



**Verified Carbon
Standard**

**MONITORING REPORT #2020-3/4-2021-1 FOR
THE GREATER NEW BEDFORD LFG
UTILIZATION PROJECT, DARTMOUTH,
MASSACHUSETTS**

**FOR VERIFICATION PERIOD
JULY 1, 2020 THROUGH MARCH 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 70,000 metric tons of CO₂e for the verification period July 1, 2010 through March 31, 2021 including 45,597 metric tons of CO₂e from July 1, 2010 through December 31, 2020, and 24,402 metric tons of CO₂e from January 1, 2021 through March 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
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1.4 Other Entities Involved in the Project

None

1.5 Project Start Date

January 1, 2002

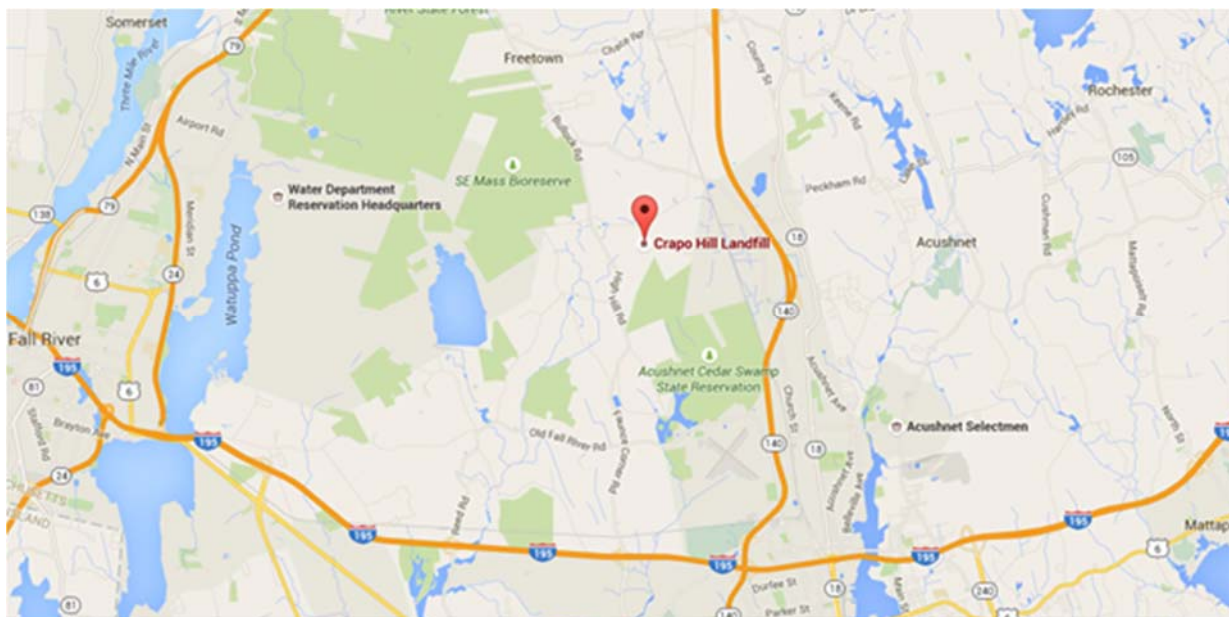
1.6 Project Crediting Period

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 violation associated with the Crapo Hill Landfill resulted in the landfill being out of compliance from July 01 through September 30, 2020. This notice of violation was due to the District's failure to *timely* submit the Discharge Monitoring Reports (DMRs) for stormwater discharge under the Clean Water Act. This violation is

specific to the landfill site which is not owned or operated by CNBE and therefore is not linked to the Project Activity. All violations indicated by EPA have been cured by the District. Specifically, the District sent the required DMRs to EPA slightly after the submittal deadline, and the EPA has confirmed and accepted receipt of the DMRs. The District delay has been caused by problems accessing the web-based interface that the EPA provides for submitting the DMRs. Supporting evidence that the DMR's for the out of compliance period, were provided and processed by the EPA are provided in Exhibit 8. The EPA has not updated their website to reflect the return to compliance for each of these incidences. The District shall be working with EPA to clear EPA violation notices.

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 two times each month. 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 v3.7, Section 3.5.1.
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 v3.7, Section 3.5.1.

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	GWPC _{H4}
Data unit	T CO ₂ e / t CH ₄
Description	Global warming potential of methane
Source of data	IPCC – Fourth Assessment Report
Value applied:	25
Justification of choice of data or description of measurement methods and procedures applied	Updated from 21 to 25 pursuant to (1) the re-validation report dated May 16, 2016, and (2) the VCS approval of updated global warming potentials provided in the IPCC's Fourth Assessment Report (Sections 3.15.3 and 4.8.3) (2007).
Purpose of Data	Calculation of baseline emissions
Comments	No comments

Data / Parameter	Regulatory requirements
Data unit	Not applicable
Description	Regulatory requirements applicable to the Landfill and Project
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

Data / Parameter	Regulatory requirements
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	Conservative for this piece of equipment given output needed vs total capacity

measurement methods and procedures applied	
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.
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
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

Data Unit / Parameter:	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.
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
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	Twice a month (approximately every two weeks)
Value applied:	4.18% was used in the ex-ante calculation based on data July 2020 through March 2021.
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.
Value applied	0.22 tonnes CO2/MWh
Monitoring equipment	None
QA/QC procedures to be applied	None
Purpose of data	Calculation of project emissions
Calculation method	488.888 lbs CO2/MWh*0.454545455 kg/lbs*0.001 tonnes/kg = 0.22 tonnes CO2/MWh

Any comment:	None
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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
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
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 2019 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
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 July 1 – December 31, 2020 usage, the engine ran for 53.1 hours; and January 1, - March 31, 2021 usage of 15 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.

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 on the basis of 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

Typically, a trained operator balances the landfill gas collection wellfield. During balancing the system, the operator measures and records the methane content, carbon dioxide content, oxygen content, landfill gas flow rate, landfill gas temperature, static pressure, and balance gas content. 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 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 2020 (July 1, 2020 – December 31, 2020)	45,597	0	0	45,597
Year 2021 (January 1, 2021 – March 31, 2021)	24,402	0	0	24,402
Total	70,000	0	0	70,000

APPENDIX A: EXHIBITS 1 - 9

EXHIBITS 1 – 9:

- Exhibit 1: The emission reductions credits in CO2 equivalent tons in accordance with Project Methodology from July 1, 2020 through March 31, 2021.
- Exhibit 2: Gas totalizer readings, and methane content readings for the period July 1, 2020 through March 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 July 1, 2020 through March 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 VCU's 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. 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. NSPS Design Report and October 9, 2019 NMOC Emission Rate Report. The NMOC Emission Report demonstrates that the NMOCs emissions are below the NSPS applicability threshold and therefore the Crapo Hill Landfill is not subject to the requirements of NSPS.
 3. Discharge Monitoring Reports submitted to USEPA providing evidence that EPA ECHO information has not been updated by EPA to show that the USEPA has received the information.
- Exhibit 9: RECs Agreements

Exhibit 1

The emission reductions credits in CO2 equivalent tons in accordance with Project Methodology from July 1, 2020 through March 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	VCS
Methane oxidation efficiency electricity generation	100.0%	100.0%
Methane oxidation efficiency LFG flaring	50.0%	50.0%
Methane, molecular weight	16.04	16.04
Pounds per metric ton	2,204.62	2,204.62
Gas constant (scf per lb-mole)	385.32	385.32
Global Warming Potential (GWP) methane	25	25

Summary results

		Unit		
Electricity generation				
Start date			1-Jul-20	1-Jan-21
End date			31-Dec-20	31-Mar-21
Methane delivered	scf		107,423,301	57,483,802
Emission Reductions	metric tons CO2e		50,717	27,139
Flaring				
Start date			1-Jul-20	1-Jan-21
End date			31-Dec-20	31-Mar-21
Methane delivered	scf		-	-
Emission Reductions	metric tons CO2e		-	-
Subtotal				
Methane delivered	scf		107,423,301	57,483,802
Emission Reductions	metric tons CO2e		50,717	27,139
Deductions				
Oxidation potential	metric tons CO2e		5,072	2,714
District Initial System	metric tons CO2e		43	22
Electricity use utility and diesel backup	metric tons CO2e		5	1
Total				
Emission Reductions eligible under VCS program	metric tons CO2e		45,597	24,402

Exhibit 2

Gas totalizer readings, and methane content readings for the period July 1, 2020 through March 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 3, June 21, 2017, v3.7

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 tons CO2 equivalent per ton methane	Emission reduction CO2 equivalent metric tons	Emission reduction cumulative CO2 equivalent metric tons
mm/dd/yy	mm/dd/yy	MMBtu HHV	MMBtu HHV	MMBtu HHV	scf	scf	metric tons	metric tons	%	metric tons	metric tons			
	1-Jul-20													
1-Jul-20	31-Jul-20	17,530	-	17,530	17,322,005	17,322,005	327	327	100.0%	327	327	25	8,178	8,178
1-Aug-20	31-Aug-20	16,941	17,530	16,941	16,740,194	34,062,199	316	643	100.0%	316	643	25	7,903	16,082
1-Sep-20	30-Sep-20	17,474	16,941	17,474	17,266,411	51,328,610	326	969	100.0%	326	969	25	8,152	24,233
1-Oct-20	31-Oct-20	18,986	17,474	18,986	18,761,032	70,089,643	354	1,324	100.0%	354	1,324	25	8,858	33,091
1-Nov-20	30-Nov-20	18,550	18,986	18,550	18,329,817	88,419,460	346	1,670	100.0%	346	1,670	25	8,654	41,745
1-Dec-20	31-Dec-20	19,232	18,550	19,232	19,003,842	107,423,301	359	2,029	100.0%	359	2,029	25	8,972	50,717
	1-Jan-21													
1-Jan-21	31-Jan-21	20,497	-	20,497	20,254,263	20,254,263	383	383	100.0%	383	383	25	9,563	9,563
1-Feb-21	28-Feb-21	17,747	20,497	17,747	17,536,751	37,791,014	331	714	100.0%	331	714	25	8,280	17,842
1-Mar-21	31-Mar-21	19,929	17,747	19,929	19,692,788	57,483,802	372	1,086	100.0%	372	1,086	25	9,297	27,139

Exhibit 3

LFG totalizer readings, and methane content readings for the periods from July 1, 2020 through March 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 3, June 21, 2017, v3.7							
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
	1-Jul-20			-												
1-Jul-20	31-Jul-20	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Aug-20	31-Aug-20	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Sep-20	30-Sep-20	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Oct-20	31-Oct-20	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Nov-20	30-Nov-20	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Dec-20	31-Dec-20	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
	1-Jan-21	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Jan-21	31-Jan-21	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Feb-21	28-Feb-21	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
1-Mar-21	31-Mar-21	-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-
		-	-	-	-	-	0	0	50%	-	-	25	-	-	-	-

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
$ER_y = BE_y - PE_y$				
70,001	BE_y	see below	tCO2e/period	
	PE_y	4.56	tCO2e/period	See Electricity Tab + Emergency Generator Tab
$BE_y = BE_{CH4,y}$				
70,006	$BE_{CH4,y}$	see below	tCO2e/period	
$BE_{CH4,y} = ((1 - OX_{top_layer}) \times F_{CH4,PJ,y} - F_{CH,BL,y}) \times GWP_{CH4}$				
70,006	OX_{top_layer}	0.1		ACM001 Methodology value
	GWP_{CH4}	25	tCO2e / tCH4	IPCC Value - 4th assessment report (2007)
	$F_{CH4,PJ,y}$	see below	t CH4/period	
	$F_{CH,BL,y}$	see below	t CH4/period	
$F_{CH4,PJ,y} = F_{CH4,flared,y} + F_{CH4,EL,y}$				
3,114	$F_{CH4,flared,y}$	0	t CH4/period	See Exhibit 3 tab
	$F_{CH4,EL,y}$	3114	t CH ₄ /period	See Exhibit 2 tab
$F_{CH4,BL,y} = F_{CH4,BL,sys,y}$				
$F_{CH4,BL,sys,y} = \%DistrictInitialSystem \times F_{CH4,PJ,y}$				
2.6	%DistrictInitialSystem	4.18		See DistrictInitialSystemTab
	$F_{CH4,PJ,y}$	see above	t CH4/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	0.26	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 (July 1 - December 31, 2020)

$$446 \quad \text{FC}_{\text{Diesel}} = \text{Number of hours run} * \text{Gallons used/hour}$$

$$\text{COEF}_{\text{Diesel},2015} = \text{NCV}_{\text{Diesel},2015} * \text{EF}_{\text{CO}_2,\text{Diesel},2015}$$

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

$$\text{PE}_{\text{FC},2015} = \text{FC}_{\text{Diesel},2015} * \text{COEF}_{\text{Diesel},2015}$$

$$\text{PEFC}, 2010 \quad \boxed{4.56} \text{ tonnes CO}_2$$

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 July 1, 2020 to December 31, 2020

53.1 hours* 8.4 gallons/hour

446.04 gallons

Emergency Generator - Diesel Use

Gallons of Diesel Consumed (Actual January 1 - March 31, 2021)

$$126 \quad \text{FC}_{\text{Diesel}} = \text{Number of hours run} * \text{Gallons used/hour}$$

$$\text{COEF}_{\text{Diesel},2015} = \text{NCV}_{\text{Diesel},2015} * \text{EF}_{\text{CO}_2,\text{Diesel},2015}$$

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

$$\text{PE}_{\text{FC},2015} = \text{FC}_{\text{Diesel},2015} * \text{COEF}_{\text{Diesel},2015}$$

$$\text{PEFC}, 2010 \quad \boxed{1.29} \text{ tonnes CO}_2$$

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 January 1, 2021 to March 31, 2021

15 hours* 8.4 gallons/hour

126 gallons

Supporting Information for Exhibit 4

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

Month	Days	LFG flow rate from District Initial System contained in Phase 1 area scfm @50% methane		LFG flow rate from District Total System, scfm @50% methane		District Initial System/Total
Jul-20	31	45		974		4.6%
Aug-20	31	45		941		4.8%
Sep-20	30	45		1,000		4.5%
Oct-20	31	45		1,092		4.1%
Nov-20	30	45		1,103		4.1%
Dec-20	31	45		1,181		3.8%
Jan-21	31	45		1,180		3.8%
Feb-21	28	45		1,131		4.0%
Mar-21	31	45		1,151		3.9%

Weighted Average 4.18%

Average 4.18%

Note: During July 1, 2020 through March 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.

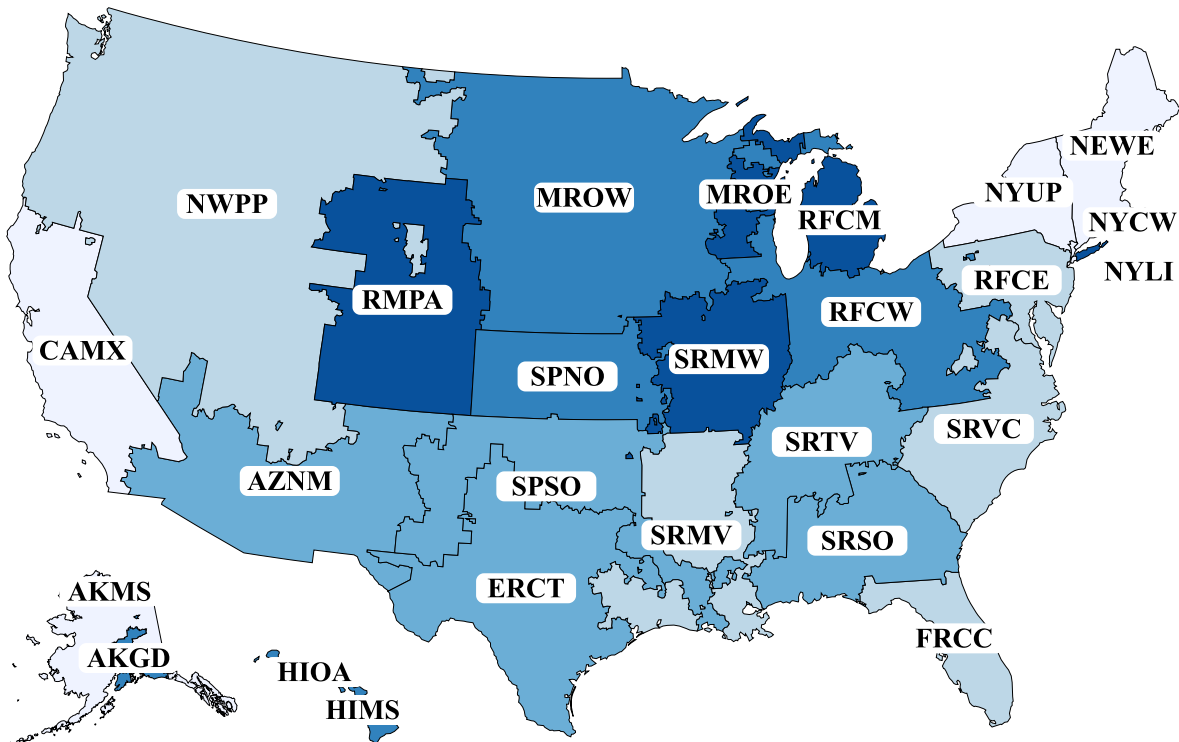
Fossil Fuel Consumption

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 eGRID2019 data
488.888	0.454545455	0.001	0.22	
lbs CO2/MWh	kg/lbs	tonnes/kg	tonnes CO2/MWh	

**CO₂ total output emission rate (lb/MWh)
by eGRID subregion, 2019**



Region	CO2 total output emission rate (lb/MWh) by eGRID subregion 2019
US	884.23
AKGD	1114.4
AKMS	549.312
AZNM	952.321
CAMX	453.209
ERCT	868.64
FRCC	861.028
HIMS	1185.595
HIOA	1694.541
MROE	1502.559
MROW	1098.353
NEWE	488.888
NWPP	715.241
NYCW	553.801
NYLI	1208.975
NYUP	232.305
PRMS	1537.308
RFCE	695.034
RFCM	1189.335
RFCW	1067.679
RMPA	1242.611
SPNO	1069.971
SPSO	1001.985
SRMV	806.755
SRMW	1584.391
SRSO	969.165
SRTV	949.695
SRVC	675.417

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.

Eversource Meter Photo and Data

July 2020																	
		Wednesday 7/1/2020	Thursday 7/2/2020	Friday 7/3/2020	Saturday 7/4/2020	Sunday 7/5/2020	Monday 7/6/2020	Tuesday 7/7/2020	Wednesday 7/8/2020	Thursday 7/9/2020	Friday 7/10/2020	Saturday 7/11/2020	Sunday 7/12/2020	Monday 7/13/2020	Tuesday 7/14/2020	Wednesday 7/15/2020	Thursday 7/16/2020
LFG and Biogas Flow to the Engines (KSCF)		1,147	1,153	1,161	1,158	1,167	1,163	1,148	1,154	1,170	1,158	1,154	1,137	1,168	1,140	1,141	1,146
LFG and Biogas Flow to the Engines (MMBTU HHV)		606	609	605	598	600	598	591	601	603	602	614	602	612	592	590	589
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and BiogasFlow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,147	1,153	1,161	1,158	1,167	1,163	1,148	1,154	1,170	1,158	1,154	1,137	1,168	1,140	1,141	1,146
LFG and Biogas Total Flow (MMBTU HHV)		606	609	605	598	600	598	591	601	603	602	614	602	612	592	590	589
Average Methane Content (%)		52.2	52.3	51.5	51.1	50.8	50.8	50.9	51.5	50.9	51.4	52.5	52.3	51.8	51.3	51.1	50.8
Engine 1 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	24
Engine 2 Hours		24	23	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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 1 Power Output (kWhr)		16,784	16,788	16,788	16,784	16,780	16,788	16,780	16,788	16,788	16,792	16,784	16,788	16,784	16,788	14,996	15,608
Generator 2 Power Output (kWhr)		16,424	16,108	16,776	16,780	16,776	16,780	15,024	16,252	16,784	15,764	16,776	16,784	16,496	15,028	16,264	16,776
Generator 3 Power Output (kWhr)		17,228	17,952	16,612	16,188	16,188	16,568	16,752	16,624	15,584	16,612	16,608	15,580	15,580	16,364	15,960	15,572
Generator 4 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Power Output (kWhr)		50,528	50,926	50,272	49,851	49,841	48,939	48,607	49,765	49,251	49,260	50,280	49,239	48,954	48,264	47,287	48,018
Net Power Output (kWhr)		48,656	49,008	48,408	47,984	47,936	47,000	46,672	47,808	47,240	47,296	48,320	47,304	46,920	46,328	45,400	45,976
Power Sold as metered by NStar, (kWhr)		48,516	48,856	48,266	47,837	47,801	46,863	46,536	47,681	47,110	47,155	48,154	47,157	46,777	46,192	45,278	45,869
Offgrid RECs (kWhr)		1,872	1,919	1,863	1,869	1,903	1,939	1,936	1,957	2,010	1,965	1,959	1,935	2,034	1,936	1,888	2,042
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		699	700	700	699	699	700	699	700	700	700	699	700	699	700	652	650
Generator 2		684	700	699	699	699	646	626	677	699	657	699	699	687	626	678	699
Generator 3		718	748	692	675	675	690	698	693	649	692	692	649	649	682	665	649
Generator 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Power output (kW average over 24-hrs)																	
Facility Gross		2,105	2,122	2,095	2,077	2,077	2,039	2,025	2,074	2,052	2,053	2,095	2,052	2,040	2,011	1,970	2,001
Facility Net		2,027	2,042	2,017	1,999	1,997	1,958	1,945	1,992	1,968	1,971	2,013	1,971	1,955	1,930	1,892	1,916
In-plant load		78	80	78	78	79	81	81	82	84	82	82	81	85	81	79	85
Daily availability factor																	
Facility		75%	74%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	74%	75%
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96%	100%
Engine 2		100%	96%	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		64%	64%	63%	63%	63%	62%	61%	63%	62%	62%	63%	62%	62%	61%	60%	61%
Engine 1		85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	79%	79%
Engine 2		83%	85%	85%	85%	85%	78%	76%	82%	85%	80%	85%	85%	83%	76%	82%	85%
Engine 3		87%	91%	84%	82%	82%	84%	85%	84%	79%	84%	84%	79%	79%	83%	81%	79%
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	312	336	359	383
Engine 2		24	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		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		112,539	112,563	112,587	112,611	112,635	112,659	112,683	112,707	112,731	112,755	112,779	112,803	112,827	112,851	112,875	112,898
Engine 2		101,051	101,075	101,098	101,122	101,146	101,170	101,194	101,218	101,242	101,266	101,290	101,314	101,338	101,362	101,386	101,410
Engine 3		110,508	110,532	110,556	110,580	110,604	110,628	110,652	110,676	110,700	110,724	110,748	110,772	110,796	110,820	110,844	110,868
Engine 4		110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327
Cumulative availability, %		July 1, 2020 @ 00:00 hours															
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 2		100%	98%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
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		699	1,399	2,098	2,798	3,497	4,196	4,896	5,595	6,295	6,994	7,694	8,393	9,092	9,792	10,444	11,094
Engine 2		684	1,385	2,084	2,783	3,482	4,128	4,754	5,431	6,130	6,787	7,486	8,185	8,873	9,499	10,177	10,876
Engine 3		718	1,466	2,158	2,833	3,507	4,197	4,895	5,588	6,237	6,930	7,622	8,271	8,920	9,602	10,267	10,916
Engine 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cumulative capacity factor, %																	
Engine 1		85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	84%	84%
Engine 2		83%	84%	84%	84%	84%	83%	82%	82%	83%	82%	82%	83%	83%	82%	82%	82%
Engine 3		87%	89%	87%	86%	85%	85%	85%	85%	84%	84%	84%	84%	83%	83%	83%	83%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

