occurrence of the cause relied upon, such notice to be confirmed in writing to the other Party, the obligations of the claiming Party will, to the extent they are affected by such Force Majeure, be suspended during the continuance of said inability, but for no longer period, and the claiming Party will not be liable to the other Party for, or on account of, any loss, damage, injury or expense resulting from, or arising out of such event of Force Majeure. The Party receiving such notice of Force Majeure will have until the end of the Business Day following such receipt to notify the claiming Party that it objects to or disputes the existence of an event of Force Majeure.

6. CHANGE IN LAW

If any statutes, rules, regulations, permits or authorizations are enacted, amended, granted or revoked which have the effect of changing the transfer and sale procedure set forth in this Agreement so that the implementation of this Agreement becomes impossible or impracticable, or otherwise revokes or eliminates the Applicable Standard, the Parties hereto agree to negotiate in good faith to amend this Agreement to conform with such new statutes, regulations, or rules in order to maintain the original intent of the Parties under this Agreement.

7. EVENTS OF DEFAULT

For purposes of this Agreement, a Party shall be in default (each of the following, an “Event of Default”):

- (a) if that Party materially breaches any or all of its obligations as described in this Agreement and such breach is not cured within five (5) Business Days of written notice of such breach from the other Party;
- (b) if any representation or warranty made by a Party in Article 2 of this Agreement proves to have been misleading or false in any material respect when made and such Party does not cure the underlying facts so as to make such representation and warranty correct and not misleading within five (5) Business Days of written notice from the other Party; or
- (c) if a Party:
 - (i) makes an assignment or any general arrangement for the benefit of its creditors,
 - (ii) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause under any bankruptcy or similar law for the protection of creditors, or has such a petition filed against it, or
 - (iii) otherwise becomes bankrupt or insolvent (however evidenced).

8. REMEDIES UPON DEFAULT/ADEQUATE ASSURANCES

8.1 Liquidated Damages. Buyer and Seller agree this Article in its entirety represents the liquidated damages of each, and no part hereof represents a penalty.

8.2 Remedies. If either Party is in Default (the “Defaulting Party”), as set forth in Article 7, the other Party (the “Non-Defaulting Party”) may select any or all of the following remedies: (i) to designate a day, no earlier than the day such notice is effective and no later than twenty (20) days after such notice is effective, as an early termination date (“Early Termination Date”) to accelerate all amounts owing between the Parties and to liquidate and terminate all, but not less than all transactions (each referred to as a “Terminated Transaction”) between the Parties, (ii) withhold any payments due in respect of this Agreement and any other agreements between the Parties to the extent of its damages pursuant to this Article 8, (iii) suspend performance, and (iv) exercise such remedies as provided in this Agreement, including an action for damages (except as limited by Article 8.5). The Non-Defaulting Party will calculate, in a commercially reasonable manner, a Settlement Amount for each such Terminated Transactions as of the Early Termination Date (or, to the extent that in the reasonable opinion of the Non-Defaulting Party certain of such Terminated Transactions are commercially impracticable to liquidate and terminate or may not be liquidated or may not be liquidated and terminated under applicable law on the Early Termination Date, as soon thereafter as is reasonably practicable).

8.3 Net Out of Settlement Amounts. The Non-Defaulting Party shall aggregate all Settlement Amounts into a single amount by: netting out (a) all Settlement Amounts that are due to the Defaulting Party, plus, at the option of the Non-Defaulting Party, any cash or other form of security then available to the Non-Defaulting Party pursuant to Article 8.7, plus any or all other amounts due to the Defaulting Party under this Agreement against (b) all Settlement Amounts that are due to the Non-Defaulting Party, plus any or all other amounts due to the Non-Defaulting Party under this Agreement, so that all such amounts shall be netted out to a single liquidated amount (the “Termination Payment”) payable by one Party to the other.

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The Termination Payment shall be due to or due from the Non-Defaulting Party as appropriate. The Termination Payment, if any, is due within two (2) Business Days following written notice sent by the Non-Defaulting Party to the Defaulting Party, which notice will be sent out as soon as reasonably possible following the calculation of the Termination Payment, but in no event later than ten (10) Business Days following the Early Termination Date.

8.4 Calculation Disputes. If the Defaulting Party disputes the Non-Defaulting Party's calculation of the Settlement Amount or Termination Payment, in whole or in part, the Defaulting Party will, within two (2) Business Days of receipt of the Non-Defaulting Party's calculation, provide the Non-Defaulting Party a detailed written explanation of the basis for such dispute.

8.5 Limitation on Damages. Subject to any provisions in this Agreement to the contrary, the Defaulting Party's liability will be limited to direct, actual damages only, and such direct, actual damages will be the sole and exclusive remedy hereunder. In no event will any other liability be incurred by either Party for any obligations that arise under this Agreement, including, but not limited to, consequential, incidental, punitive, exemplary, or indirect damages in tort, contract, or otherwise.

8.6 Exclusive Remedy. THE REMEDIES SET FORTH IN THIS ARTICLE 8 ARE THE SOLE AND EXCLUSIVE REMEDIES IN THE EVENT OF A DEFAULT OF A PARTY'S OBLIGATIONS TO SELL OR PURCHASE PRODUCT, AND A PARTY'S LIABILITY SHALL BE LIMITED AS SET FORTH IN THIS ARTICLE. ALL OTHER REMEDIES OR DAMAGES FOR FAILURE TO SELL OR PURCHASE PRODUCT AT LAW ARE HEREBY WAIVED.