		Wednesday 7/1/2020	Thursday 7/2/2020	Friday 7/3/2020	Saturday 7/4/2020	Sunday 7/5/2020	Monday 7/6/2020	Tuesday 7/7/2020	Wednesday 7/8/2020	Thursday 7/9/2020	Friday 7/10/2020	Saturday 7/11/2020	Sunday 7/12/2020	Monday 7/13/2020	Tuesday 7/14/2020	Wednesday 7/15/2020	Thursday 7/16/2020
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	215	287	359	431	503	575	647	719	791	863	935	1,007	1,078	1,150
Cumulative Availability, %		75.0%	74.5%	74.7%	74.7%	74.8%	74.8%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%
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		50,528	101,454	151,726	201,577	251,418	300,357	348,964	398,729	447,980	497,240	547,520	596,759	645,713	693,977	741,264	789,282
Cumulative Capacity Factor		63.8%	64.0%	63.9%	63.6%	63.5%	63.2%	62.9%	62.9%	62.8%	62.8%	62.8%	62.8%	62.7%	62.6%	62.4%	62.3%
Cumulative fuel input, MMBtu HHV		606	1,216	1,820	2,419	3,019	3,617	4,208	4,809	5,412	6,014	6,628	7,230	7,842	8,434	9,024	9,613
Cumulative gross output, kWhr		50,528	101,454	151,726	201,577	251,418	300,357	348,964	398,729	447,980	497,240	547,520	596,759	645,713	693,977	741,264	789,282
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		10,800	10,773	10,829	10,806	10,837	11,004	10,947	10,874	11,017	11,008	10,984	10,997	11,262	11,041	11,225	11,046
Daily heat rate, Btu/kWe gross HHV		11,997	11,967	12,030	12,004	12,039	12,224	12,161	12,080	12,239	12,229	12,202	12,217	12,511	12,265	12,470	12,270
Cumulative heat rate, Btu/kWe gross LHV		10,800	10,786	10,800	10,802	10,809	10,841	10,855	10,858	10,875	10,888	10,897	10,906	10,933	10,940	10,958	10,964
Cumulative heat rate, Btu/kWe gross HHV		11,997	11,982	11,998	11,999	12,007	12,042	12,059	12,062	12,081	12,096	12,105	12,115	12,145	12,153	12,173	12,179
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		17,472	17,568	17,664	17,760	17,856	17,952	18,048	18,144	18,240	18,336	18,432	18,528	18,624	18,720	18,816	18,912
Actual cumulative engine run hours		12,966	13,037	13,109	13,181	13,253	13,325	13,397	13,469	13,541	13,613	13,685	13,757	13,829	13,901	13,972	14,044
Cumulative Availability, %		74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.3%	74.3%	74.3%	74.3%
Max cumulative gross output, kWhr		14,411,100	14,490,300	14,569,500	14,648,700	14,727,900	14,807,100	14,886,300	14,965,500	15,044,700	15,123,900	15,203,100	15,282,300	15,361,500	15,440,700	15,519,900	15,599,100
Actual cumulative gross output, kWhr		8,892,969	8,943,895	8,994,167	9,044,018	9,093,859	9,142,798	9,191,405	9,241,170	9,290,421	9,339,681	9,389,961	9,439,200	9,488,154	9,536,418	9,583,705	9,631,723
Cumulative Capacity Factor		61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.7%
Cumulative fuel input, MMBtu HHV		113,726	114,335	114,940	115,538	116,138	116,736	117,328	117,929	118,531	119,134	119,747	120,349	120,961	121,553	122,143	122,732
Cumulative gross output, kWhr		8,892,969	8,943,895	8,994,167	9,044,018	9,093,859	9,142,798	9,191,405	9,241,170	9,290,421	9,339,681	9,389,961	9,439,200	9,488,154	9,536,418	9,583,705	9,631,723
Cumulative heat rate, Btu/kWe gross LHV		11,512	11,508	11,504	11,500	11,496	11,494	11,491	11,488	11,485	11,483	11,480	11,477	11,476	11,474	11,473	11,471
Cumulative heat rate, Btu/kWe gross HHV		12,788	12,784	12,779	12,775	12,771	12,768	12,765	12,761	12,758	12,756	12,753	12,750	12,749	12,746	12,745	12,742
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 7/1/2020	Thursday 7/2/2020	Friday 7/3/2020	Saturday 7/4/2020	Sunday 7/5/2020	Monday 7/6/2020	Tuesday 7/7/2020	Wednesday 7/8/2020	Thursday 7/9/2020	Friday 7/10/2020	Saturday 7/11/2020	Sunday 7/12/2020	Monday 7/13/2020	Tuesday 7/14/2020	Wednesday 7/15/2020	Thursday 7/16/2020
Date																	
Hour																	
1		1.996	2.068	2.067	1.994	1.991	1.992	1.944	1.944	1.970	1.955	2.016	1.967	1.967	1.924	1.895	1.919
2		1.996	2.069	2.066	1.993	1.992	1.992	1.944	1.945	1.969	1.897	2.015	1.968	1.968	1.945	1.895	1.914
3		1.996	2.068	2.067	1.993	1.992	1.993	1.943	1.945	1.970	1.902	2.016	1.968	1.967	1.944	1.894	1.911
4		1.996	2.069	2.066	1.994	1.992	1.992	1.944	1.967	1.970	1.945	2.016	1.969	1.968	1.944	1.896	1.913
5		1.996	2.069	2.066	1.993	1.991	1.993	1.944	2.016	1.970	1.944	2.016	1.968	1.968	1.943	1.894	1.913
6		1.997	2.068	2.047	1.994	1.991	1.993	1.944	2.016	1.970	1.945	2.015	1.969	1.967	1.945	1.896	1.913
7		1.997	2.068	1.995	1.992	1.992	1.952	1.945	2.017	1.970	1.946	2.015	1.969	1.969	1.945	1.885	1.916
8		1.997	2.067	1.995	1.995	1.992	1.923	1.944	2.016	1.970	1.945	2.014	1.968	1.968	1.945	1.322	1.918
9		1.990	2.059	1.994	1.995	1.993	1.916	1.936	2.013	1.964	1.939	2.013	1.965	1.956	1.939	1.709	1.902
10		1.987	1.897	1.994	1.994	1.993	1.941	1.929	2.010	1.960	1.934	2.011	1.964	1.951	1.934	1.935	1.898
11		1.986	1.577	1.995	1.994	1.992	1.943	1.928	2.008	1.956	1.932	2.010	1.963	1.948	1.933	1.962	1.894
12		1.986	2.023	1.994	1.994	1.992	1.930	1.919	1.810	1.953	1.933	2.008	1.960	1.945	1.933	1.962	1.890
13		1.987	2.056	1.993	1.994	1.992	1.933	1.920	1.961	1.951	1.933	2.008	1.962	1.946	1.935	1.961	1.895
14		1.987	2.057	1.993	1.993	1.990	1.939	1.920	2.009	1.951	1.934	2.008	1.962	1.946	1.932	1.958	1.895
15		2.022	2.058	1.994	1.992	1.990	1.939	1.931	2.007	1.951	1.951	2.009	1.960	1.949	1.932	1.949	1.899
16		2.059	2.063	1.993	1.992	1.990	1.938	1.939	2.007	1.953	2.007	2.010	1.962	1.956	1.935	1.912	1.914
17		2.066	2.064	1.994	1.993	1.991	1.944	1.944	2.013	1.961	2.013	2.011	1.962	1.960	1.913	1.917	1.919
18		2.067	2.064	1.994	1.992	1.992	1.944	1.946	2.014	1.962	2.013	2.011	1.963	1.962	1.896	1.919	1.920
19		2.068	2.065	1.995	1.993	1.992	1.944	1.947	2.014	1.964	2.014	2.011	1.964	1.963	1.896	1.920	1.922
20		2.068	2.065	1.993	1.993	1.992	1.946	1.946	2.015	1.964	2.014	2.012	1.964	1.964	1.897	1.921	1.922
21		2.068	2.065	1.993	1.993	1.993	1.945	1.945	2.016	1.964	2.014	2.011	1.964	1.901	1.897	1.919	1.919
22		2.068	2.065	1.992	1.992	1.992	1.944	1.945	1.981	1.965	2.014	1.965	1.965	1.895	1.895	1.920	1.921
23		2.068	2.066	1.993	1.993	1.992	1.944	1.944	1.968	1.966	2.015	1.966	1.965	1.896	1.895	1.919	1.921
24		2.068	2.066	1.993	1.992	1.992	1.943	1.945	1.969	1.966	2.016	1.967	1.966	1.897	1.895	1.918	1.921
TOTAL		48,516	48,856	48,266	47,837	47,801	46,863	46,536	47,681	47,110	47,155	48,154	47,157	46,777	46,192	45,278	45,869
Cumulative Output Sold, kWhr		48,516	97,372	145,638	193,475	241,276	288,139	334,675	382,356	429,466	476,621	524,775	571,932	618,709	664,901	710,179	756,048
Transformer and line efficiency		99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%
Hourly average		2.022	2.036	2.011	1.993	1.992	1.953	1.939	1.987	1.963	1.965	2.006	1.965	1.949	1.925	1.887	1.911

July 2020																			
		Friday 7/17/2020	Saturday 7/18/2020	Sunday 7/19/2020	Monday 7/20/2020	Tuesday 7/21/2020	Wednesday 7/22/2020	Thursday 7/23/2020	Friday 7/24/2020	Saturday 7/25/2020	Sunday 7/26/2020	Monday 7/27/2020	Tuesday 7/28/2020	Wednesday 7/29/2020	Thursday 7/30/2020	Friday 7/31/2020	TOTAL	Biogas	LFG
LFG and Biogas Flow to the Engine		1,116	1,166	1,168	1,139	1,155	1,114	1,127	1,019	1,097	1,097	1,129	1,153	1,157	1,120	1,138	35,359	1,353	34,006
LFG and Biogas Flow to the Engine		587	612	613	605	606	593	596	547	583	586	605	603	595	588	598	18,529	999	17,530
LFG and Biogas Flow to the Flare (		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4%	95%
LFG and BiogasFlow to the Flare (f		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF		1,116	1,166	1,168	1,139	1,155	1,114	1,127	1,019	1,097	1,097	1,129	1,153	1,157	1,120	1,138	35,359	-	-
LFG and Biogas Total Flow (MMBT		587	612	613	605	606	593	596	547	583	586	605	603	595	588	598	18,529	-	-
Average Methane Content (%)		52.0	51.9	51.8	52.4	51.8	52.6	52.2	53.0	52.5	52.8	52.9	51.7	50.8	51.8	51.9	51.8	-	-
Engine 1 Hours		24	24	24	24	24	24	24	21	24	24	24	24	24	22	24	738	-	-
Engine 2 Hours		24	24	24	24	24	24	24	21	24	24	24	24	24	24	24	739	-	-
Engine 3 Hours		24	24	24	24	24	24	24	21	24	24	24	24	24	24	24	741	-	-
Engine 4 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 1 Power Output (kWhr)		15,604	15,604	15,600	15,852	16,204	16,208	16,204	13,876	16,196	16,196	16,828	17,356	17,360	15,872	16,776	507,344	-	-
Generator 2 Power Output (kWhr)		16,780	16,780	16,780	16,396	15,864	14,688	15,600	13,272	15,028	15,032	15,408	15,604	15,600	15,604	15,848	494,596	-	-
Generator 3 Power Output (kWhr)		16,244	16,756	16,760	16,364	15,792	15,708	16,184	13,900	16,192	16,192	16,824	17,060	16,192	16,500	17,192	505,832	-	-
Generator 4 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Power Output (kWhr)		48,711	49,226	49,220	48,701	47,953	46,661	48,060	41,096	47,398	47,423	49,098	50,073	49,199	48,037	49,921	1,510,059	-	-
Net Power Output (kWhr)		46,776	47,264	47,240	46,640	45,872	44,768	46,032	39,416	45,456	45,456	46,968	47,840	47,024	45,880	47,760	1,448,648	-	-
Power Sold as metered by NStar, (		46,655	47,123	47,097	46,492	45,739	44,659	45,897	39,318	45,347	45,348	46,832	47,671	46,872	45,750	47,612	1,444,460	CRMCB inplant	-
Offgrid RECs (kWhr)		1,934	1,962	1,980	2,062	2,080	1,893	2,028	1,681	1,942	1,967	2,130	2,233	2,175	2,157	2,161	61,412	11,073	-
Calculated Performance Results																			18%
Daily																		of total in-plant	
Power output (kW average whe																		power	
Generator 1		650	650	650	661	675	675	675	661	675	675	701	723	723	721	699			
Generator 2		699	699	699	683	661	639	650	632	626	626	642	650	650	650	660			
Generator 3		677	698	698	682	658	655	674	662	675	675	701	711	675	688	716			
Generator 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Power output (kW average ove																			
Facility Gross		2,030	2,051	2,051	2,029	1,998	1,944	2,003	1,712	1,975	1,976	2,046	2,086	2,050	2,002	2,080			
Facility Net		1,949	1,969	1,968	1,943	1,911	1,865	1,918	1,642	1,894	1,894	1,957	1,993	1,959	1,912	1,990			
In-plant load		81	82	83	86	87	79	85	70	81	82	89	93	91	90	90			
Daily availability factor																			
Facility		75%	75%	75%	75%	75%	74%	75%	66%	75%	75%	75%	75%	75%	73%	75%			
Engine 1		100%	100%	100%	100%	100%	100%	100%	88%	100%	100%	100%	100%	100%	92%	100%			
Engine 2		100%	100%	100%	100%	100%	100%	100%	88%	100%	100%	100%	100%	100%	100%	100%			
Engine 3		100%	100%	100%	100%	100%	100%	100%	88%	100%	100%	100%	100%	100%	100%	100%			
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Daily capacity factor																			
Facility		62%	62%	62%	61%	61%	59%	61%	52%	60%	60%	62%	63%	62%	61%	63%			
Engine 1		79%	79%	79%	80%	82%	82%	82%	80%	82%	82%	85%	88%	88%	87%	85%			
Engine 2		85%	85%	85%	83%	80%	77%	79%	77%	76%	76%	78%	79%	79%	79%	80%			
Engine 3		82%	85%	85%	83%	80%	79%	82%	80%	82%	82%	85%	86%	82%	83%	87%			
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
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		407	431	455	479	503	527	551	572	596	620	644	668	692	714	738			
Engine 2		407	431	455	479	503	526	550	571	595	619	643	667	691	715	739			
Engine 3		408	432	456	480	504	528	552	573	597	621	645	669	693	717	741			
Engine 4		0	0	0	0	0	0	0	0	-	-	-	-	-	-	-			
Engine operating run hours tote																			
Engine 1		112,946	112,970	112,994	113,018	113,042	113,066	113,090	113,111	113,135	113,159	113,183	113,207	113,231	113,253	113,277			
Engine 2		101,458	101,482	101,506	101,530	101,554	101,577	101,601	101,622	101,646	101,670	101,694	101,718	101,742	101,766	101,790			
Engine 3		110,916	110,940	110,964	110,988	111,012	111,036	111,060	111,081	111,105	111,129	111,153	111,177	111,201	111,225	111,249			
Engine 4		110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327	110,327			
Cumulative availability, %																			
Engine 1		100%	100%	100%	100%	100%	100%	100%	99%	99%	99%	99%	99%	99%	99%	99%			
Engine 2		100%	100%	100%	100%	100%	100%	100%	99%	99%	99%	99%	99%	99%	99%	99%			
Engine 3		100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%			
Engine 4		0%	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	25,575			
Engine 1		11,744	12,395	13,045	13,705	14,380	15,056	15,731	16,391	17,066	17,741	18,442	19,165	19,889	20,610	21,309			
Engine 2		11,575	12,274	12,973	13,656	14,317	14,956	15,606	16,238	16,864	17,490	18,132	18,782	19,432	20,083	20,743			
Engine 3		11,592	12,291	12,989	13,671	14,329	14,983	15,658	16,319	16,994	17,669	18,370	19,081	19,755	20,443	21,159			
Engine 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Cumulative capacity factor, %																			
Engine 1		84%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%			
Engine 2		83%	83%	83%	83%	83%	82%	83%	82%	82%	82%	81%	81%	81%	81%	81%			
Engine 3		83%	83%	83%	83%	83%	83%	83%	82%	82%	82%	82%	83%	83%	83%	83%			
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			

	Friday 7/17/2020	Saturday 7/18/2020	Sunday 7/19/2020	Monday 7/20/2020	Tuesday 7/21/2020	Wednesday 7/22/2020	Thursday 7/23/2020	Friday 7/24/2020	Saturday 7/25/2020	Sunday 7/26/2020	Monday 7/27/2020	Tuesday 7/28/2020	Wednesday 7/29/2020	Thursday 7/30/2020	Friday 7/31/2020	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine run 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 hours	1,222	1,294	1,366	1,438	1,510	1,581	1,653	1,716	1,788	1,860	1,932	2,004	2,076	2,148	2,218			
Cumulative Availability, %	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.5%	74.5%	74.5%	74.5%	74.6%	74.6%	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	837,993	887,219	936,439	985,140	1,033,093	1,079,754	1,127,814	1,168,910	1,216,308	1,263,731	1,312,829	1,362,902	1,412,101	1,460,138	1,510,059			
Cumulative Capacity Factor	62.2%	62.2%	62.2%	62.2%	62.1%	62.0%	61.9%	61.5%	61.4%	61.4%	61.4%	61.5%	61.5%	61.5%	61.5%			
Cumulative fuel input, MMBtu	10,200	10,813	11,426	12,030	12,636	13,229	13,825	14,372	14,954	15,541	16,146	16,748	17,343	17,931	18,529			
Cumulative gross output, kWh	837,993	887,219	936,439	985,140	1,033,093	1,079,754	1,127,814	1,168,910	1,216,308	1,263,731	1,312,829	1,362,902	1,412,101	1,460,138	1,510,059			
Heat Rate																		
Daily heat rate, Btu/kWe gross	10,853	11,200	11,212	11,177	11,367	11,440	11,162	11,980	11,067	11,132	11,089	10,837	10,885	11,011	10,787			
Daily heat rate, Btu/kWe gross	12,057	12,442	12,455	12,416	12,628	12,708	12,400	13,308	12,294	12,366	12,318	12,039	12,092	12,232	11,983			
Cumulative heat rate, Btu/kWe	10,957	10,971	10,983	10,993	11,010	11,029	11,035	11,068	11,068	11,070	11,071	11,062	11,056	11,055	11,046			
Cumulative heat rate, Btu/kWe	12,172	12,187	12,201	12,212	12,231	12,252	12,258	12,295	12,295	12,298	12,298	12,289	12,282	12,280	12,270			
Cumulative by Facility starting C																		
Max cumulative available engine run hours	19,008	19,104	19,200	19,296	19,392	19,488	19,584	19,680	19,776	19,872	19,968	20,064	20,160	20,256	20,352			
Actual cumulative engine run hours	14,116	14,188	14,260	14,332	14,404	14,475	14,547	14,610	14,682	14,754	14,826	14,898	14,970	15,040	15,112			
Cumulative Availability, %	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.3%	74.2%	74.2%	74.2%	74.2%	74.3%	74.3%	74.2%	74.3%			
Max cumulative gross output, kWh	15,678,300	15,757,500	15,836,700	15,915,900	15,995,100	16,074,300	16,153,500	16,232,700	16,311,900	16,391,100	16,470,300	16,549,500	16,628,700	16,707,900	16,787,100			
Actual cumulative gross output, kWh	9,680,434	9,729,660	9,778,880	9,827,581	9,875,534	9,922,195	9,970,255	10,011,351	10,058,749	10,106,172	10,155,270	10,205,343	10,254,542	10,302,579	10,352,500			
Cumulative Capacity Factor	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	123,319	123,932	124,545	125,150	125,755	126,348	126,944	127,491	128,074	128,660	129,265	129,868	130,463	131,050	131,648			
Cumulative gross output, kWh	9,680,434	9,729,660	9,778,880	9,827,581	9,875,534	9,922,195	9,970,255	10,011,351	10,058,749	10,106,172	10,155,270	10,205,343	10,254,542	10,302,579	10,352,500			
Cumulative heat rate, Btu/kWe	11,468	11,466	11,465	11,464	11,463	11,463	11,462	11,464	11,462	11,460	11,458	11,455	11,453	11,451	11,447			
Cumulative heat rate, Btu/kWe	12,739	12,738	12,736	12,735	12,734	12,734	12,732	12,735	12,733	12,731	12,729	12,725	12,722	12,720	12,717			
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 7/17/2020	Saturday 7/18/2020	Sunday 7/19/2020	Monday 7/20/2020	Tuesday 7/21/2020	Wednesday 7/22/2020	Thursday 7/23/2020	Friday 7/24/2020	Saturday 7/25/2020	Sunday 7/26/2020	Monday 7/27/2020	Tuesday 7/28/2020	Wednesday 7/29/2020	Thursday 7/30/2020	Friday 7/31/2020	TOTAL		
Date																		
Hour																		
1	1,920	1,967	1,966	1,965	1,942	1,896	1,919	1,919	1,891	1,890	1,893	2,004	1,957	1,958	1,984			
2	1,921	1,966	1,966	1,964	1,943	1,894	1,919	1,919	1,891	1,890	1,892	2,005	1,958	1,959	1,984			
3	1,922	1,967	1,966	1,966	1,942	1,896	1,919	1,919	1,890	1,890	1,892	2,004	1,957	1,960	1,982			
4	1,915	1,967	1,966	1,964	1,943	1,896	1,919	1,918	1,890	1,889	1,892	2,006	1,957	1,959	1,984			
5	1,914	1,966	1,965	1,966	1,943	1,894	1,920	1,920	1,890	1,889	1,892	2,006	1,957	1,960	1,985			
6	1,916	1,965	1,964	1,965	1,944	1,895	1,919	1,919	1,890	1,890	1,892	2,004	1,956	1,959	1,983			
7	1,917	1,967	1,966	1,964	1,943	1,896	1,920	1,921	1,891	1,891	1,893	2,006	1,958	1,961	1,981			
8	1,918	1,967	1,966	1,966	1,943	1,896	1,920	1,918	1,893	1,891	1,891	2,005	1,958	1,960	1,984			
9	1,914	1,966	1,964	1,924	1,909	1,887	1,908	1,913	1,891	1,889	1,936	1,992	1,943	1,949	1,946			
10	1,910	1,962	1,962	1,886	1,897	1,149	1,901	1,908	1,889	1,888	1,944	1,985	1,941	1,943	1,921			
11	1,937	1,962	1,961	1,906	1,888	1,557	1,901	649	1,889	1,888	1,943	1,985	1,940	1,942	1,920			
12	1,963	1,961	1,959	1,904	1,871	1,916	1,900	-	1,889	1,887	1,942	1,985	1,941	1,942	1,932			
13	1,963	1,961	1,948	1,902	1,870	1,911	1,901	-	1,889	1,886	1,942	1,985	1,940	1,943	1,971			
14	1,962	1,960	1,957	1,900	1,870	1,909	1,899	631	1,887	1,887	1,955	1,984	1,941	1,941	1,979			
15	1,961	1,957	1,958	1,918	1,873	1,907	1,898	1,844	1,887	1,887	1,991	1,987	1,943	1,946	1,999			
16	1,963	1,958	1,958	1,927	1,881	1,911	1,904	1,886	1,887	1,890	2,000	1,994	1,949	1,951	2,004			
17	1,968	1,959	1,959	1,933	1,887	1,917	1,914	1,892	1,887	1,890	2,003	2,002	1,958	1,955	2,011			
18	1,969	1,961	1,961	1,935	1,888	1,919	1,915	1,893	1,888	1,892	2,006	1,991	1,959	1,976	2,011			
19	1,968	1,963	1,963	1,937	1,891	1,919	1,915	1,892	1,889	1,892	2,007	1,957	1,960	1,960	2,010			
20	1,968	1,963	1,964	1,939	1,893	1,919	1,916	1,892	1,890	1,892	2,007	1,957	1,961	1,961	2,010			
21	1,966	1,964	1,963	1,940	1,894	1,918	1,916	1,892	1,890	1,890	2,006	1,957	1,961	1,941	2,009			
22	1,968	1,964	1,964	1,939	1,894	1,919	1,917	1,892	1,890	1,890	2,004	1,957	1,959	1,986	2,007			
23	1,967	1,965	1,966	1,941	1,894	1,919	1,918	1,891	1,889	1,890	2,004	1,956	1,959	1,986	2,007			
24	1,965	1,965	1,965	1,941	1,896	1,919	1,919	1,890	1,890	1,890	2,005	1,957	1,959	1,984	2,008			
TOTAL	46,655	47,123	47,097	46,492	45,739	44,659	45,897	39,318	45,347	45,348	46,832	47,671	46,872	45,750	47,612			
Cumulative Output Sold, kWh	802,703	849,826	896,923	943,415	989,154	1,033,813	1,079,710	1,119,028	1,164,375	1,209,723	1,256,555	1,304,226	1,351,098	1,396,848	1,444,460			
Transformer and line efficiency	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%	99.7%	99.8%	99.8%	99.8%	99.7%	99.6%	99.7%	99.7%	99.7%	0.0%		
Hourly average	1,944	1,963	1,962	1,937	1,906	1,861	1,912	1,638	1,889	1,890	1,951	1,986	1,953	1,906	1,984	1,941		

August 2020																		
		Saturday 8/1/2020	Sunday 8/2/2020	Monday 8/3/2020	Tuesday 8/4/2020	Wednesday 8/5/2020	Thursday 8/6/2020	Friday 8/7/2020	Saturday 8/8/2020	Sunday 8/9/2020	Monday 8/10/2020	Tuesday 8/11/2020	Wednesday 8/12/2020	Thursday 8/13/2020	Friday 8/14/2020	Saturday 8/15/2020	Sunday 8/16/2020	
LFG and Biogas Flow to the Engines (KSCF)		1,205	1,182	1,109	965	1,035	1,125	1,116	1,140	1,129	1,127	1,110	808	1,051	1,096	1,104	1,067	
LFG and Biogas Flow to the Engines (MMBTU HHV)		623	608	564	412	557	586	579	597	592	591	583	424	566	584	583	568	
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Total Flow (KSCF)		1,205	1,182	1,109	965	1,035	1,125	1,116	1,140	1,129	1,127	1,110	808	1,051	1,096	1,104	1,067	
LFG and Biogas Total Flow (MMBTU HHV)		623	608	564	412	557	586	579	597	592	591	583	424	566	584	583	568	
Average Methane Content (%)		51.1	50.8	50.2	42.2	53.2	51.4	51.2	51.8	51.8	51.8	51.9	51.9	53.2	52.7	52.2	52.6	
Engine 1 Hours		24	24	24	17	16	-	-	-	-	-	-	-	-	-	-	-	
Engine 2 Hours		24	24	24	18	24	24	24	24	24	24	24	18	24	23	25	24	
Engine 3 Hours		24	24	24	17	24	24	24	24	24	24	24	18	24	24	25	24	
Engine 4 Hours		-	-	-	-	4	24	24	24	24	24	24	18	24	24	24	24	
Generator 1 Power Output (kWhr)		16,784	16,780	16,780	9,956	9,916	-	-	-	-	-	-	-	-	-	-	-	
Generator 2 Power Output (kWhr)		16,188	16,184	16,024	11,424	15,872	16,200	16,180	16,204	16,188	16,196	16,200	12,168	16,192	16,180	16,168	16,168	
Generator 3 Power Output (kWhr)		17,112	16,184	16,192	12,252	16,472	17,352	17,340	17,284	16,796	17,084	16,416	12,164	17,156	17,356	17,200	16,640	
Generator 4 Power Output (kWhr)		-	-	-	-	1,820	14,852	14,932	14,948	14,928	14,940	14,940	10,988	14,956	14,956	14,948	14,948	
Gross Power Output (kWhr)		50,172	49,239	49,086	33,678	44,089	48,360	48,429	48,400	47,889	48,188	47,499	35,292	48,264	48,375	48,186	47,623	
Net Power Output (kWhr)		48,048	47,128	46,840	32,088	42,104	46,352	46,360	46,408	45,896	46,072	45,392	33,824	46,216	46,232	46,032	45,504	
Power Sold as metered by NStar, (kWhr)		47,901	46,999	46,695	32,002	42,021	46,222	46,259	46,241	45,762	45,918	45,260	33,761	46,118	46,156	45,921	45,389	
Offgrid RECs (kWhr)		2,124	2,111	2,247	1,587	1,986	2,009	2,070	1,991	1,992	2,117	2,107	1,467	2,049	2,143	2,154	2,120	
Calculated Performance Results																		
Daily																		
Power output (kW average when running)																		
Generator 1		699	699	699	586	620	-	-	-	-	-	-	-	-	-	-	-	
Generator 2		675	674	668	635	661	675	674	675	675	675	675	676	675	703	647	674	
Generator 3		713	674	675	721	686	723	723	720	700	712	684	676	715	723	688	693	
Generator 4		-	-	-	-	455	619	622	623	622	623	623	610	623	623	623	623	
Power output (kW average over 24-hrs)																		
Facility Gross		2,091	2,052	2,045	1,403	1,837	2,015	2,018	2,017	1,995	2,008	1,979	1,471	2,011	2,016	2,008	1,984	
Facility Net		2,002	1,964	1,952	1,337	1,754	1,931	1,932	1,934	1,912	1,920	1,891	1,409	1,926	1,926	1,918	1,896	
In-plant load		89	88	94	66	83	84	86	83	83	88	88	61	85	89	90	88	
Daily availability factor																		
Facility		75%	75%	75%	54%	71%	75%	75%	75%	75%	75%	75%	56%	75%	74%	77%	75%	
Engine 1		100%	100%	100%	71%	67%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Engine 2		100%	100%	100%	75%	100%	100%	100%	100%	100%	100%	100%	75%	100%	96%	104%	100%	
Engine 3		100%	100%	100%	71%	100%	100%	100%	100%	100%	100%	100%	75%	100%	100%	104%	100%	
Engine 4		0%	0%	0%	0%	17%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	
Daily capacity factor																		
Facility		63%	62%	62%	43%	56%	61%	61%	61%	60%	61%	60%	45%	61%	61%	61%	60%	
Engine 1		85%	85%	85%	71%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Engine 2		82%	82%	82%	77%	80%	82%	82%	82%	82%	82%	82%	82%	82%	85%	78%	82%	
Engine 3		86%	82%	82%	87%	83%	88%	88%	87%	85%	86%	83%	82%	87%	88%	83%	84%	
Engine 4		0%	0%	0%	0%	55%	75%	75%	75%	75%	75%	75%	74%	76%	76%	75%	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	89	105	105	105	105	105	105	105	105	105	105	105	105	
Engine 2		24	48	72	90	114	138	162	186	210	234	258	276	300	323	348	372	
Engine 3		24	48	72	89	113	137	161	185	209	233	257	275	299	323	348	372	
Engine 4		0	0	0	0	4	28	52	76	100	124	148	166	190	214	238	262	
Engine operating run hours total from 0 hours																		
Engine 1		113,301	113,325	113,349	113,366	113,382	113,382	113,382	113,382	113,382	113,382	113,382	113,382	113,382	113,382	113,382	113,382	
Engine 2		101,791	101,815	101,839	101,861	101,881	101,905	101,929	101,953	101,977	102,001	102,025	102,049	102,071	102,091	102,114	102,139	
Engine 3		111,248	111,272	111,296	111,320	111,337	111,361	111,385	111,409	111,433	111,457	111,481	111,505	111,523	111,547	111,571	111,596	
Engine 4		110,327	110,327	110,327	110,327	110,331	110,355	110,379	110,403	110,427	110,451	110,475	110,493	110,517	110,541	110,565	110,589	
Cumulative availability, % August 1, 2020 @ 00:00 hours																		
Engine 1		100%	100%	100%	93%	88%	73%	63%	55%	49%	44%	40%	36%	34%	31%	29%	27%	
Engine 2		100%	100%	100%	94%	96%	96%	96%	97%	97%	96%	96%	96%	96%	96%	97%	97%	
Engine 3		100%	100%	100%	93%	94%	95%	96%	96%	97%	97%	97%	95%	96%	96%	97%	97%	
Engine 4		0%	0%	0%	0%	3%	19%	31%	40%	46%	52%	56%	58%	61%	64%	66%	68%	
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	1,399	2,098	2,683	3,303	3,303	3,303	3,303	3,303	3,303	3,303	3,303	3,303	3,303	3,303	3,303	
Engine 2		675	1,349	2,017	2,651	3,313	3,988	4,662	5,337	6,011	6,686	7,361	8,037	8,712	9,415	10,062	10,736	
Engine 3		713	1,387	2,062	2,783	3,469	4,192	4,915	5,635	6,335	7,046	7,730	8,406	9,121	9,844	10,532	11,225	
Engine 4		-	-	-	-	455	1,074	1,696	2,319	2,941	3,563	4,186	4,796	5,419	6,043	6,665	7,288	
Cumulative capacity factor, %																		
Engine 1		85%	85%	85%	81%	80%	67%	57%	50%	44%	40%	36%	33%	31%	29%	27%	25%	
Engine 2		82%	82%	81%	80%	80%	81%	81%	81%	81%	81%	81%	81%	81%	82%	81%	81%	
Engine 3		86%	84%	83%	84%	84%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	
Engine 4		0%	0%	0%	0%	11%	22%	29%	35%	40%	43%	46%	48%	51%	52%	54%	55%	

		Saturday 8/1/2020	Sunday 8/2/2020	Monday 8/3/2020	Tuesday 8/4/2020	Wednesday 8/5/2020	Thursday 8/6/2020	Friday 8/7/2020	Saturday 8/8/2020	Sunday 8/9/2020	Monday 8/10/2020	Tuesday 8/11/2020	Wednesday 8/12/2020	Thursday 8/13/2020	Friday 8/14/2020	Saturday 8/15/2020	Sunday 8/16/2020
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	268	336	408	480	552	624	696	768	822	894	966	1,039	1,111
Cumulative Availability, %		75.0%	75.0%	75.0%	69.8%	70.0%	70.8%	71.4%	71.9%	72.2%	72.5%	72.7%	71.4%	71.6%	71.8%	72.2%	72.3%
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		50,172	99,411	148,497	182,175	226,264	274,624	323,053	371,453	419,342	467,530	515,029	550,321	598,585	646,960	695,146	742,769
Cumulative Capacity Factor		63.3%	62.8%	62.5%	57.5%	57.1%	57.8%	58.3%	58.6%	58.8%	59.0%	59.1%	57.9%	58.1%	58.3%	58.5%	58.6%
Cumulative fuel input, MMBtu HHV		623	1,231	1,795	2,206	2,764	3,349	3,928	4,525	5,117	5,708	6,291	6,715	7,281	7,865	8,448	9,016
Cumulative gross output, kWhr		50,172	99,411	148,497	182,175	226,264	274,624	323,053	371,453	419,342	467,530	515,029	550,321	598,585	646,960	695,146	742,769
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,185	11,109	10,336	11,005	11,377	10,903	10,759	11,106	11,130	11,035	11,051	10,815	10,564	10,864	10,891	10,740
Daily heat rate, Btu/kWe gross HHV		12,425	12,341	11,482	12,225	12,638	12,111	11,952	12,337	12,364	12,258	12,276	12,014	11,735	12,068	12,099	11,931
Cumulative heat rate, Btu/kWe gross LHV		11,185	11,147	10,879	10,902	10,995	10,979	10,946	10,966	10,985	10,990	10,996	10,984	10,950	10,944	10,940	10,927
Cumulative heat rate, Btu/kWe gross HHV		12,425	12,383	12,085	12,111	12,214	12,196	12,159	12,182	12,203	12,209	12,215	12,202	12,164	12,157	12,153	12,139
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		20,448	20,544	20,640	20,736	20,832	20,928	21,024	21,120	21,216	21,312	21,408	21,504	21,600	21,696	21,792	21,888
Actual cumulative engine run hours		15,184	15,256	15,328	15,380	15,448	15,520	15,592	15,664	15,736	15,808	15,880	15,934	16,006	16,077	16,151	16,223
Cumulative Availability, %		74.3%	74.3%	74.3%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.1%	74.1%	74.1%	74.1%	74.1%
Max cumulative gross output, kWhr		16,866,300	16,945,500	17,024,700	17,103,900	17,183,100	17,262,300	17,341,500	17,420,700	17,499,900	17,579,100	17,658,300	17,737,500	17,816,700	17,895,900	17,975,100	18,054,300
Actual cumulative gross output, kWhr		10,402,672	10,451,911	10,500,997	10,534,675	10,578,764	10,627,124	10,675,553	10,723,953	10,771,842	10,820,030	10,867,529	10,902,821	10,951,085	10,999,460	11,047,646	11,095,269
Cumulative Capacity Factor		61.7%	61.7%	61.7%	61.6%	61.6%	61.6%	61.6%	61.6%	61.6%	61.6%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%
Cumulative fuel input, MMBtu HHV		132,272	132,879	133,443	133,855	134,412	134,998	135,576	136,174	136,766	137,356	137,939	138,363	138,930	139,514	140,097	140,665
Cumulative gross output, kWhr		10,402,672	10,451,911	10,500,997	10,534,675	10,578,764	10,627,124	10,675,553	10,723,953	10,771,842	10,820,030	10,867,529	10,902,821	10,951,085	10,999,460	11,047,646	11,095,269
Cumulative heat rate, Btu/kWe gross LHV		11,446	11,445	11,439	11,438	11,438	11,435	11,432	11,431	11,429	11,428	11,426	11,424	11,420	11,418	11,416	11,413
Cumulative heat rate, Btu/kWe gross HHV		12,715	12,713	12,708	12,706	12,706	12,703	12,700	12,698	12,697	12,695	12,693	12,691	12,686	12,684	12,681	12,678
Service																	
Engine 1						Low battery.											
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 8/1/2020	Sunday 8/2/2020	Monday 8/3/2020	Tuesday 8/4/2020	Wednesday 8/5/2020	Thursday 8/6/2020	Friday 8/7/2020	Saturday 8/8/2020	Sunday 8/9/2020	Monday 8/10/2020	Tuesday 8/11/2020	Wednesday 8/12/2020	Thursday 8/13/2020	Friday 8/14/2020	Saturday 8/15/2020	Sunday 8/16/2020
Hour																	
1		2,007	1,959	1,958	1,908	814	1,842	1,932	1,932	1,883	1,930	1,927	1,882	1,915	1,928	1,921	1,871
2		2,007	1,958	1,957	1,909	1,800	1,936	1,931	1,882	1,930	1,929	1,883	1,914	1,931	1,921	1,872	1,872
3		2,007	1,957	1,957	1,909	1,915	1,934	1,933	1,931	1,883	1,930	1,928	1,883	1,915	1,928	1,921	1,872
4		2,008	1,958	1,957	1,755	1,917	1,935	1,931	1,930	1,880	1,930	1,927	1,884	1,913	1,931	1,921	1,872
5		2,008	1,957	1,957	1,322	1,914	1,932	1,931	1,931	1,884	1,931	1,907	1,884	1,913	1,929	1,920	1,872
6		2,007	1,959	1,958	1,623	1,916	1,933	1,933	1,929	1,881	1,930	1,881	1,883	1,913	1,929	1,919	1,872
7		2,007	1,959	1,957	1,866	1,914	1,930	1,931	1,931	1,883	1,898	1,882	1,883	1,914	1,930	1,920	1,872
8		2,009	1,960	1,958	1,919	1,916	1,935	1,934	1,929	1,884	1,884	1,884	1,876	1,913	1,930	1,920	1,873
9		2,008	1,959	1,952	1,946	1,914	1,926	1,919	1,931	1,886	1,871	1,872	2	1,919	1,933	1,922	1,873
10		2,006	1,958	1,949	1,944	1,930	1,919	1,916	1,931	1,884	1,866	1,866	-	1,916	1,926	1,921	1,873
11		2,005	1,958	1,941	1,943	1,928	1,916	1,916	1,931	1,882	1,865	1,863	-	1,918	1,914	1,921	1,874
12		2,005	1,958	1,941	1,857	1,926	1,918	1,918	1,930	1,908	1,873	1,864	-	1,919	1,916	1,920	1,875
13		2,005	1,957	1,940	1,842	1,925	1,920	1,916	1,930	1,927	1,912	1,864	-	1,919	1,915	1,921	1,874
14		2,003	1,958	1,940	1,887	1,926	1,919	1,918	1,930	1,927	1,911	1,865	148	1,919	1,914	1,919	1,874
15		2,004	1,958	1,940	1,929	1,927	1,924	1,918	1,929	1,927	1,911	1,868	1,310	1,920	1,914	1,920	1,889
16		2,003	1,958	1,948	1,931	1,927	1,928	1,926	1,928	1,927	1,920	1,875	1,930	1,926	1,918	1,919	1,921
17		2,004	1,959	1,955	1,936	1,480	1,934	1,930	1,929	1,928	1,926	1,881	1,914	1,932	1,922	1,921	1,921
18		2,004	1,960	1,956	576	1,325	1,934	1,932	1,930	1,929	1,928	1,882	1,916	1,933	1,922	1,918	1,922
19		2,005	1,960	1,957	-	1,492	1,936	1,933	1,930	1,930	1,929	1,884	1,915	1,932	1,922	1,918	1,921
20		1,959	1,959	1,957	-	1,844	1,935	1,933	1,928	1,930	1,928	1,883	1,914	1,931	1,922	1,917	1,919
21		1,958	1,957	1,933	-	1,928	1,936	1,933	1,930	1,930	1,929	1,882	1,914	1,931	1,921	1,908	1,920
22		1,957	1,958	1,909	-	1,782	1,933	1,932	1,929	1,928	1,882	1,913	1,931	1,920	1,870	1,919	1,919
23		1,958	1,957	1,909	-	1,325	1,932	1,931	1,899	1,929	1,928	1,882	1,913	1,931	1,921	1,871	1,919
24		1,957	1,958	1,909	-	1,336	1,935	1,932	1,882	1,929	1,930	1,882	1,914	1,931	1,920	1,872	1,919
TOTAL		47,901	46,999	46,695	32,002	42,021	46,222	46,259	46,241	45,762	45,918	45,260	33,761	46,118	46,156	45,921	45,389
Cumulative Output Sold, kWhr		47,901	94,900	141,595	173,597	215,618	261,840	308,099	354,340	400,102	446,020	491,280	525,041	571,159	617,315	663,236	708,625
Transformer and line efficiency		99.7%	99.7%	99.7%	99.7%	99.8%	99.7%	99.8%	99.6%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%	99.8%	99.7%
Hourly average		1.996	1.958	1.946	1.333	1.751	1.926	1.927	1.927	1.907	1.913	1.886	1.407	1.922	1.923	1.913	1.891

August 2020																				
		Monday 8/17/2020	Tuesday 8/18/2020	Wednesday 8/19/2020	Thursday 8/20/2020	Friday 8/21/2020	Saturday 8/22/2020	Sunday 8/23/2020	Monday 8/24/2020	Tuesday 8/25/2020	Wednesday 8/26/2020	Thursday 8/27/2020	Friday 8/28/2020	Saturday 8/29/2020	Sunday 8/30/2020	Monday 8/31/2020	TOTAL	Biogas	LFG	
LFG and Biogas Flow to the Engine		1,071	1,088	1,108	1,104	1,125	1,130	1,006	1,121	1,129	1,130	1,095	1,097	1,089	1,094	986	33,742	1,460	32,282	
LFG and Biogas Flow to the Engine		572	581	581	579	594	600	538	607	614	606	592	588	594	585	539	17,787	846	16,941	
LFG and Biogas Flow to the Flare (		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8%	95%	
LFG and BiogasFlow to the Flare (†		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LFG and Biogas Total Flow (KSCF)		1,071	1,088	1,108	1,104	1,125	1,130	1,006	1,121	1,129	1,130	1,095	1,097	1,089	1,094	986	33,742			
LFG and Biogas Total Flow (MMBT		572	581	581	579	594	600	538	607	614	606	592	588	594	585	539	17,787			
Average Methane Content (%)		52.8	52.8	51.8	51.8	52.2	52.4	52.9	53.5	53.8	53.0	53.5	52.9	53.9	52.8	54.0	52.1			
Engine 1 Hours		-	-	-	-	-	-	9	24	24	24	24	24	24	24	24	306			
Engine 2 Hours		24	24	24	24	24	24	11	-	15	24	24	24	24	24	17	679			
Engine 3 Hours		24	24	24	24	24	23	23	24	24	24	24	24	24	24	24	730			
Engine 4 Hours		24	24	24	24	24	24	23	24	9	-	-	-	-	-	-	462			
Generator 1 Power Output (kWhr)		-	-	-	-	-	-	5,772	16,552	16,736	16,108	16,192	16,604	16,172	16,040	16,768	207,160			
Generator 2 Power Output (kWhr)		16,184	16,196	16,176	16,188	16,196	16,184	7,144	-	9,080	15,016	15,016	15,020	15,020	15,016	10,068	448,240			
Generator 3 Power Output (kWhr)		17,360	17,356	17,344	16,688	17,352	16,848	15,396	17,344	17,232	16,796	17,284	16,176	17,176	16,172	17,064	514,588			
Generator 4 Power Output (kWhr)		14,948	14,944	14,944	14,944	14,952	14,936	13,624	14,940	5,936	-	-	-	-	-	-	286,324			
Gross Power Output (kWhr)		48,416	48,452	48,416	47,781	48,458	47,923	41,901	48,833	49,405	48,009	48,577	47,897	48,447	47,331	43,924	1,456,179			
Net Power Output (kWhr)		46,272	46,416	46,320	45,728	46,272	45,840	40,104	46,848	46,992	46,032	46,616	45,936	46,544	45,424	42,032	1,393,872			
Power Sold as metered by NStar, (		46,128	46,273	46,175	45,595	46,127	45,730	39,995	46,740	46,860	45,910	46,489	45,814	46,424	45,301	41,984	1,390,150	CRMCB inplant		
Offgrid RECs (kWhr)		2,143	2,037	2,095	2,052	2,187	2,084	1,795	1,986	2,053	1,977	1,961	1,961	1,903	1,907	1,892	62,307	11,614		
Calculated Performance Results																			19%	
Daily																		of total in-plant		
Power output (kW average whe																		power		
Generator 1		-	-	-	-	-	-	641	690	697	671	675	692	674	668	699				
Generator 2		674	675	674	675	675	674	649	-	605	626	626	626	626	626	592				
Generator 3		723	723	723	695	723	733	669	723	718	700	720	674	716	674	711				
Generator 4		623	623	623	623	623	622	592	623	660	-	-	-	-	-	-				
Power output (kW average ove																				
Facility Gross		2,017	2,019	2,017	1,991	2,019	1,997	1,746	2,035	2,044	2,000	2,024	1,996	2,019	1,972	1,830				
Facility Net		1,928	1,934	1,930	1,905	1,928	1,910	1,671	1,952	1,958	1,918	1,942	1,914	1,939	1,893	1,751				
In-plant load		89	85	87	86	91	87	75	83	86	82	82	82	79	79	79				
Daily availability factor																				
Facility		75%	75%	75%	75%	75%	74%	69%	75%	75%	75%	75%	75%	75%	75%	68%				
Engine 1		0%	0%	0%	0%	0%	0%	38%	100%	100%	100%	100%	100%	100%	100%	100%				
Engine 2		100%	100%	100%	100%	100%	100%	46%	0%	63%	100%	100%	100%	100%	100%	71%				
Engine 3		100%	100%	100%	100%	100%	96%	96%	100%	100%	100%	100%	100%	100%	100%	100%				
Engine 4		100%	100%	100%	100%	100%	100%	96%	100%	38%	0%	0%	0%	0%	0%	0%				
Daily capacity factor																				
Facility		61%	61%	61%	60%	61%	61%	53%	62%	62%	61%	61%	60%	61%	60%	55%				
Engine 1		0%	0%	0%	0%	0%	0%	78%	84%	85%	81%	82%	84%	82%	81%	85%				
Engine 2		82%	82%	82%	82%	82%	82%	79%	0%	73%	76%	76%	76%	76%	76%	72%				
Engine 3		88%	88%	88%	84%	88%	89%	81%	88%	87%	85%	87%	82%	87%	82%	86%				
Engine 4		75%	75%	75%	75%	76%	75%	72%	75%	80%	0%	0%	0%	0%	0%	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	744				
Engine 1		105	105	105	105	105	105	114	138	162	186	210	234	258	282	306				
Engine 2		396	420	444	468	492	516	527	527	542	566	590	614	638	662	679				
Engine 3		396	420	444	468	492	515	538	562	586	610	634	658	682	706	730				
Engine 4		286	310	334	358	382	406	429	453	462	462	462	462	462	462	462				
Engine operating run hours tota																				
Engine 1		113,382	113,382	113,382	113,382	113,382	113,382	113,391	113,415	113,439	113,463	113,487	113,511	113,535	113,559	113,583				
Engine 2		102,187	102,211	102,235	102,259	102,283	102,307	102,318	102,318	102,333	102,357	102,381	102,405	102,429	102,453	102,470				
Engine 3		111,644	111,668	111,692	111,716	111,740	111,763	111,786	111,810	111,834	111,858	111,882	111,906	111,930	111,954	111,978				
Engine 4		110,613	110,637	110,661	110,685	110,709	110,733	110,756	110,780	110,789	110,789	110,789	110,789	110,789	110,789	110,789				
Cumulative availability, %																				
Engine 1		26%	24%	23%	22%	21%	20%	21%	24%	27%	30%	32%	35%	37%	39%	41%				
Engine 2		97%	97%	97%	98%	98%	98%	95%	91%	90%	91%	91%	91%	92%	92%	91%				
Engine 3		97%	97%	97%	98%	98%	98%	97%	98%	98%	98%	98%	98%	98%	98%	98%				
Engine 4		70%	72%	73%	75%	76%	77%	78%	79%	77%	74%	71%	69%	66%	64%	62%				
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		3,303	3,303	3,303	3,303	3,303	3,303	3,944	4,634	5,331	6,003	6,677	7,369	8,043	8,711	9,410				
Engine 2		11,410	12,085	12,759	13,433	14,108	14,783	15,432	16,037	16,663	17,289	17,914	18,540	19,166	19,788					
Engine 3		11,949	12,672	13,395	14,090	14,813	15,546	16,215	16,938	17,656	18,355	19,076	19,750	20,465	21,139	21,850				
Engine 4		7,911	8,534	9,156	9,779	10,402	11,024	11,617	12,239	12,899	12,899	12,899	12,899	12,899	12,899					
Cumulative capacity factor, %																				
Engine 1		24%	22%	21%	20%	19%	18%	21%	23%	26%	28%	30%	32%	34%	35%	37%				
Engine 2		81%	81%	81%	81%	81%	81%	81%	78%	78%	78%	78%	78%	77%	77%	77%				
Engine 3		85%	85%	85%	85%	86%	86%	85%	86%	86%	86%	86%	85%	86%	85%	85%				
Engine 4		56%	57%	58%	59%	60%	61%	61%	62%	63%	60%	58%	56%	54%	52%	50%				

	Monday 8/17/2020	Tuesday 8/18/2020	Wednesday 8/19/2020	Thursday 8/20/2020	Friday 8/21/2020	Saturday 8/22/2020	Sunday 8/23/2020	Monday 8/24/2020	Tuesday 8/25/2020	Wednesday 8/26/2020	Thursday 8/27/2020	Friday 8/28/2020	Saturday 8/29/2020	Sunday 8/30/2020	Monday 8/31/2020	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine run 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 hours	1,183	1,255	1,327	1,399	1,471	1,542	1,608	1,680	1,752	1,824	1,896	1,968	2,040	2,112	2,177			
Cumulative Availability, %	72.5%	72.6%	72.8%	72.9%	73.0%	73.0%	72.8%	72.9%	73.0%	73.1%	73.1%	73.2%	73.3%	73.3%	73.2%			
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	791,185	839,637	888,053	935,834	984,292	1,032,215	1,074,116	1,122,949	1,171,994	1,220,003	1,268,580	1,316,477	1,364,924	1,412,255	1,456,179			
Cumulative Capacity Factor	58.8%	58.9%	59.0%	59.1%	59.2%	59.2%	59.0%	59.1%	59.2%	59.2%	59.3%	59.4%	59.4%	59.4%	59.3%			
Cumulative fuel input, MMBtu	9,589	10,170	10,751	11,330	11,924	12,524	13,062	13,668	14,282	14,889	15,481	16,068	16,663	17,248	17,787			
Cumulative gross output, kWh	791,185	839,637	888,053	935,834	984,292	1,032,215	1,074,116	1,122,949	1,171,994	1,220,003	1,268,580	1,316,477	1,364,924	1,412,255	1,456,179			
Heat Rate																		
Daily heat rate, Btu/kWe gross	10,641	10,796	10,804	10,903	11,037	11,267	11,560	11,180	11,275	11,365	10,975	11,045	11,041	11,125	11,051			
Daily heat rate, Btu/kWe gross	11,820	11,993	12,002	12,112	12,260	12,516	12,842	12,420	12,525	12,625	12,192	12,269	12,265	12,358	12,276			
Cumulative heat rate, Btu/kWe	10,910	10,903	10,898	10,898	10,905	10,922	10,947	10,957	10,970	10,986	10,985	10,987	10,989	10,994	10,996			
Cumulative heat rate, Btu/kWe	12,119	12,112	12,106	12,106	12,114	12,133	12,160	12,172	12,186	12,204	12,203	12,206	12,208	12,213	12,215			
Cumulative by Facility starting C																		
Max cumulative available engine run hours	21,984	22,080	22,176	22,272	22,368	22,464	22,560	22,656	22,752	22,848	22,944	23,040	23,136	23,232	23,328			
Actual cumulative engine run hours	16,295	16,367	16,439	16,511	16,583	16,654	16,720	16,792	16,864	16,936	17,008	17,080	17,152	17,224	17,289			
Cumulative Availability, %	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%			
Max cumulative gross output, kWh	18,133,500	18,212,700	18,291,900	18,371,100	18,450,300	18,529,500	18,608,700	18,687,900	18,767,100	18,846,300	18,925,500	19,004,700	19,083,900	19,163,100	19,242,300			
Actual cumulative gross output, kWh	11,143,685	11,192,137	11,240,553	11,288,969	11,336,792	11,384,715	11,426,616	11,475,449	11,524,494	11,572,503	11,621,080	11,668,977	11,717,424	11,764,755	11,808,679			
Cumulative Capacity Factor	61.5%	61.5%	61.5%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%			
Cumulative fuel input, MMBtu	141,237	141,818	142,399	142,978	143,572	144,175	144,710	145,317	145,931	146,537	147,129	147,717	148,311	148,896	149,435			
Cumulative gross output, kWh	11,143,685	11,192,137	11,240,553	11,288,969	11,336,792	11,384,715	11,426,616	11,475,449	11,524,494	11,572,503	11,621,080	11,668,977	11,717,424	11,764,755	11,808,679			
Cumulative heat rate, Btu/kWe	11,409	11,407	11,404	11,402	11,400	11,400	11,400	11,399	11,399	11,399	11,397	11,396	11,394	11,393	11,392			
Cumulative heat rate, Btu/kWe	12,674	12,671	12,668	12,666	12,664	12,664	12,664	12,663	12,663	12,663	12,661	12,659	12,657	12,656	12,655			
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	8/17/2020	8/18/2020	8/19/2020	8/20/2020	8/21/2020	8/22/2020	8/23/2020	8/24/2020	8/25/2020	8/26/2020	8/27/2020	8/28/2020	8/29/2020	8/30/2020	8/31/2020			
Hour																		
1	1,920	1,930	1,929	1,898	1,930	1,927	1,880	1,940	1,962	1,917	1,920	1,919	1,872	1,918	1,486			
2	1,920	1,930	1,929	1,881	1,929	1,927	1,880	1,940	1,962	1,919	1,919	1,920	1,883	1,918	1,351			
3	1,920	1,930	1,928	1,881	1,930	1,928	1,880	1,939	1,962	1,919	1,920	1,920	1,919	1,919	1,357			
4	1,919	1,930	1,929	1,878	1,930	1,928	1,880	1,939	1,962	1,919	1,920	1,920	1,919	1,920	1,356			
5	1,919	1,931	1,928	1,870	1,929	1,928	1,880	1,939	1,963	1,920	1,920	1,920	1,919	1,920	1,355			
6	1,919	1,931	1,927	1,877	1,929	1,928	1,881	1,939	1,964	1,920	1,920	1,920	1,918	1,920	1,355			
7	1,919	1,932	1,927	1,875	1,931	1,928	1,881	1,940	1,964	1,920	1,920	1,920	1,918	1,920	1,357			
8	1,921	1,931	1,929	1,879	1,930	1,928	1,881	1,940	1,960	1,920	1,921	1,919	1,919	1,919	1,365			
9	1,920	1,921	1,919	1,878	1,915	1,926	1,879	1,929	1,936	1,908	1,912	1,914	1,919	1,917	1,839			
10	1,908	1,923	1,914	1,875	1,904	1,924	1,878	1,935	1,888	1,904	1,906	1,911	1,918	1,869	1,958			
11	1,909	1,921	1,913	1,873	1,908	1,911	1,072	1,944	1,947	1,873	1,906	1,910	1,918	1,868	1,954			
12	1,913	1,923	1,891	1,877	1,912	1,876	-	1,944	1,949	1,895	1,908	1,909	1,918	1,868	1,948			
13	1,914	1,924	1,915	1,878	1,913	1,876	504	1,944	1,949	1,903	1,953	1,909	1,949	1,868	1,956			
14	1,915	1,924	1,919	1,878	1,909	1,878	1,186	1,943	1,949	1,904	1,951	1,909	1,965	1,868	1,954			
15	1,919	1,924	1,924	1,924	1,909	1,923	1,271	1,947	1,952	1,906	1,956	1,909	1,966	1,868	1,954			
16	1,926	1,925	1,925	1,926	1,918	1,922	1,645	1,954	1,956	1,911	1,962	1,912	1,966	1,868	1,960			
17	1,931	1,931	1,928	1,932	1,924	1,923	1,932	1,959	1,962	1,917	1,968	1,915	1,966	1,868	1,964			
18	1,933	1,932	1,931	1,932	1,924	1,878	1,941	1,960	1,964	1,918	1,969	1,916	1,965	1,868	1,965			
19	1,932	1,932	1,930	1,932	1,925	1,878	1,941	1,960	1,964	1,919	1,968	1,916	1,965	1,869	1,934			
20	1,930	1,930	1,929	1,931	1,925	1,877	1,940	1,960	1,963	1,919	1,967	1,916	1,964	1,868	1,919			
21	1,930	1,930	1,929	1,930	1,925	1,878	1,941	1,960	1,963	1,920	1,967	1,895	1,964	1,870	1,919			
22	1,930	1,930	1,927	1,930	1,925	1,879	1,940	1,961	1,963	1,919	1,966	1,871	1,964	1,870	1,919			
23	1,930	1,929	1,927	1,930	1,926	1,879	1,941	1,962	1,939	1,920	1,951	1,872	1,932	1,870	1,919			
24	1,931	1,929	1,928	1,930	1,927	1,880	1,941	1,962	1,917	1,920	1,919	1,872	1,918	1,870	1,920			
TOTAL	46,128	46,273	46,175	45,595	46,127	45,730	39,995	46,740	46,860	45,910	46,489	45,814	46,424	45,301	41,964			
Cumulative Output Sold, kWh	754,753	801,026	847,201	892,796	938,923	984,653	1,024,648	1,071,388	1,118,248	1,164,158	1,210,647	1,256,461	1,302,885	1,348,186	1,390,150			
Transformer and line efficiency	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%	99.7%	99.8%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%			
Hourly average	1,922	1,928	1,924	1,900	1,922	1,905	1,666	1,948	1,953	1,913	1,937	1,909	1,934	1,888	1,749	1,868		