8.7. Adequate Assurances. Should either Party have reasonable grounds to believe that the creditworthiness of the other Party has become unsatisfactory, then the dissatisfied Party (the "Requesting Party") may require assurance of the other Party's ability to perform any obligation hereunder. Such assurance ("Adequate Assurance") may include (i) posting of a letter of credit in favor of the Requesting Party by an issuing bank reasonably acceptable to the Requesting Party, (ii) posting of cash collateral with the Requesting Party, or (iii) other security reasonably acceptable to the Requesting Party.

9. CONFIDENTIALITY

9.1 Confidentiality. Except as provided in this Article, neither Party shall publish, disclose, or otherwise divulge Confidential Information to any person at any time during or after the term of this Agreement, without the other Party's prior express written consent. Each Party shall permit knowledge of and access to Confidential Information only to those of its affiliates and to persons investing in, providing funding to or acquiring it or its affiliates, and to its and the foregoing persons' respective attorneys, accountants, representatives, agents and employees who have a need to know such Confidential Information related to this Agreement.

9.2 Required Disclosure. If required by any law, statute, ordinance, decision, order or regulation passed, adopted, issued or promulgated by a court, governmental agency or authority having jurisdiction over a Party, that Party may release Confidential Information, or a portion thereof, to the court, governmental agency or authority, as required by the applicable law, statute, ordinance, decision, order or regulation, and a Party may disclose Confidential Information to accountants in connection with audits, provided that such Party has notified the other Party of the required disclosure, such that the other Party may attempt (if such Party so chooses) to cause that court, governmental agency, authority or accountant to treat such information in a confidential manner and to prevent such information from being disclosed or otherwise becoming part of the public domain.

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9.3 Tax Treatment Exception. Notwithstanding any provision of this Agreement to the contrary, the legal obligations of confidentiality hereunder do not extend to the U.S. federal or state tax structure or the U.S. federal or state tax treatment of any transaction hereunder. If any U.S. federal or state tax analyses or materials are provided to a Party, such Party is free to disclose any such analyses or materials without limitation.

9.4 Survival. The Parties obligations under this Article 9 shall survive for a period of one (1) year following the expiration or termination of this Agreement.

10. ENTIRE AGREEMENT

This Agreement, together with any attachments or exhibits specifically referenced herein, constitutes the entire agreement between the Seller and the Buyer with respect to the subject matter hereof, supersedes all prior oral or written representations and contracts, and may be modified only by a written amendment signed by Buyer and Seller.

11. GOVERNING LAW; WAIVER OF TRIAL BY JURY

This Agreement shall be construed, enforced, and performed in accordance with the laws of the State of New York, without recourse to principles governing conflicts of law. **AS A MATERIAL INDUCEMENT TO EACH PARTY TO ENTER INTO THIS AGREEMENT, THE PARTIES EACH HEREBY IRREVOCABLY WAIVE ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR RELATING HERETO, ANY PRODUCT OR THE TRANSACTIONS CONTEMPLATED HEREBY. EACH PARTY FURTHER WAIVES ANY RIGHT TO CONSOLIDATE ANY ACTION IN WHICH A JURY TRIAL HAS BEEN WAIVED WITH ANY OTHER ACTION IN WHICH A JURY TRIAL CANNOT BE OR HAS NOT BEEN WAIVED.**

12. RECORDING

Each Party consents to the recording of its trading, marketing and scheduling representatives' telephone conversations without any further notice. Any tape recordings may be submitted in evidence to any court or in any legal proceeding for the purpose of establishing any matter relating to the Transaction. In addition, the Parties agree not to contest the authority of either Party's employees to enter into the Transaction evidenced by this Agreement. Notwithstanding the foregoing, any agreement with respect to the Transaction shall be in a writing signed by both Parties.

13. WAIVER

No delay or omission by a Party in the exercise of any right under this Agreement shall be taken, construed or considered as a waiver or relinquishment thereof, and any such right may be exercised from time to time and as often as may be deemed expedient. If any of the terms and conditions hereof are breached and thereafter waived by a Party, such waiver shall be limited to the particular breach so waived and is not deemed to waive any other breach hereunder.

14. NOTICES

All notices, payments and other formal communications which either Party may give to the other under or in connection with this Agreement shall be in writing and shall be sent by any of the following methods: hand delivery; reputable overnight courier; certified mail, return receipt requested; or, with respect to

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communications other than payments, by facsimile transmission, if the original communication is delivered by reputable overnight courier. The communications shall be sent to the following addresses, and shall be effective when received:

If to SELLER:

COMMONWEALTH NEW BEDFORD ENERGY LLC
7 Winslow Way
Mansfield, MA 02048
Attn: Thomas Yeransian
Telephone: 508-339-3074
Email: tyeransian@crmex.com

If to BUYER:

EXELON GENERATION COMPANY, LLC
1310 Point Street 8th Floor
Baltimore, MD 21231
Email (for Invoices): RECOPSGROUP@constellation.com

Legal Notices:
EXELON GENERATION COMPANY, LLC
1310 Point Street 8th Floor
Baltimore, MD 21231
Attn: Counsel
Telephone: 410-470-7156
Facsimile: 410-470-2600