September 2020																	
		Tuesday 9/1/2020	Wednesday 9/2/2020	Thursday 9/3/2020	Friday 9/4/2020	Saturday 9/5/2020	Sunday 9/6/2020	Monday 9/7/2020	Tuesday 9/8/2020	Wednesday 9/9/2020	Thursday 9/10/2020	Friday 9/11/2020	Saturday 9/12/2020	Sunday 9/13/2020	Monday 9/14/2020	Tuesday 9/15/2020	Wednesday 9/16/2020
LFG and Biogas Flow to the Engines (KSCF)		1,102	1,064	1,092	1,079	1,100	1,090	1,075	1,101	1,082	1,066	1,084	1,071	1,086	1,085	1,102	1,113
LFG and Biogas Flow to the Engines (MMBTU HHV)		583	582	596	578	584	583	575	586	577	573	582	572	590	591	591	604
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,102	1,064	1,092	1,079	1,100	1,090	1,075	1,101	1,082	1,066	1,084	1,071	1,086	1,085	1,102	1,113
LFG and Biogas Total Flow (MMBTU HHV)		583	582	596	578	584	583	575	586	577	573	582	572	590	591	591	604
Average Methane Content (%)		52.2	54.1	53.9	52.9	52.5	52.8	52.8	52.6	52.7	53.1	53.1	52.8	53.7	53.8	53.0	53.7
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	23	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Engine 4 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 1 Power Output (kWhr)		16,784	15,956	16,316	16,192	15,048	15,004	15,416	16,012	15,388	15,016	15,024	15,016	15,532	16,480	16,784	16,788
Generator 2 Power Output (kWhr)		15,020	15,016	15,916	15,020	15,012	15,012	15,008	15,016	15,016	15,004	15,008	15,012	15,012	15,600	16,180	16,184
Generator 3 Power Output (kWhr)		16,176	15,728	16,964	16,608	16,728	17,340	17,120	16,172	16,172	17,184	17,316	16,648	17,336	17,212	16,704	17,344
Generator 4 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Power Output (kWhr)		48,071	46,763	48,279	47,851	46,763	47,348	47,533	47,205	46,610	47,204	47,402	46,715	47,936	49,355	49,755	50,401
Net Power Output (kWhr)		46,024	44,888	46,288	45,864	44,856	45,432	45,648	45,200	44,616	45,200	45,440	44,720	45,952	47,296	47,664	48,368
Power Sold as metered by NStar, (kWhr)		45,897	44,792	46,166	45,730	44,740	45,321	45,515	45,090	44,499	45,073	45,341	44,612	45,846	47,173	47,551	48,252
Offgrid RECs (kWhr)		2,048	1,875	1,990	1,988	1,906	1,917	1,885	2,005	1,994	2,003	1,962	1,996	1,984	2,059	2,091	2,032
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		699	665	680	675	627	625	642	667	641	626	626	626	647	687	699	700
Generator 2		626	626	622	626	625	625	625	626	626	625	625	626	626	650	674	674
Generator 3		674	684	707	692	697	723	713	674	674	716	722	694	722	717	696	723
Generator 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Power output (kW average over 24-hrs)																	
Facility Gross		2,003	1,948	2,012	1,994	1,948	1,973	1,981	1,967	1,942	1,967	1,975	1,946	1,997	2,056	2,073	2,100
Facility Net		1,918	1,870	1,929	1,911	1,869	1,893	1,902	1,883	1,859	1,883	1,893	1,863	1,915	1,971	1,986	2,015
In-plant load		85	78	83	83	79	80	79	84	83	84	82	83	83	86	87	85
Daily availability factor																	
Facility		75%	74%	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%	96%	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		61%	59%	61%	60%	59%	60%	60%	60%	59%	60%	60%	59%	61%	62%	63%	64%
Engine 1		85%	81%	82%	82%	76%	76%	78%	81%	78%	76%	76%	76%	78%	83%	85%	85%
Engine 2		76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	79%	82%	82%
Engine 3		82%	83%	86%	84%	84%	88%	86%	82%	82%	87%	87%	84%	88%	87%	84%	88%
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	312	336	360	384
Engine 2		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 3		24	47	71	95	119	143	167	191	215	239	263	287	311	335	359	383
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		113,583	113,607	113,631	113,655	113,679	113,703	113,727	113,751	113,775	113,799	113,823	113,847	113,871	113,895	113,919	113,943
Engine 2		102,470	102,494	102,518	102,542	102,566	102,590	102,614	102,638	102,662	102,686	102,710	102,734	102,758	102,782	102,806	102,830
Engine 3		111,978	112,002	112,025	112,049	112,073	112,097	112,121	112,145	112,169	112,193	112,217	112,241	112,265	112,289	112,313	112,337
Engine 4		110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789
Cumulative availability, %	August 1, 2020 @ 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%	98%	99%	99%	99%	99%	99%	99%	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		699	1,364	2,044	2,719	3,346	3,971	4,613	5,280	5,922	6,547	7,173	7,799	8,446	9,133	9,832	10,532
Engine 2		626	1,252	1,874	2,500	3,125	3,751	4,376	5,002	5,627	6,252	6,877	7,503	8,129	8,779	9,453	10,127
Engine 3		674	1,358	2,065	2,757	3,454	4,176	4,889	5,563	6,237	6,953	7,675	8,368	9,091	9,808	10,504	11,226
Engine 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cumulative capacity factor, %																	
Engine 1		85%	83%	83%	82%	81%	80%	80%	80%	80%	79%	79%	79%	79%	79%	79%	80%
Engine 2		76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%	77%
Engine 3		82%	82%	83%	84%	84%	85%	85%	84%	84%	84%	85%	85%	85%	85%	85%	85%
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

		Tuesday 9/1/2020	Wednesday 9/2/2020	Thursday 9/3/2020	Friday 9/4/2020	Saturday 9/5/2020	Sunday 9/6/2020	Monday 9/7/2020	Tuesday 9/8/2020	Wednesday 9/9/2020	Thursday 9/10/2020	Friday 9/11/2020	Saturday 9/12/2020	Sunday 9/13/2020	Monday 9/14/2020	Tuesday 9/15/2020	Wednesday 9/16/2020
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	215	287	359	431	503	575	647	719	791	863	935	1,007	1,079	1,151
Cumulative Availability, %		75.0%	74.5%	74.7%	74.7%	74.8%	74.8%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%	74.9%
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		48,071	94,834	143,113	190,964	237,727	285,075	332,608	379,813	426,423	473,627	521,029	567,744	615,680	665,035	714,790	765,191
Cumulative Capacity Factor		60.7%	59.9%	60.2%	60.3%	60.0%	60.0%	60.0%	59.9%	59.8%	59.8%	59.8%	59.7%	59.8%	60.0%	60.2%	60.4%
Cumulative fuel input, MMBtu HHV		583	1,165	1,761	2,339	2,923	3,506	4,081	4,667	5,244	5,817	6,399	6,971	7,562	8,153	8,744	9,348
Cumulative gross output, kWhr		48,071	94,834	143,113	190,964	237,727	285,075	332,608	379,813	426,423	473,627	521,029	567,744	615,680	665,035	714,790	765,191
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		10,911	11,210	11,113	10,876	11,244	11,075	10,890	11,175	11,148	10,933	11,053	11,028	11,085	10,776	10,696	10,795
Daily heat rate, Btu/kWe gross HHV		12,120	12,453	12,345	12,081	12,491	12,303	12,097	12,414	12,384	12,145	12,278	12,251	12,314	11,970	11,882	11,992
Cumulative heat rate, Btu/kWe gross LHV		10,911	11,058	11,077	11,026	11,069	11,070	11,044	11,061	11,070	11,056	11,056	11,054	11,056	11,035	11,012	10,998
Cumulative heat rate, Btu/kWe gross HHV		12,120	12,284	12,305	12,249	12,296	12,297	12,269	12,287	12,297	12,282	12,282	12,279	12,282	12,259	12,233	12,217
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours	23,424	23,520	23,616	23,712	23,808	23,904	24,000	24,096	24,192	24,288	24,384	24,480	24,576	24,672	24,768	24,864	
Actual cumulative engine run hours	17,361	17,432	17,504	17,576	17,648	17,720	17,792	17,864	17,936	18,008	18,080	18,152	18,224	18,296	18,368	18,440	
Cumulative Availability, %	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.2%	74.2%	74.2%	74.2%	
Max cumulative gross output, kWhr	19,321,500	19,400,700	19,479,900	19,559,100	19,638,300	19,717,500	19,796,700	19,875,900	19,955,100	20,034,300	20,113,500	20,192,700	20,271,900	20,351,100	20,430,300	20,509,500	
Actual cumulative gross output, kWhr	11,856,750	11,903,513	11,951,792	11,999,643	12,046,406	12,093,754	12,141,287	12,188,492	12,235,102	12,282,306	12,329,708	12,376,423	12,423,359	12,473,714	12,523,469	12,573,870	
Cumulative Capacity Factor	61.4%	61.4%	61.4%	61.4%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	
Cumulative fuel input, MMBtu HHV	150,018	150,600	151,196	151,774	152,358	152,941	153,516	154,102	154,679	155,252	155,834	156,407	156,997	157,588	158,179	158,783	
Cumulative gross output, kWhr	11,856,750	11,903,513	11,951,792	11,999,643	12,046,406	12,093,754	12,141,287	12,188,492	12,235,102	12,282,306	12,329,708	12,376,423	12,423,359	12,473,714	12,523,469	12,573,870	
Cumulative heat rate, Btu/kWe gross LHV	11,390	11,389	11,388	11,386	11,385	11,384	11,382	11,381	11,381	11,379	11,378	11,376	11,375	11,373	11,370	11,368	
Cumulative heat rate, Btu/kWe gross HHV	12,653	12,652	12,651	12,648	12,648	12,646	12,644	12,643	12,642	12,640	12,639	12,637	12,636	12,634	12,631	12,628	
Service																	
Engine 1																	
Engine 2			Spark plugs														
Engine 3			Oil Change														
Engine 4																	
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports																	
Date		Tuesday 9/1/2020	Wednesday 9/2/2020	Thursday 9/3/2020	Friday 9/4/2020	Saturday 9/5/2020	Sunday 9/6/2020	Monday 9/7/2020	Tuesday 9/8/2020	Wednesday 9/9/2020	Thursday 9/10/2020	Friday 9/11/2020	Saturday 9/12/2020	Sunday 9/13/2020	Monday 9/14/2020	Tuesday 9/15/2020	Wednesday 9/16/2020
Hour																	
1		1.919	1.920	1.966	1.939	1.882	1.892	1.891	1.894	1.844	1.843	1.893	1.839	1.885	1.943	1.963	2.012
2		1.920	1.920	1.966	1.939	1.844	1.892	1.892	1.894	1.844	1.843	1.894	1.839	1.887	1.942	1.961	2.013
3		1.919	1.920	1.966	1.940	1.844	1.893	1.892	1.894	1.844	1.843	1.894	1.838	1.889	1.942	1.962	2.013
4		1.919	1.920	1.966	1.940	1.844	1.892	1.892	1.894	1.844	1.885	1.894	1.840	1.889	1.942	1.963	2.013
5		1.906	1.920	1.966	1.940	1.832	1.892	1.892	1.895	1.844	1.890	1.894	1.838	1.890	1.942	1.961	2.012
6		1.913	1.921	1.966	1.939	1.839	1.892	1.893	1.895	1.845	1.890	1.894	1.839	1.889	1.942	1.963	2.010
7		1.913	1.921	1.966	1.940	1.838	1.880	1.893	1.895	1.845	1.890	1.895	1.840	1.885	1.941	1.962	2.009
8		1.916	1.920	1.966	1.939	1.842	1.887	1.893	1.894	1.844	1.890	1.895	1.841	1.887	1.922	1.962	2.011
9		1.909	1.916	1.957	1.927	1.844	1.891	1.892	1.882	1.832	1.880	1.884	1.847	1.892	1.880	1.958	2.013
10		1.904	1.885	1.930	1.882	1.844	1.890	1.890	1.877	1.830	1.875	1.885	1.844	1.894	1.876	1.953	2.006
11		1.901	1.332	1.903	1.882	1.835	1.884	1.891	1.874	1.829	1.862	1.886	1.840	1.892	1.913	1.953	2.005
12		1.901	1.801	1.903	1.881	1.835	1.881	1.880	1.869	1.823	1.863	1.887	1.837	1.889	1.931	1.942	2.005
13		1.901	1.956	1.467	1.880	1.853	1.880	1.877	1.869	1.831	1.864	1.890	1.834	1.887	1.980	1.944	2.005
14		1.901	1.283	1.901	1.881	1.881	1.881	1.877	1.869	1.874	1.874	1.888	1.833	1.903	1.994	1.992	2.004
15		1.904	1.576	1.933	1.880	1.882	1.886	1.877	1.875	1.880	1.883	1.888	1.869	1.929	1.996	2.004	2.005
16		1.910	1.937	1.938	1.883	1.882	1.888	1.892	1.882	1.884	1.887	1.890	1.884	1.930	2.004	2.007	2.006
17		1.915	1.971	1.937	1.887	1.888	1.889	1.938	1.887	1.891	1.892	1.893	1.890	1.934	2.010	2.012	2.012
18		1.917	1.970	1.938	1.888	1.889	1.890	1.939	1.888	1.891	1.893	1.893	1.892	2.011	2.013	2.013	2.013
19		1.917	1.969	1.938	1.890	1.890	1.890	1.938	1.888	1.891	1.886	1.894	1.893	1.942	2.012	2.013	2.013
20		1.918	1.968	1.938	1.890	1.890	1.889	1.913	1.889	1.892	1.886	1.894	1.894	1.942	2.013	2.016	2.013
21		1.918	1.967	1.938	1.890	1.890	1.890	1.893	1.857	1.865	1.885	1.880	1.884	1.942	2.013	2.012	2.013
22		1.918	1.967	1.939	1.891	1.890	1.890	1.893	1.843	1.844	1.885	1.884	1.883	1.943	2.012	2.009	2.013
23		1.919	1.966	1.939	1.891	1.891	1.891	1.893	1.843	1.844	1.891	1.887	1.887	1.942	2.013	2.015	2.016
24		1.919	1.966	1.939	1.891	1.891	1.891	1.894	1.843	1.844	1.893	1.866	1.886	1.942	1.999	2.011	2.017
TOTAL		45.897	44.792	46.166	45.730	44.740	45.321	45.515	45.090	44.499	45.073	45.341	44.612	45.846	47.173	47.551	48.252
Cumulative Output Sold, kWhr		45.897	90.689	136.855	182.585	227.325	272.646	318.161	363.251	407.750	452.823	498.164	542.776	588.622	635.795	683.346	731.598
Transformer and line efficiency		99.7%	99.8%	99.7%	99.7%	99.7%	99.8%	99.7%	99.8%	99.7%	99.7%	99.8%	99.8%	99.8%	99.7%	99.8%	99.8%
Hourly average		1.912	1.866	1.924	1.905	1.864	1.888	1.896	1.879	1.854	1.878	1.889	1.859	1.910	1.966	1.981	2.011

September 2020																		
		Thursday 9/17/2020	Friday 9/18/2020	Saturday 9/19/2020	Sunday 9/20/2020	Monday 9/21/2020	Tuesday 9/22/2020	Wednesday 9/23/2020	Thursday 9/24/2020	Friday 9/25/2020	Saturday 9/26/2020	Sunday 9/27/2020	Monday 9/28/2020	Tuesday 9/29/2020	Wednesday 9/30/2020	TOTAL	Biogas	LFG
LFG and Biogas Flow to the Engine		1,127	1,115	1,127	1,129	1,147	1,131	1,144	1,154	1,128	1,128	1,131	1,116	1,119	1,104	33,193	649	32,544
LFG and Biogas Flow to the Engine		616	605	596	592	607	621	622	617	608	615	616	618	621	617	17,919	445	17,474
LFG and Biogas Flow to the Flare (- LFG and BiogasFlow to the Flare (!)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5%	98%
LFG and Biogas Total Flow (KSCF)		1,127	1,115	1,127	1,129	1,147	1,131	1,144	1,154	1,128	1,128	1,131	1,116	1,119	1,104	33,193		
LFG and Biogas Total Flow (MMBT		616	605	596	592	607	621	622	617	608	615	616	618	621	617	17,919		
Average Methane Content (%)		54.1	53.6	52.2	51.8	52.3	54.3	53.8	52.8	53.2	53.9	53.9	54.7	54.8	55.2	53.3		
Engine 1 Hours		23	23	24	24	24	24	24	24	24	24	24	24	24	24	718		
Engine 2 Hours		24	24	24	24	24	24	24	24	24	24	24	10	-	-	658		
Engine 3 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	719		
Engine 4 Hours		-	-	-	-	-	-	-	-	-	-	-	14	24	24	62		
Generator 1 Power Output (kWhr)		16,784	16,312	16,788	16,784	16,784	17,020	17,368	17,368	17,368	17,372	17,364	17,364	17,388	17,376	492,196		
Generator 2 Power Output (kWhr)		16,580	16,772	16,768	16,048	15,676	16,780	16,780	15,856	15,584	15,584	15,580	15,580	16,544	-	427,604		
Generator 3 Power Output (kWhr)		17,340	17,264	16,176	16,176	17,328	17,440	16,584	16,596	16,172	16,760	17,420	16,948	16,828	16,936	504,720		
Generator 4 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	8,996	16,732	16,860	42,588		
Gross Power Output (kWhr)		50,799	50,447	49,794	49,093	49,850	51,346	50,818	49,917	49,210	49,786	50,471	49,922	51,006	51,213	1,468,863		
Net Power Output (kWhr)		48,784	48,424	47,760	47,056	47,752	49,176	48,704	47,840	47,184	47,824	48,464	47,912	48,936	49,112	1,408,384		
Power Sold as metered by NStar, (l Offgrid RECs (kWhr)		48,666	48,309	47,634	46,941	47,627	49,041	48,574	47,696	47,052	47,687	48,326	47,805	48,754	48,973	1,404,683	CRMBC Inplant	
		4,039	-	2,035	2,036	2,098	2,171	2,113	2,076	2,026	1,962	2,007	2,010	2,070	2,101	60,479	10,120	
Calculated Performance Results																	17%	
Daily																	of total in-plant power	
Power output (kW average whe																		
Generator 1		730	709	700	699	699	709	724	724	724	724	724	724	725	724			
Generator 2		691	699	699	669	653	699	699	661	649	649	649	654	-	-			
Generator 3		723	719	674	674	722	727	691	692	674	698	726	706	701	706			
Generator 4		-	-	-	-	-	-	-	-	-	-	-	643	697	703			
Power output (kW average ove																		
Facility Gross		2,117	2,102	2,075	2,046	2,077	2,139	2,117	2,080	2,050	2,074	2,103	2,080	2,125	2,134			
Facility Net		2,033	2,018	1,990	1,961	1,990	2,049	2,029	1,993	1,966	1,993	2,019	1,996	2,039	2,046			
In-plant load		84	84	85	85	87	90	88	87	84	82	84	84	86	88			
Daily availability factor																		
Facility		74%	74%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%			
Engine 1		96%	96%	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%	42%	0%	0%			
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%	58%	100%	100%			
Daily capacity factor																		
Facility		64%	64%	63%	62%	63%	65%	64%	63%	62%	63%	64%	63%	64%	65%			
Engine 1		88%	86%	85%	85%	86%	88%	88%	88%	88%	88%	88%	88%	88%	88%			
Engine 2		84%	85%	85%	81%	79%	85%	85%	80%	79%	79%	79%	79%	0%	0%			
Engine 3		88%	87%	82%	82%	88%	88%	84%	84%	82%	85%	88%	86%	85%	86%			
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	78%	85%	85%			
Cumulative by engine																		
Engine operating run hours in tl																		
Max Cumulative Available,		408	432	456	480	504	528	552	576	600	624	648	672	696	720			
Engine 1		407	430	454	478	502	526	550	574	598	622	646	670	694	718			
Engine 2		408	432	456	480	504	528	552	576	600	624	648	658	658	658			
Engine 3		407	431	455	479	503	527	551	575	599	623	647	671	695	719			
Engine 4		0	0	0	0	0	0	0	0	-	-	-	14	38	62			
Engine operating run hours tota																		
Engine 1		113,990	114,013	114,037	114,061	114,085	114,109	114,133	114,157	114,181	114,205	114,229	114,253	114,277	114,301			
Engine 2		102,878	102,902	102,926	102,950	102,974	102,998	103,022	103,046	103,070	103,094	103,118	103,128	103,128	103,128			
Engine 3		112,385	112,409	112,433	112,457	112,481	112,505	112,529	112,553	112,577	112,601	112,625	112,649	112,673	112,697			
Engine 4		110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,789	110,803	110,827	110,851			
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%	98%	95%	91%			
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%	2%	5%	9%			
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		11,261	11,970	12,670	13,369	14,069	14,778	15,478	16,177	16,876	17,575	18,274	18,973	19,672	20,371			
Engine 2		10,818	11,517	12,216	12,884	13,537	14,237	14,936	15,596	16,246	16,895	17,544	18,199	18,199	18,199			
Engine 3		11,949	12,668	13,342	14,016	14,738	15,465	16,156	16,847	17,521	18,220	18,945	19,652	20,353	21,058			
Engine 4		-	-	-	-	-	-	-	-	-	-	-	643	1,340	2,042			
Cumulative capacity factor, %																		
Engine 1		80%	81%	81%	81%	81%	81%	82%	82%	82%	82%	83%	83%	83%	83%			
Engine 2		77%	78%	78%	78%	78%	78%	79%	79%	79%	79%	79%	79%	79%	74%			
Engine 3		85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%			
Engine 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	6%	8%			

	Thursday 9/17/2020	Friday 9/18/2020	Saturday 9/19/2020	Sunday 9/20/2020	Monday 9/21/2020	Tuesday 9/22/2020	Wednesday 9/23/2020	Thursday 9/24/2020	Friday 9/25/2020	Saturday 9/26/2020	Sunday 9/27/2020	Monday 9/28/2020	Tuesday 9/29/2020	Wednesday 9/30/2020	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			
Actual cumulative engine run time	1,222	1,293	1,365	1,437	1,509	1,581	1,653	1,725	1,797	1,869	1,941	2,013	2,085	2,157			
Cumulative Availability, %	74.9%	74.8%	74.8%	74.8%	74.9%	74.9%	74.9%	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	815,990	866,437	916,231	965,324	1,015,174	1,066,520	1,117,338	1,167,255	1,216,465	1,266,251	1,316,722	1,366,644	1,417,650	1,468,863			
Cumulative Capacity Factor	60.6%	60.8%	60.9%	60.9%	61.0%	61.2%	61.3%	61.4%	61.4%	61.5%	61.6%	61.6%	61.7%	61.8%			
Cumulative fuel input, MMBtu	9,965	10,570	11,166	11,757	12,364	12,985	13,608	14,224	14,832	15,447	16,063	16,681	17,302	17,919			
Cumulative gross output, kWh	815,990	866,437	916,231	965,324	1,015,174	1,066,520	1,117,338	1,167,255	1,216,465	1,266,251	1,316,722	1,366,644	1,417,650	1,468,863			
Heat Rate																	
Daily heat rate, Btu/kWe gross	10,923	10,798	10,775	10,850	10,954	10,891	11,025	11,125	11,117	11,113	10,994	11,146	10,951	10,844			
Daily heat rate, Btu/kWe net	12,134	11,995	11,969	12,053	12,169	12,098	12,248	12,359	12,349	12,345	12,213	12,381	12,165	12,046			
Cumulative heat rate, Btu/kWe gross	10,993	10,982	10,970	10,964	10,964	10,960	10,963	10,970	10,976	10,981	10,982	10,988	10,987	10,982			
Cumulative heat rate, Btu/kWe net	12,212	12,199	12,187	12,180	12,179	12,175	12,179	12,186	12,193	12,199	12,199	12,206	12,205	12,199			
Cumulative by Facility starting C																	
Max cumulative available engine run time	24,960	25,056	25,152	25,248	25,344	25,440	25,536	25,632	25,728	25,824	25,920	26,016	26,112	26,208			
Actual cumulative engine run time	18,511	18,582	18,654	18,726	18,798	18,870	18,942	19,014	19,086	19,158	19,230	19,302	19,374	19,446			
Cumulative Availability, %	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%			
Max cumulative gross output, kWh	20,588,700	20,667,900	20,747,100	20,826,300	20,905,500	20,984,700	21,063,900	21,143,100	21,222,300	21,301,500	21,380,700	21,459,900	21,539,100	21,618,300			
Actual cumulative gross output, kWh	12,624,669	12,675,116	12,724,910	12,774,003	12,823,853	12,875,199	12,926,017	12,975,934	13,025,144	13,074,930	13,125,401	13,175,323	13,226,329	13,277,542			
Cumulative Capacity Factor	61.3%	61.3%	61.3%	61.3%	61.3%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%	61.4%			
Cumulative fuel input, MMBtu	159,400	160,005	160,601	161,193	161,799	162,400	163,043	163,660	164,267	164,882	165,498	166,117	166,737	167,354			
Cumulative gross output, kWh	12,624,669	12,675,116	12,724,910	12,774,003	12,823,853	12,875,199	12,926,017	12,975,934	13,025,144	13,074,930	13,125,401	13,175,323	13,226,329	13,277,542			
Cumulative heat rate, Btu/kWe gross	11,366	11,364	11,361	11,359	11,358	11,356	11,355	11,354	11,353	11,352	11,351	11,350	11,348	11,346			
Cumulative heat rate, Btu/kWe net	12,626	12,624	12,621	12,619	12,617	12,615	12,614	12,613	12,612	12,611	12,609	12,608	12,606	12,604			
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 9/17/2020	Friday 9/18/2020	Saturday 9/19/2020	Sunday 9/20/2020	Monday 9/21/2020	Tuesday 9/22/2020	Wednesday 9/23/2020	Thursday 9/24/2020	Friday 9/25/2020	Saturday 9/26/2020	Sunday 9/27/2020	Monday 9/28/2020	Tuesday 9/29/2020	Wednesday 9/30/2020	TOTAL		
Date																	
Hour																	
1	2,017	2,040	1,986	1,982	1,967	2,034	2,068	2,014	1,967	1,965	2,022	1,964	2,016	2,064			
2	2,017	2,040	1,985	1,985	1,982	2,033	2,069	2,014	1,967	1,966	2,022	1,964	2,016	2,064			
3	2,017	2,040	1,986	1,982	1,981	2,034	2,069	2,014	1,966	1,966	2,022	1,963	2,016	2,065			
4	2,017	2,040	1,985	1,984	1,984	2,033	2,070	2,014	1,966	1,966	2,022	1,964	2,016	2,065			
5	2,017	2,040	1,984	1,983	1,982	2,035	2,071	2,010	1,967	1,966	2,022	1,964	2,017	2,065			
6	2,017	2,040	1,983	1,984	1,981	2,033	2,069	1,979	1,958	1,966	2,021	1,965	2,016	2,066			
7	2,017	2,039	1,985	1,982	1,982	2,025	2,064	1,965	1,964	1,966	2,021	1,964	2,014	2,065			
8	2,015	2,038	1,987	1,985	1,986	2,032	2,011	1,966	1,954	1,966	2,021	1,965	2,013	2,060			
9	2,032	2,028	1,989	1,987	1,977	2,023	1,998	1,955	1,957	1,966	2,021	1,955	2,003	2,060			
10	2,029	1,624	1,991	1,961	1,973	2,022	1,995	1,949	1,958	1,965	2,019	1,886	1,992	2,081			
11	2,029	1,965	1,985	1,939	1,965	2,023	2,000	1,948	1,956	1,963	2,018	1,868	1,991	2,080			
12	2,027	2,034	1,984	1,936	1,970	2,022	1,995	1,946	1,951	1,957	2,018	1,707	1,991	2,081			
13	2,028	2,035	1,979	1,936	1,973	2,020	1,997	1,946	1,952	1,956	2,017	1,989	1,991	2,080			
14	2,028	2,033	1,979	1,937	1,973	2,022	1,998	1,965	1,946	1,959	2,016	2,009	2,054	2,030			
15	2,029	2,033	1,979	1,941	1,977	2,044	1,999	2,009	1,953	2,012	2,016	2,059	2,055	2,025			
16	2,029	2,035	1,983	1,933	1,983	2,063	2,002	2,014	1,957	2,018	2,017	2,066	2,055	2,025			
17	2,035	2,038	1,987	1,939	1,989	2,068	2,011	2,018	1,962	2,019	2,017	2,068	2,061	2,027			
18	2,036	2,039	1,990	1,944	1,991	2,068	2,012	2,019	1,963	2,020	2,018	2,069	2,062	2,028			
19	2,038	2,038	1,991	1,938	1,991	2,068	2,012	2,019	1,964	2,020	2,018	2,070	2,062	2,028			
20	2,039	2,038	1,980	1,937	1,991	2,068	2,012	2,019	1,965	2,021	2,019	2,070	2,063	2,028			
21	2,038	2,034	1,984	1,937	1,988	2,067	2,012	2,016	1,964	2,021	2,019	2,069	2,062	2,017			
22	2,038	2,029	1,984	1,937	1,983	2,068	2,013	1,965	1,964	2,021	1,993	2,070	2,061	1,956			
23	2,038	2,004	1,984	1,936	2,025	2,068	2,013	1,966	1,965	2,021	1,963	2,070	2,063	1,956			
24	2,039	1,985	1,984	1,936	2,033	2,068	2,014	1,966	1,966	2,021	1,964	2,067	2,064	1,957			
TOTAL	48,666	48,309	47,634	46,941	47,627	49,041	48,574	47,696	47,052	47,687	48,326	47,805	48,754	48,973			
Cumulative Output Sold, kWh	780,264	828,573	876,207	923,148	970,775	1,019,816	1,068,390	1,116,086	1,163,138	1,210,825	1,259,151	1,306,956	1,355,710	1,404,683			
Transformer and line efficiency	99.8%	99.8%	99.7%	99.8%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%	99.6%	99.7%	0.0%		
Hourly average	2,028	2,013	1,985	1,956	1,984	2,043	2,024	1,987	1,961	1,987	2,014	1,992	2,031	2,041	1,951		

October 2020		Thursday 10/1/2020	Friday 10/2/2020	Saturday 10/3/2020	Sunday 10/4/2020	Monday 10/5/2020	Tuesday 10/6/2020	Wednesday 10/7/2020	Thursday 10/8/2020	Friday 10/9/2020	Saturday 10/10/2020	Sunday 10/11/2020	Monday 10/12/2020	Tuesday 10/13/2020	Wednesday 10/14/2020	Thursday 10/15/2020	Friday 10/16/2020
LFG and Biogas Flow to the Engines (KSCF)		1,115	1,104	1,116	1,105	1,104	1,134	1,116	1,129	1,107	1,125	1,137	1,129	1,126	1,119	1,129	1,291
LFG and Biogas Flow to the Engines (MMBTU HHV)		613	605	600	595	603	620	622	615	607	633	624	623	643	637	648	640
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,115	1,104	1,116	1,105	1,104	1,134	1,116	1,129	1,107	1,125	1,137	1,129	1,126	1,119	1,129	1,291
LFG and Biogas Total Flow (MMBTU HHV)		613	605	600	595	603	620	622	615	607	633	624	623	643	637	648	640
Average Methane Content (%)		54.3	54.1	53.1	53.3	54.0	54.1	55.0	53.9	54.2	55.6	54.2	54.5	56.4	56.3	56.7	49.0
Engine 1 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Engine 2 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine 3 Hours		24	24	24	24	24	24	24	24	23	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)		17,372	17,376	17,376	17,376	17,372	17,376	17,380	17,376	17,376	17,372	17,368	17,376	17,376	17,376	17,376	17,364
Generator 2 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 3 Power Output (kWhr)		17,416	17,564	17,568	17,564	17,572	17,408	17,084	16,396	15,420	16,188	16,180	17,184	17,580	17,564	17,576	17,208
Generator 4 Power Output (kWhr)		15,528	15,528	15,528	15,524	15,524	16,228	17,312	16,120	16,508	17,320	16,008	15,548	16,996	17,320	17,316	17,312
Gross Power Output (kWhr)		50,301	50,432	50,409	50,401	50,473	51,048	51,819	49,919	49,335	50,945	49,621	50,195	52,058	52,368	52,383	52,001
Net Power Output (kWhr)		48,312	48,464	48,448	48,464	48,504	49,064	49,864	47,888	47,264	49,040	47,672	48,136	50,072	50,472	50,456	50,040
Power Sold as metered by NStar, (kWhr)		48,182	48,347	48,337	48,376	48,363	48,897	49,692	47,735	47,143	48,949	47,608	48,021	49,934	50,335	50,315	49,935
Offgrid RECs (kWhr)		1,989	1,968	1,960	1,938	1,969	1,984	1,956	2,031	2,070	1,904	1,949	2,060	1,986	1,895	1,928	1,963
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		724	724	724	724	724	724	724	724	724	724	724	724	724	724	724	724
Generator 2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 3		726	732	732	732	732	725	712	683	670	675	674	716	733	732	732	717
Generator 4		647	647	647	647	647	676	721	672	680	722	667	648	708	722	722	721
Power output (kW average over 24-hrs)																	
Facility Gross		2,096	2,101	2,100	2,100	2,103	2,127	2,159	2,080	2,056	2,123	2,068	2,091	2,169	2,182	2,183	2,167
Facility Net		2,013	2,019	2,019	2,019	2,021	2,044	2,078	1,995	1,969	2,043	1,986	2,006	2,086	2,103	2,102	2,085
In-plant load		83	82	82	81	82	83	81	85	86	79	81	86	83	79	80	82
Daily availability factor																	
Facility		75%	75%	75%	75%	75%	75%	75%	75%	74%	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		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%	100%	100%	100%
Engine 4		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Daily capacity factor																	
Facility		64%	64%	64%	64%	64%	64%	65%	63%	62%	64%	63%	63%	66%	66%	66%	66%
Engine 1		88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%
Engine 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 3		88%	89%	89%	89%	89%	88%	86%	83%	81%	82%	82%	87%	89%	89%	89%	87%
Engine 4		78%	78%	78%	78%	78%	82%	87%	81%	83%	87%	81%	79%	86%	87%	87%	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	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine 2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Engine 3		24	48	72	96	120	144	168	192	215	239	263	287	311	335	359	383
Engine 4		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine operating run hours total from 0 hours																	
Engine 1		114,302	114,326	114,350	114,374	114,398	114,422	114,446	114,470	114,494	114,518	114,542	114,566	114,590	114,614	114,638	114,662
Engine 2		103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128
Engine 3		112,697	112,721	112,745	112,769	112,793	112,817	112,841	112,865	112,889	112,912	112,936	112,960	112,984	113,008	113,032	113,056
Engine 4		110,852	110,876	110,900	110,924	110,948	110,972	110,996	111,020	111,044	111,068	111,092	111,116	111,140	111,164	111,188	111,212
Cumulative availability, %		October 1, 2020 @ 00:00 hours															
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
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		724	1,448	2,172	2,896	3,620	4,344	5,068	5,792	6,516	7,240	7,963	8,687	9,411	10,135	10,859	11,583
Engine 2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine 3		726	1,458	2,190	2,921	3,654	4,379	5,091	5,774	6,444	7,119	7,793	8,509	9,241	9,973	10,706	11,423
Engine 4		647	1,294	1,941	2,588	3,235	3,911	4,632	5,304	5,992	6,713	7,380	8,028	8,736	9,458	10,180	10,901
Cumulative capacity factor, %																	
Engine 1		88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%
Engine 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 3		88%	88%	88%	89%	89%	88%	88%	87%	87%	86%	86%	86%	86%	86%	87%	87%
Engine 4		78%	78%	78%	78%	78%	79%	80%	80%	81%	81%	81%	81%	81%	82%	82%	83%

		Thursday 10/1/2020	Friday 10/2/2020	Saturday 10/3/2020	Sunday 10/4/2020	Monday 10/5/2020	Tuesday 10/6/2020	Wednesday 10/7/2020	Thursday 10/8/2020	Friday 10/9/2020	Saturday 10/10/2020	Sunday 10/11/2020	Monday 10/12/2020	Tuesday 10/13/2020	Wednesday 10/14/2020	Thursday 10/15/2020	Friday 10/16/2020
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	504	576	647	719	791	863	935	1,007	1,079	1,151
Cumulative Availability, %		75.0%	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%	74.9%
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		50,301	100,733	151,142	201,543	252,016	303,064	354,883	404,802	454,137	505,082	554,703	604,898	656,956	709,324	761,707	813,708
Cumulative Capacity Factor		63.5%	63.6%	63.6%	63.6%	63.6%	63.8%	64.0%	63.9%	63.7%	63.8%	63.7%	63.6%	63.8%	64.0%	64.1%	64.2%
Cumulative fuel input, MMBtu HHV		613	1,217	1,817	2,412	3,015	3,636	4,257	4,873	5,479	6,112	6,736	7,359	8,002	8,639	9,287	9,927
Cumulative gross output, kWhr		50,301	100,733	151,142	201,543	252,016	303,064	354,883	404,802	454,137	505,082	554,703	604,898	656,956	709,324	761,707	813,708
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		10,961	10,794	10,706	10,634	10,755	10,940	10,800	11,096	11,067	11,190	11,315	11,175	11,122	10,952	11,136	11,079
Daily heat rate, Btu/kWe gross HHV		12,177	11,990	11,893	11,813	11,947	12,153	11,998	12,326	12,294	12,431	12,569	12,414	12,355	12,166	12,370	12,307
Cumulative heat rate, Btu/kWe gross LHV		10,961	10,877	10,820	10,774	10,770	10,799	10,799	10,835	10,861	10,894	10,931	10,952	10,965	10,964	10,976	10,983
Cumulative heat rate, Btu/kWe gross HHV		12,177	12,083	12,020	11,968	11,964	11,996	11,996	12,037	12,065	12,102	12,143	12,166	12,181	12,180	12,193	12,200
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		26,304	26,400	26,496	26,592	26,688	26,784	26,880	26,976	27,072	27,168	27,264	27,360	27,456	27,552	27,648	27,744
Actual cumulative engine run hours		19,518	19,590	19,662	19,734	19,806	19,878	19,950	20,022	20,093	20,165	20,237	20,309	20,381	20,453	20,525	20,597
Cumulative Availability, %		74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%	74.2%
Max cumulative gross output, kWhr		21,697,500	21,776,700	21,855,900	21,935,100	22,014,300	22,093,500	22,172,700	22,251,900	22,331,100	22,410,300	22,489,500	22,568,700	22,647,900	22,727,100	22,806,300	22,885,500
Actual cumulative gross output, kWhr		13,327,843	13,378,275	13,428,684	13,479,085	13,529,558	13,580,606	13,632,425	13,682,344	13,731,679	13,782,624	13,832,245	13,882,440	13,934,498	13,986,866	14,039,249	14,091,250
Cumulative Capacity Factor		61.4%	61.4%	61.4%	61.4%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.6%
Cumulative fuel input, MMBtu HHV		167,966	168,571	169,171	169,766	170,369	170,989	171,611	172,226	172,833	173,466	174,090	174,713	175,356	175,993	176,641	177,281
Cumulative gross output, kWhr		13,327,843	13,378,275	13,428,684	13,479,085	13,529,558	13,580,606	13,632,425	13,682,344	13,731,679	13,782,624	13,832,245	13,882,440	13,934,498	13,986,866	14,039,249	14,091,250
Cumulative heat rate, Btu/kWe gross LHV		11,345	11,343	11,340	11,338	11,336	11,334	11,332	11,331	11,330	11,330	11,330	11,329	11,328	11,327	11,326	11,325
Cumulative heat rate, Btu/kWe gross HHV		12,603	12,600	12,598	12,595	12,592	12,591	12,588	12,587	12,586	12,586	12,586	12,585	12,584	12,583	12,582	12,581
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		Thursday 10/1/2020	Friday 10/2/2020	Saturday 10/3/2020	Sunday 10/4/2020	Monday 10/5/2020	Tuesday 10/6/2020	Wednesday 10/7/2020	Thursday 10/8/2020	Friday 10/9/2020	Saturday 10/10/2020	Sunday 10/11/2020	Monday 10/12/2020	Tuesday 10/13/2020	Wednesday 10/14/2020	Thursday 10/15/2020	Friday 10/16/2020
Hour																	
1		1.957	2.020	2.014	2.012	2.016	2.016	2.036	2.033	1.952	2.037	2.044	1.962	2.022	2.104	2.102	2.100
2		1.957	2.021	2.012	2.013	2.019	2.017	2.034	2.036	1.952	2.040	2.044	1.961	2.023	2.104	2.102	2.100
3		1.985	2.010	2.012	2.010	2.021	2.014	2.034	2.032	1.953	2.040	2.043	1.964	2.022	2.104	2.102	2.100
4		2.006	2.015	2.013	2.010	2.013	2.016	2.053	2.036	1.953	2.039	2.043	1.964	2.022	2.104	2.102	2.101
5		2.011	2.019	2.010	2.012	2.021	2.017	2.092	2.030	1.953	2.041	2.043	1.960	2.070	2.105	2.096	2.101
6		2.009	2.015	2.013	2.011	2.018	2.014	2.090	2.035	1.953	2.039	2.043	1.959	2.094	2.104	2.099	2.099
7		2.010	2.018	2.010	2.009	2.014	2.016	2.089	2.032	1.953	2.039	1.987	1.967	2.088	2.102	2.097	2.099
8		2.012	2.016	2.013	2.013	2.015	2.015	2.094	2.031	1.950	2.040	1.959	2.012	2.085	2.099	2.097	2.094
9		2.010	2.010	2.013	2.012	2.013	2.006	2.088	1.952	1.944	2.039	1.965	2.010	2.079	2.094	2.092	2.091
10		2.012	2.006	2.016	2.014	2.006	2.014	2.088	1.951	1.953	2.043	1.967	2.010	2.081	2.092	2.090	2.091
11		2.007	2.005	2.018	2.018	2.006	2.016	2.087	1.949	1.841	2.037	1.965	2.008	2.085	2.080	2.089	2.090
12		2.008	2.010	2.012	2.018	2.007	2.010	2.087	1.943	1.368	2.038	1.962	2.012	2.087	2.089	2.089	2.090
13		2.010	2.013	2.011	2.020	2.009	2.010	2.087	1.949	1.763	2.038	1.962	2.019	2.092	2.089	2.091	2.090
14		2.010	2.014	2.013	2.019	2.015	2.009	2.087	1.958	2.009	2.038	1.962	2.020	2.093	2.092	2.091	2.090
15		2.011	2.014	2.018	2.020	2.016	2.047	2.088	1.992	2.078	2.038	1.965	2.016	2.090	2.092	2.091	2.092
16		2.012	2.016	2.019	2.020	2.017	2.088	2.091	2.014	2.087	2.040	1.962	2.018	2.094	2.093	2.094	2.093
17		2.018	2.020	2.019	2.021	2.022	2.093	2.095	2.021	2.090	2.039	1.963	2.022	2.099	2.098	2.098	2.099
18		2.019	2.020	2.019	2.021	2.022	2.094	2.095	2.020	2.088	2.037	1.961	2.021	2.100	2.098	2.099	2.092
19		2.019	2.019	2.019	2.020	2.022	2.094	2.094	1.954	2.085	2.037	1.961	2.018	2.100	2.097	2.098	2.045
20		2.019	2.016	2.018	2.020	2.014	2.093	2.049	1.952	2.030	2.041	1.961	2.019	2.100	2.097	2.099	2.033
21		2.020	2.010	2.010	2.014	2.010	2.093	2.038	1.955	2.031	2.041	1.962	2.019	2.099	2.097	2.099	2.033
22		2.020	2.015	2.010	2.011	2.013	2.044	2.031	1.954	2.037	2.041	1.961	2.018	2.102	2.100	2.099	2.035
23		2.020	2.012	2.013	2.020	2.017	2.026	2.029	1.954	2.038	2.043	1.958	2.021	2.104	2.100	2.099	2.035
24		2.020	2.013	2.012	2.018	2.017	2.035	2.036	1.952	2.038	2.044	1.963	2.021	2.103	2.101	2.100	2.042
TOTAL		48,182	48,347	48,337	48,376	48,363	48,897	49,692	47,735	47,143	48,949	47,608	48,021	49,934	50,335	50,315	49,935
Cumulative Output Sold, kWhr		48,182	96,529	144,866	193,242	241,605	290,502	340,194	387,929	435,072	484,021	531,629	579,650	629,584	679,919	730,234	780,169
Transformer and line efficiency		99.7%	99.8%	99.8%	99.8%	99.7%	99.7%	99.7%	99.7%	99.7%	99.8%	99.9%	99.8%	99.7%	99.7%	99.7%	99.8%
Hourly average		2.008	2.014	2.014	2.016	2.015	2.037	2.071	1.989	1.964	2.040	1.984	2.001	2.081	2.097	2.096	2.081

October 2020																				
		Saturday 10/17/2020	Sunday 10/18/2020	Monday 10/19/2020	Tuesday 10/20/2020	Wednesday 10/21/2020	Thursday 10/22/2020	Friday 10/23/2020	Saturday 10/24/2020	Sunday 10/25/2020	Monday 10/26/2020	Tuesday 10/27/2020	Wednesday 10/28/2020	Thursday 10/29/2020	Friday 10/30/2020	Saturday 10/31/2020	TOTAL	Biogas	LFG	
LFG and Biogas Flow to the Engine		1,257	1,238	1,266	1,289	1,240	1,284	1,219	1,247	1,245	1,202	1,209	1,223	1,213	1,188	1,186	36,592	749	35,843	
LFG and Biogas Flow to the Engine		636	630	645	646	642	647	617	632	626	611	613	635	630	630	624	19,392	405	18,986	
LFG and Biogas Flow to the Flare (		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1%	98%	
LFG and BiogasFlow to the Flare (t		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LFG and Biogas Total Flow (KSCF)		1,257	1,238	1,266	1,289	1,240	1,284	1,219	1,247	1,245	1,202	1,209	1,223	1,213	1,188	1,186	36,592			
LFG and Biogas Total Flow (MMBT		636	630	645	646	642	647	617	632	626	611	613	635	630	630	624	19,392			
Average Methane Content (%)		50.0	50.3	50.3	49.5	51.2	49.8	50.0	50.1	49.7	50.2	50.1	51.3	51.3	52.4	52.0	52.4			
Engine 1 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	744			
Engine 2 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Engine 3 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	743			
Engine 4 Hours		24	24	24	24	24	24	24	24	24	23	24	24	24	24	24	743			
Generator 1 Power Output (kWhr)		17,388	17,376	17,376	17,376	17,376	17,376	17,376	17,376	17,028	16,980	17,376	17,380	17,376	17,380	16,360	536,888			
Generator 2 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Generator 3 Power Output (kWhr)		17,132	16,752	17,576	17,580	17,580	17,576	17,572	17,512	16,176	17,512	16,692	17,016	17,576	17,400	17,256	532,380			
Generator 4 Power Output (kWhr)		17,332	17,324	17,324	17,316	17,320	17,316	17,324	17,320	16,364	13,252	16,716	16,724	16,724	16,728	16,528	513,232			
Gross Power Output (kWhr)		51,961	51,564	52,363	52,385	52,379	52,379	52,382	52,330	49,679	47,840	50,889	51,235	51,802	51,824	50,266	1,584,786			
Net Power Output (kWhr)		49,936	49,504	50,368	50,480	50,488	50,472	50,480	50,432	47,768	45,976	49,040	49,368	49,888	49,664	48,376	1,524,400			
Power Sold as metered by NStar, (t		49,819	49,435	50,263	50,332	50,333	50,344	50,350	50,329	47,674	45,868	48,907	49,250	49,752	49,570	48,298	1,520,693	CRMCB inplant		
Offgrid RECs (kWhr)		2,023	2,061	1,993	1,906	1,891	1,906	1,903	1,898	1,911	1,864	1,849	1,867	1,914	1,960	1,890	60,386	10,290		
Calculated Performance Results																			17%	
Daily																		of total in-plant		
Power output (kW average whe																		power		
Generator 1		725	724	724	724	724	724	724	724	710	708	724	724	724	724	682				
Generator 2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Generator 3		714	698	732	733	733	732	732	730	674	730	696	709	732	725	719				
Generator 4		722	722	722	722	722	722	722	722	682	576	697	697	697	697	689				
Power output (kW average ove																				
Facility Gross		2,165	2,149	2,182	2,183	2,182	2,182	2,183	2,180	2,070	1,993	2,120	2,135	2,158	2,151	2,094				
Facility Net		2,081	2,063	2,099	2,103	2,104	2,103	2,103	2,101	1,990	1,916	2,043	2,057	2,079	2,069	2,016				
In-plant load		84	86	83	79	79	79	79	79	80	78	77	78	80	82	79				
Daily availability factor																				
Facility		75%	75%	75%	75%	75%	75%	75%	75%	75%	74%	75%	75%	75%	75%	75%				
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Engine 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Engine 3		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Engine 4		100%	100%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%	100%	100%				
Daily capacity factor																				
Facility		66%	65%	66%	66%	66%	66%	66%	66%	63%	60%	64%	65%	65%	65%	63%				
Engine 1		88%	88%	88%	88%	88%	88%	88%	88%	86%	86%	88%	88%	88%	88%	83%				
Engine 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Engine 3		87%	85%	89%	89%	89%	89%	89%	88%	82%	88%	84%	86%	89%	88%	87%				
Engine 4		88%	87%	87%	87%	87%	87%	87%	87%	83%	70%	84%	84%	84%	84%	83%				
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	744				
Engine 1		408	432	456	480	504	528	552	576	600	624	648	672	696	720	744				
Engine 2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Engine 3		407	431	455	479	503	527	551	575	599	623	647	671	695	719	743				
Engine 4		408	432	456	480	504	528	552	576	600	623	647	671	695	719	743				
Engine operating run hours tota																				
Engine 1		114,710	114,734	114,758	114,782	114,806	114,830	114,854	114,878	114,902	114,926	114,950	114,974	114,998	115,022	115,046				
Engine 2		103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128	103,128				
Engine 3		113,104	113,128	113,152	113,176	113,200	113,224	113,248	113,272	113,296	113,320	113,344	113,368	113,392	113,416	113,440				
Engine 4		111,260	111,284	111,308	111,332	111,356	111,380	111,404	111,428	111,452	111,475	111,499	111,523	111,547	111,571	111,595				
Cumulative availability, %																				
Engine 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Engine 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Engine 3		100%	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%	100%	100%	100%	100%	100%				
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		12,307	13,031	13,755	14,479	15,203	15,927	16,651	17,375	18,085	18,792	19,516	20,241	20,965	21,689	22,370				
Engine 2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Engine 3		12,136	12,834	13,567	14,299	15,032	15,764	16,496	17,226	17,900	18,630	19,325	20,034	20,766	21,491	22,210				
Engine 4		11,623	12,345	13,067	13,788	14,510	15,231	15,953	16,675	17,357	17,933	18,629	19,326	20,023	20,720	21,409				
Cumulative capacity factor, %																				
Engine 1		88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	87%				
Engine 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Engine 3		87%	86%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%				
Engine 4		83%	83%	83%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%				

	Saturday 10/17/2020	Sunday 10/18/2020	Monday 10/19/2020	Tuesday 10/20/2020	Wednesday 10/21/2020	Thursday 10/22/2020	Friday 10/23/2020	Saturday 10/24/2020	Sunday 10/25/2020	Monday 10/26/2020	Tuesday 10/27/2020	Wednesday 10/28/2020	Thursday 10/29/2020	Friday 10/30/2020	Saturday 10/31/2020	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	1,223	1,295	1,367	1,439	1,511	1,583	1,655	1,727	1,799	1,870	1,942	2,014	2,086	2,158	2,230			
Cumulative Availability, %	74.9%	74.9%	74.9%	74.9%	75.0%	75.0%	75.0%	75.0%	75.0%	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	2,455,200			
Actual cumulative gross output, kWh	865,669	917,233	969,596	1,021,981	1,074,360	1,126,739	1,179,121	1,231,451	1,281,130	1,328,970	1,379,859	1,431,094	1,482,896	1,534,520	1,584,786			
Cumulative Capacity Factor	64.3%	64.3%	64.4%	64.5%	64.6%	64.7%	64.7%	64.8%	64.7%	64.5%	64.5%	64.5%	64.6%	64.6%	64.5%			
Cumulative fuel input, MMBtu	10,563	11,193	11,838	12,484	13,126	13,773	14,390	15,022	15,649	16,260	16,872	17,507	18,137	18,767	19,392			
Cumulative gross output, kWh	865,669	917,233	969,596	1,021,981	1,074,360	1,126,739	1,179,121	1,231,451	1,281,130	1,328,970	1,379,859	1,431,094	1,482,896	1,534,520	1,584,786			
Heat Rate																		
Daily heat rate, Btu/kWe gross	11,018	10,998	11,080	11,099	11,039	11,119	10,600	10,877	11,351	11,495	10,842	11,157	10,948	10,984	11,179			
Daily heat rate, Btu/kWe net	12,240	12,218	12,308	12,330	12,263	12,352	11,775	12,083	12,609	12,770	12,044	12,394	12,162	12,202	12,418			
Cumulative heat rate, Btu/kWe gross	10,985	10,986	10,991	10,996	10,998	11,004	10,986	10,981	10,996	11,014	11,007	11,013	11,010	11,010	11,015			
Cumulative heat rate, Btu/kWe net	12,203	12,203	12,209	12,215	12,218	12,224	12,204	12,199	12,215	12,235	12,228	12,234	12,231	12,230	12,236			
Cumulative by Facility starting C																		
Max cumulative available engine run time	27,840	27,936	28,032	28,128	28,224	28,320	28,416	28,512	28,608	28,704	28,800	28,896	28,992	29,088	29,184			
Actual cumulative engine run time	20,669	20,741	20,813	20,885	20,957	21,029	21,101	21,173	21,245	21,316	21,388	21,460	21,532	21,604	21,676			
Cumulative Availability, %	74.2%	74.2%	74.2%	74.2%	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	22,964,700	23,043,900	23,123,100	23,202,300	23,281,500	23,360,700	23,439,900	23,519,100	23,598,300	23,677,500	23,756,700	23,835,900	23,915,100	23,994,300	24,073,500			
Actual cumulative gross output, kWh	14,143,211	14,194,775	14,247,138	14,299,523	14,351,902	14,404,281	14,456,663	14,508,993	14,558,672	14,606,512	14,657,401	14,708,636	14,760,438	14,812,062	14,862,328			
Cumulative Capacity Factor	61.6%	61.6%	61.6%	61.6%	61.6%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%	61.7%			
Cumulative fuel input, MMBtu	177,917	178,547	179,192	179,838	180,480	181,127	181,744	182,376	183,003	183,613	184,226	184,841	185,491	186,121	186,745			
Cumulative gross output, kWh	14,143,211	14,194,775	14,247,138	14,299,523	14,351,902	14,404,281	14,456,663	14,508,993	14,558,672	14,606,512	14,657,401	14,708,636	14,760,438	14,812,062	14,862,328			
Cumulative heat rate, Btu/kWe gross	11,324	11,323	11,322	11,321	11,320	11,320	11,317	11,315	11,315	11,316	11,314	11,314	11,313	11,311	11,311			
Cumulative heat rate, Btu/kWe net	12,580	12,578	12,577	12,576	12,575	12,575	12,572	12,570	12,570	12,571	12,569	12,568	12,567	12,566	12,565			
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 10/17/2020	Sunday 10/18/2020	Monday 10/19/2020	Tuesday 10/20/2020	Wednesday 10/21/2020	Thursday 10/22/2020	Friday 10/23/2020	Saturday 10/24/2020	Sunday 10/25/2020	Monday 10/26/2020	Tuesday 10/27/2020	Wednesday 10/28/2020	Thursday 10/29/2020	Friday 10/30/2020	Saturday 10/31/2020	TOTAL		
Hour																		
1	2,042	2,037	2,094	2,097	2,102	2,102	2,103	2,102	2,043	1,759	2,079	2,024	2,078	2,080	2,018			
2	2,072	2,037	2,095	2,101	2,102	2,102	2,103	2,102	2,043	1,773	2,079	2,024	2,078	2,080	2,019			
3	2,095	2,037	2,095	2,102	2,103	2,102	2,103	2,102	2,044	1,740	2,077	2,024	2,078	2,080	2,019			
4	2,096	2,037	2,095	2,102	2,103	2,102	2,103	2,102	2,044	1,732	2,076	2,024	2,078	2,078	2,018			
5	2,097	2,038	2,095	2,102	2,103	2,102	2,103	2,102	2,043	1,733	2,076	2,024	2,078	2,077	2,018			
6	2,100	2,038	2,090	2,101	2,101	2,101	2,103	2,101	2,043	1,773	2,075	2,022	2,076	2,077	2,068			
7	2,101	2,038	2,087	2,099	2,100	2,100	2,102	2,101	2,043	1,793	2,074	2,022	2,075	2,077	2,072			
8	2,096	2,039	2,087	2,100	2,100	2,099	2,100	2,099	2,044	1,787	2,074	2,021	2,075	2,074	2,068			
9	2,096	2,038	2,087	2,094	2,090	2,096	2,090	2,099	2,044	1,900	2,049	1,997	2,067	2,065	2,003			
10	2,098	2,037	2,082	2,083	2,082	2,091	2,089	2,098	2,043	1,410	2,003	2,016	2,059	2,058	1,954			
11	2,096	2,040	2,086	2,084	2,083	2,085	2,094	2,098	2,039	1,539	2,004	2,058	2,062	2,059	1,953			
12	2,095	2,038	2,092	2,090	2,092	2,083	2,093	2,097	2,039	2,013	2,012	2,073	2,062	2,058	1,958			
13	2,094	2,039	2,092	2,093	2,094	2,087	2,093	2,098	2,039	2,070	2,014	2,073	2,063	2,059	1,970			
14	2,096	2,038	2,093	2,094	2,094	2,091	2,094	2,098	2,039	2,073	2,015	2,074	2,063	2,062	2,006			
15	2,095	2,083	2,093	2,094	2,094	2,090	2,093	2,098	2,039	2,073	2,015	2,074	2,064	2,071	2,007			
16	2,093	2,095	2,093	2,095	2,094	2,094	2,093	2,097	2,039	2,073	2,016	2,074	2,069	2,070	2,007			
17	2,092	2,095	2,098	2,100	2,099	2,101	2,093	2,098	2,040	2,077	2,021	2,079	2,074	2,076	2,005			
18	2,065	2,091	2,099	2,100	2,099	2,101	2,094	2,097	2,039	2,078	2,021	2,079	2,079	2,077	2,005			
19	2,031	2,088	2,099	2,100	2,099	2,102	2,096	2,097	2,039	2,077	2,021	2,078	2,077	2,078	2,004			
20	2,036	2,090	2,099	2,099	2,099	2,102	2,098	2,097	1,817	2,078	2,021	2,078	2,078	2,078	2,003			
21	2,030	2,088	2,101	2,099	2,098	2,103	2,102	2,097	1,775	2,079	2,020	2,080	2,079	2,077	2,003			
22	2,030	2,088	2,104	2,100	2,099	2,102	2,102	2,099	1,771	2,079	2,020	2,078	2,080	2,020	2,003			
23	2,036	2,092	2,103	2,101	2,101	2,103	2,103	2,099	1,765	2,079	2,022	2,076	2,080	2,020	2,041			
24	2,037	2,094	2,104	2,102	2,102	2,103	2,103	2,051	1,760	2,080	2,023	2,078	2,080	2,019	2,076			
TOTAL	49,819	49,435	50,263	50,332	50,333	50,344	50,350	50,329	47,674	45,868	48,907	49,250	49,752	49,570	48,298			
Cumulative Output Sold, kWh	829,988	879,423	929,686	980,018	1,030,351	1,080,695	1,131,045	1,181,374	1,229,048	1,274,916	1,323,823	1,373,073	1,422,825	1,472,395	1,520,693			
Transformer and line efficiency	99.8%	99.9%	99.8%	99.7%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%	99.7%	99.8%	99.7%	99.8%	99.8%	0.0%		
Hourly average	2,076	2,060	2,094	2,097	2,097	2,098	2,098	2,097	1,986	1,911	2,038	2,052	2,073	2,065	2,012	2,044		

November 2020		DLST															
		Sunday 11/1/2020	Monday 11/2/2020	Tuesday 11/3/2020	Wednesday 11/4/2020	Thursday 11/5/2020	Friday 11/6/2020	Saturday 11/7/2020	Sunday 11/8/2020	Monday 11/9/2020	Tuesday 11/10/2020	Wednesday 11/11/2020	Thursday 11/12/2020	Friday 11/13/2020	Saturday 11/14/2020	Sunday 11/15/2020	Monday 11/16/2020
LFG and Biogas Flow to the Engines (KSCF)		1,245	1,185	1,224	1,197	1,207	1,180	1,214	1,230	1,216	1,241	1,227	1,133	1,195	1,210	1,209	1,224
LFG and Biogas Flow to the Engines (MMBTU HHV)		655	625	648	628	640	638	652	647	647	663	653	614	646	645	644	657
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and BiogasFlow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,245	1,185	1,224	1,197	1,207	1,180	1,214	1,230	1,216	1,241	1,227	1,133	1,195	1,210	1,209	1,224
LFG and Biogas Total Flow (MMBTU HHV)		655	625	648	628	640	638	652	647	647	663	653	614	646	645	644	657
Average Methane Content (%)		52.0	52.1	52.3	51.8	52.4	53.4	53.1	52.0	52.6	52.8	52.6	53.5	53.4	52.7	52.7	53.1
Engine 1 Hours		25	24	24	23	24	24	24	24	24	24	24	24	24	24	24	24
Engine 2 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine 3 Hours		25	24	24	24	24	23	24	24	24	24	24	24	24	24	24	24
Engine 4 Hours		25	24	24	24	24	24	24	24	24	24	24	24	24	24	23	25
Generator 1 Power Output (kWhr)		18,100	17,372	17,380	15,552	17,376	17,412	17,612	17,612	17,616	17,616	17,612	16,452	17,108	17,376	17,376	17,376
Generator 2 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 3 Power Output (kWhr)		18,304	17,568	16,616	16,696	16,192	15,464	16,752	16,752	17,128	17,348	17,356	16,236	16,980	16,976	16,696	17,024
Generator 4 Power Output (kWhr)		17,420	16,712	16,280	16,192	16,712	16,720	16,724	15,924	15,536	15,544	15,536	15,268	16,392	16,740	16,732	16,724
Gross Power Output (kWhr)		53,960	51,773	50,364	48,521	50,387	49,671	51,140	50,358	50,370	50,624	50,630	48,042	50,589	51,204	50,920	51,198
Net Power Output (kWhr)		52,112	49,824	48,400	46,656	48,536	47,872	49,360	48,560	48,520	48,744	48,776	46,280	48,688	49,184	48,928	49,200
Power Sold as metered by NStar, (kWhr)		52,003	49,709	48,303	46,548	48,389	47,757	49,235	48,473	48,394	48,609	48,612	46,183	48,583	49,076	48,854	49,093
Offgrid RECs (kWhr)		1,847	1,950	1,964	1,864	1,851	1,799	1,780	1,797	1,851	1,881	1,853	1,763	1,901	2,020	1,991	2,000
Calculated Performance Results																	
Daily																	
	Power output (kW average when running)																
	Generator 1	724	724	724	676	724	726	734	734	734	734	734	686	713	724	724	724
	Generator 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Generator 3	732	732	692	696	675	672	698	698	714	723	723	677	708	707	696	709
	Generator 4	697	696	678	675	696	697	697	664	647	648	647	636	683	698	727	669
	Power output (kW average over 24-hrs)																
	Facility Gross	2,158	2,157	2,099	2,022	2,099	2,070	2,131	2,098	2,099	2,109	2,110	2,002	2,108	2,134	2,122	2,133
	Facility Net	2,084	2,076	2,017	1,944	2,022	1,995	2,057	2,023	2,022	2,031	2,032	1,928	2,029	2,049	2,039	2,050
	In-plant load	74	81	82	78	77	75	74	75	77	78	77	73	79	84	83	83
	Daily availability factor																
	Facility	75%	75%	75%	74%	75%	74%	75%	75%	75%	75%	75%	75%	75%	75%	74%	76%
	Engine 1	100%	100%	100%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Engine 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Engine 3	100%	100%	100%	100%	100%	96%	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%	96%	104%
	Daily capacity factor																
	Facility	65%	65%	64%	61%	64%	63%	65%	64%	64%	64%	64%	61%	64%	65%	64%	65%
	Engine 1	88%	88%	88%	82%	88%	88%	89%	89%	89%	89%	89%	83%	86%	88%	88%	88%
	Engine 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Engine 3	89%	89%	84%	84%	82%	81%	85%	85%	87%	88%	88%	82%	86%	86%	84%	86%
	Engine 4	84%	84%	82%	82%	84%	84%	84%	80%	78%	79%	78%	77%	83%	85%	88%	81%
Cumulative by engine																	
	Engine operating run hours in the month																
	Max Cumulative Available, hours	25	49	73	97	121	145	169	193	217	241	265	289	313	337	361	385
	Engine 1	25	49	73	96	120	144	168	192	216	240	264	288	312	336	360	384
	Engine 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Engine 3	25	49	73	97	121	144	168	192	216	240	264	288	312	336	360	384
	Engine 4	25	49	73	97	121	145	169	193	217	241	265	289	313	337	360	385
	Engine operating run hours total from 0 hours																
	Engine 1	115,071	115,095	115,119	115,142	115,166	115,190	115,214	115,238	115,262	115,286	115,310	115,334	115,358	115,382	115,406	115,430
	Engine 2	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126	103,126
	Engine 3	113,440	113,489	113,513	113,537	113,561	113,584	113,608	113,632	113,656	113,680	113,704	113,728	113,752	113,776	113,800	113,824
	Engine 4	111,595	111,620	111,644	111,668	111,692	111,716	111,740	111,764	111,788	111,812	111,836	111,860	111,884	111,908	111,932	111,980
	Cumulative availability, %	November 1, 2020 @ 00:00 hours															
	Engine 1	100%	100%	100%	99%	99%	99%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%
	Engine 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Engine 3	100%	100%	100%	100%	100%	99%	99%	99%	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%	100%
	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	724	1,448	2,172	2,848	3,572	4,298	5,032	5,765	6,499	7,233	7,967	8,653	9,366	10,090	10,814	11,538
	Engine 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Engine 3	732	1,464	2,156	2,852	3,527	4,199	4,897	5,595	6,309	7,032	7,755	8,431	9,139	9,846	10,542	11,251
	Engine 4	697	1,393	2,071	2,746	3,442	4,139	4,836	5,499	6,147	6,794	7,442	8,078	8,761	9,458	10,186	10,855
	Cumulative capacity factor, %																
	Engine 1	88%	88%	88%	86%	87%	87%	87%	87%	88%	88%	88%	87%	87%	87%	87%	87%
	Engine 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Engine 3	89%	89%	87%	86%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
	Engine 4	84%	84%	84%	83%	83%	84%	84%	83%	83%	82%	82%	82%	82%	82%	82%	82%

	Sunday 11/1/2020	Monday 11/2/2020	Tuesday 11/3/2020	Wednesday 11/4/2020	Thursday 11/5/2020	Friday 11/6/2020	Saturday 11/7/2020	Sunday 11/8/2020	Monday 11/9/2020	Tuesday 11/10/2020	Wednesday 11/11/2020	Thursday 11/12/2020	Friday 11/13/2020	Saturday 11/14/2020	Sunday 11/15/2020	Monday 11/16/2020
Cumulative by Facility in month																
Max cumulative available engine run hours	100	196	292	388	484	580	676	772	868	964	1,060	1,156	1,252	1,348	1,444	1,540
Actual cumulative engine run hours	75	147	219	290	362	433	505	577	649	721	793	865	937	1,009	1,080	1,153
Cumulative Availability, %	75.0%	75.0%	75.0%	74.7%	74.8%	74.7%	74.7%	74.7%	74.8%	74.8%	74.8%	74.8%	74.8%	74.9%	74.8%	74.9%
Max cumulative gross output, kWhr	82,500	161,700	240,900	320,100	399,300	478,500	557,700	636,900	716,100	795,300	874,500	953,700	1,032,900	1,112,100	1,191,300	1,270,500
Actual cumulative gross output, kWhr	53,960	105,733	156,097	204,618	255,005	304,676	355,816	406,174	456,544	507,168	557,798	605,840	656,429	707,633	758,553	809,751
Cumulative Capacity Factor	65.4%	65.4%	64.8%	63.9%	63.9%	63.7%	63.8%	63.8%	63.8%	63.8%	63.8%	63.5%	63.6%	63.6%	63.7%	63.7%
Cumulative fuel input, MMBtu HHV	655	1,280	1,928	2,556	3,195	3,833	4,485	5,132	5,779	6,442	7,095	7,709	8,355	8,999	9,643	10,301
Cumulative gross output, kWhr	53,960	105,733	156,097	204,618	255,005	304,676	355,816	406,174	456,544	507,168	557,798	605,840	656,429	707,633	758,553	809,751
Heat Rate																
Daily heat rate, Btu/kWe gross LHV	10,927	10,867	11,584	11,642	11,425	11,557	11,477	11,560	11,570	11,789	11,612	11,497	11,493	11,331	11,389	11,559
Daily heat rate, Btu/kWe gross HHV	12,139	12,072	12,868	12,933	12,692	12,838	12,749	12,842	12,853	13,097	12,899	12,772	12,768	12,587	12,651	12,840
Cumulative heat rate, Btu/kWe gross LHV	10,927	10,898	11,119	11,243	11,279	11,324	11,346	11,373	11,395	11,434	11,450	11,454	11,457	11,448	11,444	11,451
Cumulative heat rate, Btu/kWe gross HHV	12,139	12,106	12,352	12,490	12,530	12,580	12,604	12,634	12,658	12,702	12,720	12,724	12,727	12,717	12,713	12,721
Cumulative by Facility starting Calendar Year																
Max cumulative available engine run hours	29,284	29,380	29,476	29,572	29,668	29,764	29,860	29,956	30,052	30,148	30,244	30,340	30,436	30,532	30,628	30,724
Actual cumulative engine run hours	21,751	21,823	21,895	21,966	22,038	22,109	22,181	22,253	22,325	22,397	22,469	22,541	22,613	22,685	22,756	22,829
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%	74.3%	74.3%
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	14,916,288	14,968,061	15,018,425	15,066,946	15,117,333	15,167,004	15,218,144	15,268,502	15,318,872	15,369,496	15,420,126	15,468,168	15,518,757	15,569,961	15,620,881	15,672,079
Cumulative Capacity Factor	61.7%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%
Cumulative fuel input, MMBtu HHV	187,400	188,025	188,674	189,301	189,941	190,578	191,230	191,877	192,524	193,187	193,840	194,454	195,100	195,744	196,389	197,046
Cumulative gross output, kWhr	14,916,288	14,968,061	15,018,425	15,066,946	15,117,333	15,167,004	15,218,144	15,268,502	15,318,872	15,369,496	15,420,126	15,468,168	15,518,757	15,569,961	15,620,881	15,672,079
Cumulative heat rate, Btu/kWe gross LHV	11,310	11,308	11,309	11,310	11,310	11,311	11,312	11,313	11,313	11,315	11,316	11,317	11,317	11,317	11,317	11,318
Cumulative heat rate, Btu/kWe gross HHV	12,563	12,562	12,563	12,564	12,564	12,565	12,566	12,567	12,568	12,570	12,571	12,571	12,572	12,572	12,572	12,573
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	Sunday 11/1/2020	Monday 11/2/2020	Tuesday 11/3/2020	Wednesday 11/4/2020	Thursday 11/5/2020	Friday 11/6/2020	Saturday 11/7/2020	Sunday 11/8/2020	Monday 11/9/2020	Tuesday 11/10/2020	Wednesday 11/11/2020	Thursday 11/12/2020	Friday 11/13/2020	Saturday 11/14/2020	Sunday 11/15/2020	Monday 11/16/2020
Date																
Hour																
1	2,077	2,079	2,076	1,969	2,022	2,020	2,057	2,056	2,006	2,027	2,027	2,028	2,079	2,060	2,010	2,064
2	2,078	2,076	2,078	1,969	2,016	2,058	2,056	2,058	2,005	2,027	2,027	2,028	2,076	2,064	2,009	2,069
3	2,077	2,079	2,077	1,970	2,021	2,076	2,057	2,057	2,006	2,026	2,027	2,028	2,080	2,060	2,008	2,068
4	2,079	2,076	2,078	1,971	2,022	2,077	2,057	2,052	2,008	2,028	2,027	2,028	2,078	2,062	2,006	2,068
5	2,079	2,077	2,079	1,970	2,023	2,077	2,057	2,055	2,003	2,028	2,028	2,028	2,078	2,061	2,006	2,067
6	2,079	2,076	2,077	1,967	2,015	2,077	2,053	2,056	1,999	2,029	2,028	2,029	2,079	2,060	2,007	2,065
7	2,079	2,077	2,070	1,966	2,017	2,078	2,054	2,055	1,997	2,025	2,028	2,029	2,076	2,060	2,007	2,058
8	2,080	2,078	2,023	1,969	2,016	2,078	2,058	2,048	2,000	2,028	2,028	2,027	2,078	2,059	2,009	2,055
9	2,082	2,064	1,999	1,949	2,000	2,073	2,055	2,009	1,996	2,024	2,024	2,021	2,073	2,064	2,015	2,058
10	2,082	2,064	2,006	1,956	2,006	2,039	2,053	2,008	2,033	2,022	2,020	2,020	1,597	1,913	2,067	2,054
11	2,085	2,064	2,007	1,933	2,010	1,493	2,046	2,004	2,030	2,022	2,020	1,683	1,218	2,066	2,016	2,050
12	2,078	2,064	2,007	1,347	2,011	2,013	2,044	1,993	2,019	2,021	2,020	2,015	1,993	2,061	2,014	2,052
13	2,082	2,065	2,013	1,359	2,013	2,058	2,045	1,993	2,019	2,021	2,021	1,273	2,060	2,063	2,018	2,055
14	2,082	2,065	2,012	1,755	2,010	2,058	2,046	1,993	2,019	2,020	2,022	1,150	2,061	2,062	2,046	2,055
15	2,082	2,065	2,010	2,042	2,012	2,063	2,049	1,996	2,020	2,021	2,022	1,504	2,060	2,063	2,066	2,059
16	2,082	2,058	1,970	2,076	2,015	2,067	2,049	2,001	2,021	2,022	2,025	2,079	2,064	2,064	2,065	2,059
17	2,081	2,074	1,963	2,080	2,021	2,074	2,049	2,001	2,028	2,027	2,027	2,080	2,065	2,023	2,065	2,057
18	2,082	2,070	1,968	2,080	2,021	1,424	2,049	2,001	2,030	2,028	2,027	2,081	2,066	2,007	2,067	2,018
19	2,075	2,069	1,964	2,078	2,020	1,699	2,049	2,002	2,030	2,028	2,027	2,079	2,066	2,008	2,066	2,010
20	2,082	2,070	1,964	2,060	2,019	1,980	2,049	2,003	2,029	2,027	2,027	2,079	2,066	2,008	2,066	2,010
21	2,078	2,074	1,963	2,016	2,019	2,007	2,049	2,008	2,023	2,027	2,027	2,078	2,067	2,009	2,065	2,009
22	2,083	2,074	1,962	2,022	2,020	2,056	2,050	2,008	2,022	2,027	2,027	2,079	2,059	2,009	2,068	2,012
23	2,080	2,075	1,968	2,022	2,020	2,056	2,050	2,008	2,026	2,027	2,027	2,080	2,064	2,008	2,069	2,010
24	2,080	2,076	1,969	2,022	2,020	2,056	2,054	2,008	2,027	2,027	2,027	2,080	2,064	2,008	2,067	2,011
2,079																
TOTAL	52,003	49,709	48,303	46,548	48,389	47,757	49,235	48,473	48,394	48,609	48,612	46,183	48,583	49,076	48,854	49,093
Cumulative Output Sold, kWhr	52,003	101,712	150,015	196,563	244,952	292,709	341,944	390,417	438,811	487,420	536,032	582,215	630,798	679,874	728,728	777,821
Transformer and line efficiency	99.8%	99.8%	99.8%	99.8%	99.7%	99.8%	99.7%	99.8%	99.7%	99.7%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%
Hourly average	2,167	2,071	2,013	1,940	2,016	1,990	2,051	2,020	2,016	2,025	2,026	1,924	2,024	2,045	2,036	2,046

[illegible]

	Tuesday 11/17/2020	Wednesday 11/18/2020	Thursday 11/19/2020	Friday 11/20/2020	Saturday 11/21/2020	Sunday 11/22/2020	Monday 11/23/2020	Tuesday 11/24/2020	Wednesday 11/25/2020	Thursday 11/26/2020	Friday 11/27/2020	Saturday 11/28/2020	Sunday 11/29/2020	Monday 11/30/2020	TOTAL	Biogas	LFG
Cumulative by Facility in month																	
Max cumulative available engine	1,636	1,732	1,828	1,924	2,020	2,116	2,212	2,308	2,404	2,500	2,596	2,692	2,788	2,884			
Actual cumulative engine run	1,225	1,295	1,367	1,422	1,494	1,566	1,637	1,708	1,780	1,852	1,924	1,996	2,068	2,140			
Cumulative Availability, %	74.9%	74.8%	74.8%	73.9%	74.0%	74.0%	74.0%	74.0%	74.0%	74.1%	74.1%	74.1%	74.2%	74.2%			
Max cumulative gross output, kWh	1,349,700	1,428,900	1,508,100	1,587,300	1,666,500	1,745,700	1,824,900	1,904,100	1,983,300	2,062,500	2,141,700	2,220,900	2,300,100	2,379,300			
Actual cumulative gross output, kWh	859,622	906,996	955,533	992,167	1,040,843	1,089,528	1,139,473	1,189,861	1,241,106	1,293,478	1,345,638	1,397,739	1,448,803	1,501,143			
Cumulative Capacity Factor	63.7%	63.5%	63.4%	62.5%	62.5%	62.4%	62.4%	62.5%	62.6%	62.7%	62.8%	62.9%	63.0%	63.1%			
Cumulative fuel input, MMBtu	10,942	11,569	12,221	12,671	13,278	13,877	14,508	15,128	15,773	16,418	17,063	17,714	18,355	19,001			
Cumulative gross output, kWh	859,622	906,996	955,533	992,167	1,040,843	1,089,528	1,139,473	1,189,861	1,241,106	1,293,478	1,345,638	1,397,739	1,448,803	1,501,143			
Heat Rate																	
Daily heat rate, Btu/kWe gross	11,581	11,907	12,089	11,065	11,224	11,074	11,379	11,083	11,317	11,099	11,126	11,253	11,301	11,102			
Daily heat rate, Btu/kWe gross	12,865	13,227	13,429	12,292	12,468	12,302	12,640	12,312	12,572	12,330	12,360	12,501	12,554	12,333			
Cumulative heat rate, Btu/kWe	11,459	11,482	11,513	11,496	11,484	11,465	11,462	11,445	11,440	11,426	11,415	11,409	11,405	11,394			
Cumulative heat rate, Btu/kWe	12,729	12,755	12,789	12,771	12,757	12,736	12,732	12,714	12,709	12,693	12,680	12,674	12,669	12,658			
Cumulative by Facility starting C																	
Max cumulative available engine	30,820	30,916	31,012	31,108	31,204	31,300	31,396	31,492	31,588	31,684	31,780	31,876	31,972	32,068			
Actual cumulative engine run	22,901	22,971	23,043	23,098	23,170	23,242	23,313	23,384	23,456	23,528	23,600	23,672	23,744	23,816			
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	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	15,721,950	15,769,324	15,817,861	15,854,495	15,903,171	15,951,856	16,001,801	16,052,189	16,103,434	16,155,806	16,207,966	16,260,067	16,311,131	16,363,471			
Cumulative Capacity Factor	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.8%	61.9%			
Cumulative fuel input, MMBtu	197,688	198,314	198,966	199,416	200,023	200,622	201,254	201,874	202,518	203,164	203,809	204,460	205,101	205,746			
Cumulative gross output, kWh	15,721,950	15,769,324	15,817,861	15,854,495	15,903,171	15,951,856	16,001,801	16,052,189	16,103,434	16,155,806	16,207,966	16,260,067	16,311,131	16,363,471			
Cumulative heat rate, Btu/kWe	11,319	11,321	11,323	11,323	11,322	11,322	11,322	11,321	11,321	11,320	11,320	11,319	11,319	11,319			
Cumulative heat rate, Btu/kWe	12,574	12,576	12,579	12,578	12,578	12,577	12,577	12,576	12,576	12,575	12,575	12,574	12,574	12,574			
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	11/17/2020	11/18/2020	11/19/2020	11/20/2020	11/21/2020	11/22/2020	11/23/2020	11/24/2020	11/25/2020	11/26/2020	11/27/2020	11/28/2020	11/29/2020	11/30/2020	TOTAL		
Hour																	
1	2,010	2,026	2,023	1,977	1,953	1,952	1,953	1,449	2,021	2,083	2,131	2,132	2,071	2,079			
2	2,008	2,028	2,023	1,977	1,953	1,952	1,953	2,039	2,018	2,083	2,132	2,131	2,069	2,078			
3	2,010	2,025	2,024	1,978	1,954	1,951	1,953	2,126	2,022	2,083	2,131	2,131	2,069	2,077			
4	2,008	2,026	2,022	1,978	1,954	1,947	1,953	2,126	2,021	2,083	2,131	2,131	2,071	2,079			
5	2,008	2,024	2,020	1,977	1,954	1,950	1,953	2,125	2,020	2,083	2,131	2,126	2,070	2,080			
6	2,005	2,024	2,018	1,976	1,947	1,950	1,953	2,101	2,020	2,082	2,125	2,131	2,069	2,074			
7	2,001	2,015	2,017	1,977	1,952	1,947	1,954	2,062	2,015	2,082	2,131	2,132	2,068	2,075			
8	2,008	1,927	1,950	1,976	1,950	1,951	1,978	2,063	2,015	2,083	2,112	2,121	2,069	2,073			
9	1,772	1,894	1,821	731	1,952	1,950	2,006	2,016	2,012	2,083	2,075	2,076	2,057	2,069			
10	1,422	1,900	1,825	-	1,951	1,952	2,006	2,018	2,018	2,083	2,076	2,076	2,027	2,070			
11	2,032	1,896	1,826	-	1,952	1,952	1,891	2,018	2,035	2,079	2,075	2,074	2,026	2,071			
12	2,030	1,598	1,868	-	1,953	1,953	2,124	2,018	2,076	2,113	2,075	2,070	2,021	2,070			
13	2,030	1,361	1,705	-	1,954	1,951	2,135	2,017	2,077	2,125	2,077	2,077	2,019	2,074			
14	2,027	1,378	1,749	161	1,953	1,950	2,136	2,017	2,075	2,125	2,077	2,077	2,029	2,079			
15	2,029	1,523	1,973	1,042	1,952	1,949	2,135	2,017	2,077	2,129	2,076	2,076	2,027	2,123			
16	2,024	1,799	1,970	1,844	1,950	1,949	2,137	2,019	2,078	2,131	2,076	2,075	2,027	2,129			
17	2,028	2,017	1,969	1,952	1,951	1,949	2,139	2,021	2,081	2,132	2,076	2,076	2,026	2,135			
18	2,024	2,016	1,968	1,953	1,950	1,951	2,138	2,019	2,081	2,132	2,074	2,076	2,025	2,136			
19	2,030	2,015	1,977	1,952	1,949	1,950	2,110	2,014	2,082	2,133	2,070	2,075	2,024	2,136			
20	2,030	1,976	1,976	1,953	1,949	1,951	2,080	2,016	2,081	2,132	2,071	2,074	2,020	2,136			
21	2,030	1,974	1,977	1,955	1,948	1,951	2,074	2,021	2,081	2,131	2,070	2,066	2,022	2,135			
22	2,027	1,974	1,977	1,955	1,951	1,951	2,077	2,018	2,081	2,131	2,071	2,069	2,078	2,136			
23	2,030	1,954	1,977	1,955	1,953	1,951	1,781	2,021	2,082	2,130	2,076	2,070	2,077	2,137			
24	2,027	2,025	1,976	1,954	1,953	1,951	1,422	2,018	2,083	2,131	2,132	2,070	2,078	2,136			
TOTAL	47,650	45,395	46,631	35,223	46,838	46,811	48,041	48,379	49,252	50,582	50,271	50,212	49,139	50,387			
Cumulative Output Sold, kWh	825,471	870,866	917,497	952,720	999,558	1,046,369	1,094,410	1,142,789	1,192,041	1,242,623	1,292,894	1,343,106	1,392,245	1,442,632			
Transformer and line efficiency	99.8%	99.8%	99.8%	99.8%	99.7%	99.8%	99.7%	99.8%	99.8%	100.0%	99.8%	99.8%	99.8%	99.8%	0.0%		
Hourly average	1,985	1,891	1,943	1,468	1,952	1,950	2,002	2,016	2,052	2,108	2,095	2,092	2,047	2,099	2,004		

December 2020																	
		Tuesday 12/1/2020	Wednesday 12/2/2020	Thursday 12/3/2020	Friday 12/4/2020	Saturday 12/5/2020	Sunday 12/6/2020	Monday 12/7/2020	Tuesday 12/8/2020	Wednesday 12/9/2020	Thursday 12/10/2020	Friday 12/11/2020	Saturday 12/12/2020	Sunday 12/13/2020	Monday 12/14/2020	Tuesday 12/15/2020	Wednesday 12/16/2020
LFG and Biogas Flow to the Engines (KSCF)		1,182	1,209	1,213	1,189	1,201	1,209	1,205	1,054	1,244	1,261	1,247	1,228	1,239	1,253	1,233	1,202
LFG and Biogas Flow to the Engines (MMBTU HHV)		632	633	624	623	656	643	633	552	667	649	637	634	652	661	632	622
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,182	1,209	1,213	1,189	1,201	1,209	1,205	1,054	1,244	1,261	1,247	1,228	1,239	1,253	1,233	1,202
LFG and Biogas Total Flow (MMBTU HHV)		632	633	624	623	656	643	633	552	667	649	637	634	652	661	632	622
Average Methane Content (%)		52.8	51.7	50.9	51.8	54.0	52.5	51.9	51.7	53.0	50.9	50.5	51.0	52.0	52.1	50.7	51.1
Engine 1 Hours		24	24	24	24	24	24	24	21	24	24	24	24	24	24	24	24
Engine 2 Hours		24	24	24	24	24	24	24	22	24	24	24	24	24	24	24	24
Engine 3 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine 4 Hours		24	24	24	24	24	24	24	21	24	24	24	24	24	24	24	24
Generator 1 Power Output (kWhr)		17,956	17,960	16,760	16,200	17,440	17,952	17,960	14,804	17,960	17,068	17,568	17,600	17,600	17,596	16,880	16,200
Generator 2 Power Output (kWhr)		17,400	16,340	16,216	16,212	17,212	16,604	16,212	14,088	17,392	16,900	16,172	16,620	17,392	17,392	16,652	16,276
Generator 3 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 4 Power Output (kWhr)		16,964	16,164	17,028	17,560	17,568	16,252	16,168	14,220	17,372	16,396	17,172	17,436	17,420	17,356	16,224	16,896
Gross Power Output (kWhr)		52,473	50,592	50,117	50,112	52,361	50,952	50,481	43,360	52,832	50,476	51,036	51,779	52,524	52,473	49,878	49,478
Net Power Output (kWhr)		50,672	48,720	48,248	48,304	50,560	49,088	48,552	41,536	50,800	48,536	49,096	49,912	50,704	50,488	47,880	47,432
Power Sold as metered by NStar, (kWhr)		50,537	48,808	48,149	48,176	50,444	49,002	48,440	41,460	50,694	48,433	49,079	49,808	50,601	50,394	47,783	47,346
Offgrid RECs (kWhr)		1,802	1,872	1,868	1,808	1,802	1,866	1,928	1,824	2,031	1,941	1,943	1,867	1,821	1,985	1,999	2,045
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		748	748	698	675	727	748	748	705	748	711	732	733	733	733	703	675
Generator 2		725	681	676	676	717	692	676	640	725	704	674	693	725	725	694	678
Generator 3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 4		707	674	710	732	732	677	674	677	724	683	716	727	726	723	676	704
Power output (kW average over 24-hrs)																	
Facility Gross		2,186	2,108	2,088	2,088	2,182	2,123	2,103	1,807	2,201	2,103	2,127	2,157	2,189	2,186	2,078	2,062
Facility Net		2,111	2,030	2,010	2,013	2,107	2,045	2,023	1,731	2,117	2,022	2,046	2,080	2,113	2,104	1,995	1,976
In-plant load		75	78	78	75	75	78	80	76	85	81	81	78	76	83	83	85
Daily availability factor																	
Facility		75%	75%	75%	75%	75%	75%	75%	67%	75%	75%	75%	75%	75%	75%	75%	75%
Engine 1		100%	100%	100%	100%	100%	100%	100%	88%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 2		100%	100%	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 4		100%	100%	100%	100%	100%	100%	100%	88%	100%	100%	100%	100%	100%	100%	100%	100%
Daily capacity factor																	
Facility		66%	64%	63%	63%	66%	64%	64%	55%	67%	64%	64%	65%	66%	66%	63%	62%
Engine 1		91%	91%	85%	82%	88%	91%	91%	85%	91%	86%	89%	89%	89%	89%	85%	82%
Engine 2		88%	83%	82%	82%	87%	84%	82%	78%	88%	85%	82%	84%	88%	84%	82%	82%
Engine 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 4		86%	82%	86%	89%	89%	82%	82%	82%	88%	83%	87%	88%	88%	88%	82%	85%
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	189	213	237	261	285	309	333	357	381
Engine 2		24	48	72	96	120	144	168	190	214	238	262	286	310	334	358	382
Engine 3		0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-
Engine 4		24	48	72	96	120	144	168	189	213	237	261	285	309	333	357	381
Engine operating run hours total from 0 hours																	
Engine 1		115,761	115,785	115,809	115,833	115,857	115,881	115,905	115,929	115,950	115,974	115,998	116,022	116,046	116,070	116,094	116,118
Engine 2		103,417	103,441	103,465	103,489	103,513	103,537	103,561	103,585	103,607	103,631	103,655	103,679	103,703	103,727	103,751	103,775
Engine 3		113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904	113,904
Engine 4		112,265	112,289	112,313	112,337	112,361	112,385	112,409	112,433	112,454	112,478	112,502	112,526	112,550	112,574	112,598	112,622
Cumulative availability, %	December 1, 2020 @ 00:00 hours																
Engine 1		100%	100%	100%	100%	100%	100%	100%	98%	99%	99%	99%	99%	99%	99%	99%	99%
Engine 2		100%	100%	100%	100%	100%	100%	100%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Engine 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 4		100%	100%	100%	100%	100%	100%	100%	98%	99%	99%	99%	99%	99%	99%	99%	99%
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		748	1,497	2,195	2,870	3,597	4,345	5,093	5,798	6,546	7,257	7,989	8,723	9,456	10,189	10,892	11,567
Engine 2		725	1,406	2,082	2,757	3,474	4,166	4,842	5,482	6,207	6,911	7,585	8,277	9,002	9,726	10,420	11,098
Engine 3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine 4		707	1,380	2,090	2,822	3,554	4,231	4,904	5,581	6,305	6,988	7,704	8,430	9,156	9,879	10,555	11,259
Cumulative capacity factor, %																	
Engine 1		91%	91%	89%	87%	87%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%
Engine 2		88%	85%	84%	84%	84%	84%	84%	83%	84%	84%	84%	84%	84%	84%	84%	84%
Engine 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 4		86%	84%	84%	86%	86%	85%	85%	85%	85%	85%	85%	85%	85%	86%	85%	85%

		Tuesday 12/1/2020	Wednesday 12/2/2020	Thursday 12/3/2020	Friday 12/4/2020	Saturday 12/5/2020	Sunday 12/6/2020	Monday 12/7/2020	Tuesday 12/8/2020	Wednesday 12/9/2020	Thursday 12/10/2020	Friday 12/11/2020	Saturday 12/12/2020	Sunday 12/13/2020	Monday 12/14/2020	Tuesday 12/15/2020	Wednesday 12/16/2020
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	504	568	640	712	784	856	928	1,000	1,072	1,144
Cumulative Availability, %		75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	74.0%	74.1%	74.2%	74.2%	74.3%	74.4%	74.4%	74.4%	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		52,473	103,065	153,182	203,294	255,655	306,607	357,088	400,448	453,280	503,756	554,792	606,571	659,095	711,568	761,446	810,924
Cumulative Capacity Factor		66.3%	65.1%	64.5%	64.2%	64.6%	64.5%	64.4%	63.2%	63.6%	63.6%	63.7%	63.8%	64.0%	64.2%	64.1%	64.0%
Cumulative fuel input, MMBtu HHV		632	1,265	1,889	2,512	3,167	3,810	4,443	4,995	5,661	6,310	6,947	7,581	8,233	8,894	9,526	10,147
Cumulative gross output, kWhr		52,473	103,065	153,182	203,294	255,655	306,607	357,088	400,448	453,280	503,756	554,792	606,571	659,095	711,568	761,446	810,924
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		10,841	11,256	11,215	11,188	11,273	11,355	11,279	11,459	11,358	11,573	11,227	11,026	11,180	11,333	11,410	11,309
Daily heat rate, Btu/kWe gross HHV		12,042	12,504	12,459	12,428	12,523	12,614	12,529	12,729	12,617	12,856	12,472	12,248	12,419	12,589	12,675	12,563
Cumulative heat rate, Btu/kWe gross LHV		10,841	11,044	11,100	11,122	11,153	11,186	11,200	11,228	11,243	11,276	11,271	11,250	11,245	11,251	11,262	11,265
Cumulative heat rate, Btu/kWe gross HHV		12,042	12,269	12,331	12,355	12,389	12,427	12,441	12,472	12,489	12,526	12,521	12,498	12,491	12,499	12,510	12,513
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		32,164	32,260	32,356	32,452	32,548	32,644	32,740	32,836	32,932	33,028	33,124	33,220	33,316	33,412	33,508	33,604
Actual cumulative engine run hours		23,888	23,960	24,032	24,104	24,176	24,248	24,320	24,384	24,456	24,528	24,600	24,672	24,744	24,816	24,888	24,960
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%	74.3%	74.3%
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		16,415,944	16,466,536	16,516,653	16,566,765	16,619,126	16,670,078	16,720,559	16,763,919	16,816,751	16,867,227	16,918,263	16,970,042	17,022,566	17,075,039	17,124,917	17,174,395
Cumulative Capacity Factor		61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	61.9%	62.0%	62.0%	62.0%
Cumulative fuel input, MMBtu HHV		206,378	207,011	207,635	208,258	208,914	209,556	210,189	210,741	211,408	212,056	212,693	213,327	213,979	214,640	215,272	215,894
Cumulative gross output, kWhr		16,415,944	16,466,536	16,516,653	16,566,765	16,619,126	16,670,078	16,720,559	16,763,919	16,816,751	16,867,227	16,918,263	16,970,042	17,022,566	17,075,039	17,124,917	17,174,395
Cumulative heat rate, Btu/kWe gross LHV		11,317	11,317	11,317	11,316	11,316	11,316	11,316	11,316	11,317	11,317	11,317	11,316	11,316	11,316	11,316	11,316
Cumulative heat rate, Btu/kWe gross HHV		12,572	12,572	12,571	12,571	12,571	12,571	12,571	12,571	12,571	12,572	12,572	12,571	12,570	12,570	12,571	12,571
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 12/1/2020	Wednesday 12/2/2020	Thursday 12/3/2020	Friday 12/4/2020	Saturday 12/5/2020	Sunday 12/6/2020	Monday 12/7/2020	Tuesday 12/8/2020	Wednesday 12/9/2020	Thursday 12/10/2020	Friday 12/11/2020	Saturday 12/12/2020	Sunday 12/13/2020	Monday 12/14/2020	Tuesday 12/15/2020	Wednesday 12/16/2020
Hour																	
1		2,137	2,074	2,021	2,011	2,008	2,129	2,019	2,021	2,119	2,099	2,000	2,063	2,115	2,054	2,088	1,941
2		2,137	2,074	2,021	2,011	2,009	2,092	2,021	2,023	2,117	2,068	2,004	2,061	2,114	2,053	2,053	1,942
3		2,136	2,065	2,022	2,008	2,012	2,072	2,019	2,024	2,118	2,066	1,999	2,059	2,114	2,053	2,048	1,939
4		2,136	2,026	2,020	2,012	2,034	2,072	2,021	2,020	2,068	2,034	2,063	2,114	2,066	2,050	2,050	1,941
5		2,136	2,019	2,019	2,012	2,062	2,071	2,015	2,023	2,119	2,065	2,056	2,060	2,114	2,110	2,050	1,939
6		2,135	2,021	2,021	2,006	2,062	2,070	2,016	2,016	2,113	2,066	2,057	2,060	2,114	2,110	2,047	1,939
7		2,134	2,021	2,012	2,008	2,060	2,069	2,014	2,018	2,079	2,065	2,050	2,059	2,114	2,111	2,049	1,940
8		2,133	2,019	1,987	2,007	2,126	2,069	2,017	2,017	2,057	2,063	2,059	2,060	2,115	2,110	2,048	1,938
9		2,123	2,014	1,941	2,004	2,130	2,028	2,014	2,015	2,058	2,018	2,055	2,042	2,115	2,105	2,045	1,938
10		2,123	2,018	1,981	2,004	2,130	2,024	2,016	1,990	2,066	2,015	2,020	2,008	2,115	2,102	1,998	1,939
11		2,124	2,019	2,004	2,004	2,131	2,027	2,019	1,940	2,122	2,016	2,003	2,008	2,114	2,105	2,003	1,940
12		2,123	2,018	2,007	2,003	2,133	2,026	2,019	1,946	2,121	1,573	2,003	2,062	2,116	2,107	1,983	1,953
13		2,123	2,020	2,008	2,006	2,133	2,027	2,019	1,998	2,121	1,927	2,047	2,065	2,117	2,107	1,945	1,997
14		2,123	2,022	2,009	2,004	2,132	2,026	2,019	2,005	2,112	2,061	2,066	2,115	2,108	1,947	1,998	
15		2,067	2,015	2,008	2,004	2,131	2,025	2,022	2,006	2,124	2,077	2,060	2,066	2,116	2,108	1,945	1,998
16		2,068	2,016	2,012	2,005	2,132	2,024	2,021	2,004	2,126	2,055	2,061	2,092	2,116	2,108	1,943	2,000
17		2,073	2,023	2,008	2,009	2,126	2,019	2,017	2,002	2,120	2,055	2,065	2,115	2,115	2,111	1,942	2,002
18		2,073	2,022	2,008	2,009	2,127	2,020	2,019	2,003	2,127	2,020	2,064	2,115	2,114	2,111	1,946	2,001
19		2,072	2,015	2,006	2,009	2,127	2,016	2,018	1,995	2,125	2,001	2,063	2,114	2,114	2,111	1,943	2,001
20		2,071	2,018	2,006	2,008	2,127	2,017	2,018	1,262	2,124	2,064	2,114	2,114	2,114	2,111	1,941	2,001
21		2,071	2,018	2,003	2,008	2,126	2,019	2,014	-	2,123	1,996	2,064	2,114	2,114	2,108	1,942	2,001
22		2,070	2,018	2,011	2,008	2,130	2,020	2,020	-	2,122	2,004	2,064	2,114	2,079	2,109	1,942	1,997
23		2,075	2,020	2,007	2,008	2,128	2,020	2,019	298	2,124	1,999	2,063	2,114	2,058	2,107	1,942	2,012
24		2,074	2,023	2,007	2,008	2,128	2,020	2,024	1,834	2,123	2,004	2,063	2,114	2,055	2,109	1,943	2,049
TOTAL		50,537	48,608	48,149	48,176	50,444	49,002	48,440	41,460	50,694	48,433	49,079	49,808	50,601	50,394	47,783	47,346
Cumulative Output Sold, kWhr		50,537	99,145	147,294	195,470	245,914	294,916	343,356	384,816	435,510	483,943	533,022	582,830	633,431	683,825	731,608	778,954
Transformer and line efficiency		99.7%	99.8%	99.8%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	100.0%	99.8%	99.8%	99.8%	99.8%	99.8%
Hourly average		2,106	2,025	2,006	2,007	2,102	2,042	2,018	1,728	2,112	2,018	2,045	2,075	2,108	2,100	1,991	1,973

December 2020																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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	Thursday 12/17/2020	Friday 12/18/2020	Saturday 12/19/2020	Sunday 12/20/2020	Monday 12/21/2020	Tuesday 12/22/2020	Wednesday 12/23/2020	Thursday 12/24/2020	Friday 12/25/2020	Saturday 12/26/2020	Sunday 12/27/2020	Monday 12/28/2020	Tuesday 12/29/2020	Wednesday 12/30/2020	Thursday 12/31/2020	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	1,216	1,288	1,360	1,432	1,504	1,576	1,648	1,720	1,792	1,864	1,936	2,008	2,079	2,149	2,220			
Cumulative Availability, %	74.5%	74.5%	74.6%	74.6%	74.6%	74.6%	74.6%	74.7%	74.7%	74.7%	74.7%	74.7%	74.7%	74.6%	74.6%			
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	862,112	910,383	958,352	1,006,382	1,057,550	1,109,133	1,159,483	1,208,903	1,259,977	1,309,651	1,359,072	1,408,851	1,460,428	1,510,322	1,560,586			
Cumulative Capacity Factor	64.0%	63.9%	63.7%	63.5%	63.6%	63.7%	63.7%	63.6%	63.6%	63.6%	63.6%	63.5%	63.6%	63.6%	63.6%			
Cumulative fuel input, MMBtu	10,798	11,409	12,032	12,635	13,299	13,960	14,576	15,245	15,895	16,532	17,162	17,811	18,467	19,114	19,761			
Cumulative gross output, kWh	862,112	910,383	958,352	1,006,382	1,057,550	1,109,133	1,159,483	1,208,903	1,259,977	1,309,651	1,359,072	1,408,851	1,460,428	1,510,322	1,560,586			
Heat Rate																		
Daily heat rate, Btu/kWe gross	11,440	11,394	11,686	11,307	11,676	11,549	11,013	12,170	11,464	11,551	11,470	11,729	11,463	11,668	11,593			
Daily heat rate, Btu/kWe gross	12,708	12,658	12,981	12,561	12,971	12,830	12,234	13,519	12,734	12,832	12,742	13,030	12,734	12,961	12,878			
Cumulative heat rate, Btu/kWe	11,275	11,281	11,302	11,302	11,320	11,331	11,317	11,352	11,356	11,364	11,367	11,380	11,383	11,393	11,399			
Cumulative heat rate, Btu/kWe	12,525	12,532	12,555	12,555	12,575	12,587	12,571	12,610	12,615	12,623	12,628	12,642	12,645	12,656	12,663			
Cumulative by Facility starting C																		
Max cumulative available engine run time, hours	33,700	33,796	33,892	33,988	34,084	34,180	34,276	34,372	34,468	34,564	34,660	34,756	34,852	34,948	35,044			
Actual cumulative engine run time, hours	25,032	25,104	25,176	25,248	25,320	25,392	25,464	25,536	25,608	25,680	25,752	25,823	25,895	25,965	26,036			
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%	74.3%			
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	17,225,583	17,273,854	17,321,823	17,369,853	17,421,021	17,472,604	17,522,954	17,572,374	17,623,448	17,673,122	17,722,543	17,772,322	17,823,899	17,873,793	17,924,057	2,046		
Cumulative Capacity Factor	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%			
Cumulative fuel input, MMBtu	216,544	217,155	217,778	218,381	219,045	219,707	220,323	220,991	221,641	222,279	222,908	223,557	224,214	224,861	225,508			
Cumulative gross output, kWh	17,225,583	17,273,854	17,321,823	17,369,853	17,421,021	17,472,604	17,522,954	17,572,374	17,623,448	17,673,122	17,722,543	17,772,322	17,823,899	17,873,793	17,924,057			
Cumulative heat rate, Btu/kWe	11,316	11,317	11,318	11,318	11,319	11,319	11,319	11,321	11,321	11,322	11,322	11,324	11,324	11,325	11,326			
Cumulative heat rate, Btu/kWe	12,571	12,571	12,572	12,572	12,574	12,574	12,573	12,576	12,577	12,577	12,578	12,579	12,579	12,580	12,581			
Service																		
Engine 1																		
Engine 2																		
Engine 3																		
Engine 4																		
Oil - oil and filter change																		
Service - plugs, air filter, valve inspection																		
Precipitation																		
NSTAR Power Reports	Thursday 12/17/2020	Friday 12/18/2020	Saturday 12/19/2020	Sunday 12/20/2020	Monday 12/21/2020	Tuesday 12/22/2020	Wednesday 12/23/2020	Thursday 12/24/2020	Friday 12/25/2020	Saturday 12/26/2020	Sunday 12/27/2020	Monday 12/28/2020	Tuesday 12/29/2020	Wednesday 12/30/2020	Thursday 12/31/2020	TOTAL		
Date																		
Hour																		
1	2,049	1,942	1,916	1,913	1,915	2,122	2,069	1,976	1,989	2,028	1,976	1,972	1,847	2,060	2,083			
2	2,050	1,943	1,916	1,915	1,915	2,085	2,069	1,978	1,989	2,027	1,974	1,972	2,084	2,060	2,083			
3	2,050	1,943	1,915	1,913	1,916	2,072	2,065	1,976	1,989	2,029	1,974	1,972	2,087	2,060	2,083			
4	2,103	1,943	1,916	1,915	1,914	2,074	2,022	1,978	2,006	2,024	1,973	1,973	2,104	2,060	2,085			
5	2,107	1,942	1,913	1,920	1,917	2,075	2,022	1,979	2,036	2,025	1,974	1,975	2,111	2,061	2,085			
6	2,106	1,942	1,916	1,920	1,915	2,070	2,022	1,977	2,035	1,994	1,972	1,976	2,110	2,060	2,083			
7	2,107	1,933	1,915	1,921	1,914	2,068	2,016	1,982	2,050	1,979	1,971	1,977	2,109	2,061	2,083			
8	2,107	1,933	1,912	1,921	1,940	2,069	1,970	1,978	2,082	1,979	1,972	1,975	2,106	2,051	2,084			
9	2,108	1,934	1,911	1,922	2,048	2,067	1,970	1,984	2,082	1,979	1,974	1,973	2,064	2,050	2,081			
10	2,106	1,932	1,913	1,923	2,097	2,066	1,987	1,986	2,082	1,982	1,978	1,974	2,067	2,057	2,079			
11	2,103	1,982	1,916	1,922	2,096	2,070	1,974	1,986	2,082	1,979	1,977	1,972	2,060	1,489	2,098			
12	2,103	1,911	1,913	1,923	2,093	2,068	1,979	1,987	2,081	1,981	1,976	1,977	2,062	1,392	2,104			
13	2,105	1,864	1,918	1,922	2,109	2,069	1,989	1,988	2,082	1,980	1,979	1,978	2,061	1,736	2,109			
14	2,091	1,889	1,921	1,922	2,114	1,718	2,027	1,990	2,082	1,980	1,978	1,978	2,061	2,104	2,105			
15	2,046	1,907	1,918	1,921	2,115	1,913	2,018	1,990	2,081	1,980	1,977	2,071	2,058	1,900	2,107			
16	2,012	1,906	1,916	1,916	2,116	2,122	2,020	1,989	2,077	1,978	1,976	2,119	2,064	2,057	1,703			
17	1,996	1,909	1,913	1,914	2,120	2,120	2,024	1,985	2,081	1,975	1,970	2,124	2,058	2,084	1,420			
18	1,996	1,909	1,912	1,916	2,118	2,122	2,021	1,986	2,079	1,975	1,970	2,116	2,056	2,079	1,464			
19	1,984	1,909	1,912	1,913	2,121	2,118	2,021	1,989	2,078	1,976	1,970	2,120	2,056	2,083	1,884			
20	1,940	1,910	1,910	1,913	2,117	2,118	2,020	1,986	2,081	1,976	1,969	2,119	2,062	2,079	2,101			
21	1,939	1,912	1,912	1,917	2,118	2,115	2,021	1,988	2,062	1,975	1,968	2,119	2,059	2,082	2,098			
22	1,941	1,914	1,914	1,914	2,120	2,082	2,023	1,988	2,031	1,975	1,968	2,118	2,060	2,081	2,098			
23	1,940	1,914	1,912	1,917	2,121	2,070	1,979	1,984	2,029	1,974	1,969	1,824	2,059	2,083	2,098			
24	1,941	1,915	1,913	1,919	2,120	2,073	1,975	1,989	2,029	1,976	1,972	1,408	2,059	2,084	2,097			
TOTAL	49,030	46,138	45,943	46,032	49,089	49,546	48,303	47,619	49,295	47,726	47,357	47,782	49,524	47,913	48,315			
Cumulative Output Sold, kWh	827,984	874,122	920,065	966,097	1,015,186	1,064,732	1,113,035	1,160,654	1,209,949	1,257,675	1,305,032	1,352,814	1,402,338	1,450,251	1,498,566			
Transformer and line efficiency	99.8%	99.8%	100.0%	99.8%	99.8%	99.8%	99.8%	100.0%	99.9%	99.9%	99.8%	99.8%	99.8%	99.9%	99.7%			
Hourly average	2,043	1,922	1,914	1,918	2,045	2,064	2,013	1,984	2,054	1,989	1,973	1,991	2,064	1,996	2,013	2,014		

January 2021																	
		Friday 1/1/2021	Saturday 1/2/2021	Sunday 1/3/2021	Monday 1/4/2021	Tuesday 1/5/2021	Wednesday 1/6/2021	Thursday 1/7/2021	Friday 1/8/2021	Saturday 1/9/2021	Sunday 1/10/2021	Monday 1/11/2021	Tuesday 1/12/2021	Wednesday 1/13/2021	Thursday 1/14/2021	Friday 1/15/2021	Saturday 1/16/2021
LFG and Biogas Flow to the Engines (KSCF)		1,249	1,245	1,245	1,240	1,256	1,251	1,314	1,252	1,309	1,333	1,298	1,288	1,288	1,308	1,252	1,217
LFG and Biogas Flow to the Engines (MMBTU HHV)		663	682	667	675	685	684	696	672	685	683	676	685	686	693	672	696
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and BiogasFlow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,249	1,245	1,245	1,240	1,256	1,251	1,314	1,252	1,309	1,333	1,298	1,288	1,288	1,308	1,252	1,217
LFG and Biogas Total Flow (MMBTU HHV)		663	682	667	675	685	684	696	672	685	683	676	685	686	693	672	696
Average Methane Content (%)		52.4	54.1	52.9	53.8	53.9	54.0	52.3	53.0	51.7	50.6	51.5	52.6	52.6	52.3	53.0	56.5
Engine 1 Hours		24	24	24	24	24	22	24	24	24	24	24	24	24	24	23	24
Engine 2 Hours		-	-	-	-	-	-	-	16	24	24	24	24	24	24	24	24
Engine 3 Hours		24	24	24	24	24	24	24	8	-	-	-	-	-	-	-	-
Engine 4 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Generator 1 Power Output (kWhr)		17,944	17,960	17,964	17,964	18,200	16,548	17,968	17,964	17,964	17,952	17,964	17,964	17,964	17,932	16,168	17,604
Generator 2 Power Output (kWhr)		-	-	-	-	-	-	-	11,632	17,620	16,788	16,220	17,000	17,616	17,568	17,512	17,132
Generator 3 Power Output (kWhr)		16,748	16,772	16,700	17,372	17,956	17,896	17,960	3,136	-	-	-	-	-	-	-	-
Generator 4 Power Output (kWhr)		17,540	17,568	17,560	17,692	17,804	17,804	17,804	17,792	17,832	17,452	17,456	17,232	16,960	17,600	17,796	17,796
Gross Power Output (kWhr)		52,315	52,375	52,295	53,105	54,027	52,297	53,813	50,623	53,552	52,287	51,759	52,316	52,662	53,209	51,547	52,674
Net Power Output (kWhr)		50,408	50,592	50,408	51,192	52,080	50,448	51,848	48,696	51,552	50,288	49,728	50,344	50,704	51,096	49,592	50,904
Power Sold as metered by NStar, (kWhr)		50,386	50,481	50,333	51,059	51,970	50,346	51,730	48,610	51,448	50,227	49,612	50,241	50,597	50,518	49,481	50,782
Offgrid RECs (kWhr)		1,908	1,782	1,890	1,912	1,947	1,849	1,966	1,926	2,000	1,997	2,032	1,973	1,958	2,114	1,954	1,769
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		748	748	749	749	758	752	749	749	749	748	749	749	749	747	703	734
Generator 2		-	-	-	-	-	-	-	727	734	700	676	708	734	732	730	714
Generator 3		698	699	696	724	748	746	748	392	-	-	-	-	-	-	-	-
Generator 4		731	732	732	737	742	742	742	741	743	727	727	718	707	733	742	742
Power output (kW average over 24-hrs)																	
Facility Gross		2,180	2,182	2,179	2,213	2,251	2,179	2,242	2,109	2,231	2,179	2,157	2,180	2,194	2,217	2,148	2,195
Facility Net		2,100	2,108	2,100	2,133	2,170	2,102	2,160	2,029	2,148	2,095	2,072	2,098	2,113	2,129	2,066	2,121
In-plant load		79	74	79	80	81	77	82	80	83	83	85	82	82	88	81	74
Daily availability factor																	
Facility		75%	75%	75%	75%	75%	73%	75%	75%	75%	75%	75%	75%	75%	75%	74%	75%
Engine 1		100%	100%	100%	100%	100%	92%	100%	100%	100%	100%	100%	100%	100%	100%	96%	100%
Engine 2		0%	0%	0%	0%	0%	0%	0%	67%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		100%	100%	100%	100%	100%	100%	100%	33%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 4		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Daily capacity factor																	
Facility		66%	66%	66%	67%	68%	66%	68%	64%	68%	66%	65%	66%	66%	67%	65%	67%
Engine 1		91%	91%	91%	91%	92%	91%	91%	91%	91%	91%	91%	91%	91%	91%	85%	89%
Engine 2		0%	0%	0%	0%	0%	0%	0%	88%	89%	85%	82%	86%	89%	88%	88%	87%
Engine 3		85%	85%	84%	88%	91%	90%	91%	48%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 4		89%	89%	89%	89%	90%	90%	90%	90%	90%	88%	88%	87%	86%	89%	90%	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		24	48	72	96	120	142	166	190	214	238	262	286	310	334	357	381
Engine 2		0	0	0	0	0	0	0	16	40	64	88	112	136	160	184	208
Engine 3		24	48	72	96	120	144	168	176	176	176	176	176	176	176	176	176
Engine 4		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384
Engine operating run hours total from 0 hours																	
Engine 1		116,478	116,502	116,526	116,550	116,574	116,598	116,620	116,644	116,668	116,692	116,716	116,740	116,764	116,788	116,812	116,835
Engine 2		104,135	104,135	104,135	104,135	104,135	104,135	104,135	104,151	104,175	104,199	104,223	104,247	104,271	104,295	104,319	104,343
Engine 3		114,210	114,234	114,258	114,282	114,306	114,330	114,354	114,378	114,386	114,386	114,386	114,386	114,386	114,386	114,386	114,386
Engine 4		112,983	113,007	113,031	113,055	113,079	113,103	113,127	113,151	113,175	113,199	113,223	113,247	113,271	113,295	113,319	113,367
Cumulative availability, %		January 1, 2021 @ 00:00 hours															
Engine 1		100%	100%	100%	100%	100%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Engine 2		0%	0%	0%	0%	0%	0%	0%	8%	19%	27%	33%	39%	44%	48%	51%	54%
Engine 3		100%	100%	100%	100%	100%	100%	100%	92%	81%	73%	67%	61%	56%	52%	49%	46%
Engine 4		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
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		748	1,496	2,245	2,993	3,751	4,504	5,252	6,001	6,749	7,497	8,246	8,994	9,743	10,490	11,193	11,926
Engine 2		-	-	-	-	-	-	-	727	1,461	2,161	2,837	3,545	4,279	5,011	5,741	6,454
Engine 3		698	1,397	2,093	2,816	3,565	4,310	5,059	5,451	5,451	5,451	5,451	5,451	5,451	5,451	5,451	5,451
Engine 4		731	1,463	2,195	2,932	3,674	4,415	5,157	5,899	6,642	7,369	8,096	8,814	9,521	10,254	10,996	11,737
Cumulative capacity factor, %																	
Engine 1		91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	90%	90%
Engine 2		0%	0%	0%	0%	0%	0%	0%	11%	20%	26%	31%	36%	40%	43%	46%	49%
Engine 3		85%	85%	85%	85%	86%	87%	88%	83%	73%	66%	60%	55%	51%	47%	44%	41%
Engine 4		89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%

		Friday 1/1/2021	Saturday 1/2/2021	Sunday 1/3/2021	Monday 1/4/2021	Tuesday 1/5/2021	Wednesday 1/6/2021	Thursday 1/7/2021	Friday 1/8/2021	Saturday 1/9/2021	Sunday 1/10/2021	Monday 1/11/2021	Tuesday 1/12/2021	Wednesday 1/13/2021	Thursday 1/14/2021	Friday 1/15/2021	Saturday 1/16/2021
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	430	502	574	646	718	790	862	934	1,006	1,077	1,149
Cumulative Availability, %		75.0%	75.0%	75.0%	75.0%	75.0%	74.7%	74.7%	74.7%	74.8%	74.8%	74.8%	74.8%	74.8%	74.9%	74.8%	74.8%
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		52,315	104,690	156,985	210,090	264,117	316,414	370,227	420,850	474,402	526,689	578,448	630,764	683,426	736,635	788,182	840,856
Cumulative Capacity Factor		66.1%	66.1%	66.1%	66.3%	66.7%	66.6%	66.8%	66.4%	66.6%	66.5%	66.4%	66.4%	66.4%	66.4%	66.3%	66.4%
Cumulative fuel input, MMBtu HHV		663	1,345	2,012	2,687	3,372	4,056	4,752	5,423	6,108	6,791	7,467	8,152	8,838	9,530	10,202	10,898
Cumulative gross output, kWhr		52,315	104,690	156,985	210,090	264,117	316,414	370,227	420,850	474,402	526,689	578,448	630,764	683,426	736,635	788,182	840,856
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		11,407	11,729	11,475	11,449	11,410	11,772	11,635	11,948	11,508	11,752	11,759	11,792	11,721	11,716	11,736	11,898
Daily heat rate, Btu/kWe gross HHV		12,671	13,029	12,747	12,718	12,675	13,077	12,924	13,273	12,784	13,055	13,062	13,099	13,021	13,015	13,037	13,217
Cumulative heat rate, Btu/kWe gross LHV		11,407	11,568	11,537	11,515	11,493	11,539	11,553	11,601	11,590	11,606	11,620	11,634	11,641	11,646	11,652	11,668
Cumulative heat rate, Btu/kWe gross HHV		12,671	12,850	12,816	12,791	12,767	12,819	12,834	12,887	12,875	12,893	12,908	12,924	12,931	12,937	12,944	12,961
Cumulative by Facility starting Calendar Year																	
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	430	502	574	646	718	790	862	934	1,006	1,077	1,149
Cumulative Availability, %		75.0%	75.0%	75.0%	75.0%	75.0%	74.7%	74.7%	74.7%	74.8%	74.8%	74.8%	74.8%	74.8%	74.9%	74.8%	74.8%
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		52,315	104,690	156,985	210,090	264,117	316,414	370,227	420,850	474,402	526,689	578,448	630,764	683,426	736,635	788,182	840,856
Cumulative Capacity Factor		66.1%	66.1%	66.1%	66.3%	66.7%	66.6%	66.8%	66.4%	66.6%	66.5%	66.4%	66.4%	66.4%	66.4%	66.3%	66.4%
Cumulative fuel input, MMBtu HHV		663	1,345	2,012	2,687	3,372	4,056	4,752	5,423	6,108	6,791	7,467	8,152	8,838	9,530	10,202	10,898
Cumulative gross output, kWhr		52,315	104,690	156,985	210,090	264,117	316,414	370,227	420,850	474,402	526,689	578,448	630,764	683,426	736,635	788,182	840,856
Cumulative heat rate, Btu/kWe gross LHV		11,407	11,568	11,537	11,515	11,493	11,539	11,553	11,601	11,590	11,606	11,620	11,634	11,641	11,646	11,652	11,668
Cumulative heat rate, Btu/kWe gross HHV		12,671	12,850	12,816	12,791	12,767	12,819	12,834	12,887	12,875	12,893	12,908	12,924	12,931	12,937	12,944	12,961
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 1/1/2021	Saturday 1/2/2021	Sunday 1/3/2021	Monday 1/4/2021	Tuesday 1/5/2021	Wednesday 1/6/2021	Thursday 1/7/2021	Friday 1/8/2021	Saturday 1/9/2021	Sunday 1/10/2021	Monday 1/11/2021	Tuesday 1/12/2021	Wednesday 1/13/2021	Thursday 1/14/2021	Friday 1/15/2021	Saturday 1/16/2021
Date																	
Hour																	
1		2,096	2,101	2,096	2,100	2,160	2,183	2,159	2,151	2,145	2,145	2,083	2,087	2,097	2,140	2,132	2,125
2		2,095	2,105	2,096	2,101	2,158	2,185	2,156	2,153	2,144	2,143	2,081	2,086	2,096	2,142	2,130	2,127
3		2,094	2,105	2,097	2,100	2,157	2,182	2,159	1,991	2,143	2,141	2,081	2,083	2,100	2,140	2,131	2,125
4		2,095	2,103	2,099	2,101	2,157	2,178	2,159	1,430	2,144	2,145	2,080	2,086	2,096	2,141	2,134	2,122
5		2,095	2,104	2,097	2,100	2,158	2,174	2,159	1,480	2,145	2,138	2,080	2,086	2,098	2,143	2,131	2,124
6		2,093	2,107	2,099	2,100	2,158	2,170	2,158	1,572	2,143	2,094	2,080	2,085	2,095	2,141	2,130	2,122
7		2,093	2,107	2,099	2,098	2,156	2,158	2,156	1,715	2,141	2,094	2,080	2,084	2,093	2,139	2,127	2,119
8		2,094	2,108	2,097	2,098	2,151	2,159	2,153	1,813	2,141	2,094	2,071	2,079	2,091	2,135	2,126	2,121
9		2,096	2,108	2,102	2,093	2,142	2,165	2,151	2,180	2,143	2,098	2,075	2,079	2,091	2,117	1,725	2,115
10		2,100	2,108	2,079	2,093	2,155	2,176	2,151	2,121	2,145	2,089	2,075	2,082	2,093	1,641	1,406	2,114
11		2,103	2,111	2,081	2,119	2,155	1,666	2,155	2,138	2,144	2,040	2,049	2,096	2,098	2,089	1,820	2,114
12		2,106	2,108	2,077	2,130	2,156	1,423	2,155	2,140	2,145	2,034	2,032	2,118	2,095	2,093	2,013	2,110
13		2,103	2,110	2,099	2,131	2,159	1,767	2,157	2,140	2,146	2,059	2,033	2,118	2,099	2,123	2,123	2,109
14		2,102	2,109	2,106	2,143	2,157	2,151	2,158	2,150	2,147	2,089	2,036	2,097	2,102	2,075	2,127	2,107
15		2,103	2,107	2,102	2,155	2,172	2,166	2,160	2,149	2,148	2,090	2,037	2,102	2,094	2,073	2,126	2,109
16		2,104	2,106	2,105	2,155	2,181	2,168	2,162	2,142	2,146	2,091	2,036	2,094	2,093	2,127	2,121	2,113
17		2,102	2,099	2,101	2,156	2,177	2,162	2,154	2,146	2,145	2,081	2,038	2,100	2,096	2,134	2,111	2,111
18		2,101	2,101	2,100	2,156	2,179	2,161	2,155	2,146	2,144	2,076	2,052	2,096	2,111	2,133	2,116	2,112
19		2,102	2,099	2,102	2,154	2,175	2,159	2,153	2,143	2,141	2,081	2,084	2,095	2,145	2,134	2,121	2,110
20		2,100	2,095	2,097	2,155	2,179	2,160	2,153	2,143	2,143	2,078	2,083	2,096	2,144	2,133	2,123	2,111
21		2,102	2,098	2,102	2,152	2,178	2,157	2,152	2,142	2,141	2,079	2,084	2,097	2,142	2,133	2,127	2,113
22		2,101	2,095	2,100	2,154	2,181	2,160	2,153	2,142	2,142	2,083	2,088	2,099	2,142	2,131	2,127	2,114
23		2,102	2,094	2,099	2,158	2,185	2,158	2,151	2,140	2,141	2,083	2,087	2,098	2,143	2,132	2,127	2,116
24		2,104	2,093	2,101	2,157	2,184	2,158	2,151	2,143	2,141	2,082	2,087	2,098	2,143	2,132	2,126	2,120
TOTAL		50,386	50,481	50,333	51,059	51,970	50,346	51,730	48,610	51,448	50,227	49,612	50,241	50,597	50,518	49,481	50,782
Cumulative Output Sold, kWhr		50,386	100,867	151,200	202,259	254,229	304,575	356,305	404,915	456,363	506,590	556,202	606,443	657,040	707,558	757,039	807,821
Transformer and line efficiency		100.0%	99.8%	99.9%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.8%	99.8%	99.8%	98.9%	99.8%	99.8%
Hourly average		2,099	2,103	2,097	2,127	2,165	2,098	2,155	2,025	2,144	2,093	2,067	2,093	2,108	2,105	2,062	2,116

January 2021																					
	Sunday 1/17/2021	Monday 1/18/2021	Tuesday 1/19/2021	Wednesday 1/20/2021	Thursday 1/21/2021	Friday 1/22/2021	Saturday 1/23/2021	Sunday 1/24/2021	Monday 1/25/2021	Tuesday 1/26/2021	Wednesday 1/27/2021	Thursday 1/28/2021	Friday 1/29/2021	Saturday 1/30/2021	Sunday 1/31/2021	TOTAL	Biogas	LFG			
LFG and Biogas Flow to the Engine	1,257	1,270	1,286	1,257	1,229	1,271	1,289	1,285	1,264	1,281	1,229	1,253	1,273	1,195	1,260	39,223	871	38,352			
LFG and Biogas Flow to the Engine	707	705	700	702	690	700	689	674	676	690	666	670	668	628	642	21,104	606	20,497			
LFG and Biogas Flow to the Flare (	-	-	-	-	-	-	-	-	-	-	-	-	-	76	-	76	2.9%	97%			
LFG and BiogasFlow to the Flare (#	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	40					
LFG and Biogas Total Flow (KSCF)	1,257	1,270	1,286	1,257	1,229	1,271	1,289	1,285	1,264	1,281	1,229	1,253	1,273	1,271	1,260	39,300					
LFG and Biogas Total Flow (MMBT	707	705	700	702	690	700	689	674	676	690	666	670	668	668	642	21,144					
Average Methane Content (%)	55.6	54.8	53.8	55.2	55.5	54.4	52.8	52.7	52.9	53.2	53.6	52.9	51.8	51.9	50.3	53.2					
Engine 1 Hours	24	24	24	24	24	18	-	-	-	-	-	-	-	-	-	519					
Engine 2 Hours	24	24	24	24	14	24	24	24	24	24	24	24	24	23	24	547					
Engine 3 Hours	-	-	-	13	23	24	24	24	24	24	22	24	24	24	24	450					
Engine 4 Hours	24	24	24	20	12	4	24	24	24	24	24	24	24	21	24	705					
Generator 1 Power Output (kWhr)	17,604	17,720	17,964	18,356	18,496	14,424	-	-	-	-	-	-	-	-	-	388,588					
Generator 2 Power Output (kWhr)	17,212	17,484	17,960	10,068	9,188	18,268	18,184	17,916	18,560	18,560	18,192	17,788	17,844	16,912	17,404	400,628					
Generator 3 Power Output (kWhr)	-	-	-	8,852	15,908	17,780	17,360	17,356	17,360	17,356	15,436	17,356	17,360	17,356	17,356	321,376					
Generator 4 Power Output (kWhr)	17,808	17,856	17,464	15,132	8,396	2,256	18,504	17,376	16,752	17,516	18,484	18,496	18,036	14,752	17,944	518,460					
Gross Power Output (kWhr)	52,739	53,198	53,489	52,486	52,057	52,766	54,030	52,615	52,646	53,408	52,053	53,586	53,205	48,958	52,645	1,630,737					
Net Power Output (kWhr)	50,896	51,168	51,368	50,552	50,048	50,848	52,168	50,736	50,608	51,280	50,016	51,488	50,968	46,856	50,480	1,569,360					
Power Sold as metered by NStar, (l	50,805	51,061	51,246	50,437	49,931	50,733	52,023	50,598	50,481	51,143	49,879	51,367	50,848	46,782	50,348	1,565,503	CRMCB inplant				
Offgrid RECs (kWhr)	1,843	2,031	2,122	1,932	2,011	1,915	1,863	1,879	2,038	2,128	2,037	2,098	2,237	2,102	2,165	61,378	14,953				
Calculated Performance Results																		24%			
Daily																	of total in-plant power				
Power output (kW average whe																					
Generator 1	734	738	749	765	771	801	-	-	-	-	-	-	-	-	-						
Generator 2	717	729	748	719	656	761	758	747	773	773	758	741	744	735	725						
Generator 3	-	-	-	681	692	741	723	723	723	723	702	723	723	723	723						
Generator 4	742	744	728	757	700	564	771	724	698	730	770	771	752	702	748						
Power output (kW average ove																					
Facility Gross	2,197	2,217	2,229	2,187	2,169	2,199	2,251	2,192	2,194	2,225	2,169	2,233	2,217	2,040	2,194						
Facility Net	2,121	2,132	2,140	2,106	2,085	2,119	2,174	2,114	2,109	2,137	2,084	2,145	2,124	1,952	2,103						
In-plant load	77	85	88	81	84	80	78	78	85	89	85	87	93	88	90						
Daily availability factor																					
Facility	75%	75%	75%	74%	76%	73%	75%	75%	75%	75%	73%	75%	75%	71%	75%						
Engine 1	100%	100%	100%	100%	100%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
Engine 2	100%	100%	100%	58%	58%	100%	100%	100%	100%	100%	100%	100%	100%	96%	100%						
Engine 3	0%	0%	0%	54%	96%	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%						
Engine 4	100%	100%	100%	83%	50%	17%	100%	100%	100%	100%	100%	100%	100%	88%	100%						
Daily capacity factor																					
Facility	67%	67%	68%	66%	66%	67%	68%	66%	66%	67%	66%	68%	67%	62%	66%						
Engine 1	89%	89%	91%	93%	93%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
Engine 2	87%	88%	91%	87%	80%	92%	92%	90%	94%	94%	92%	90%	90%	89%	88%						
Engine 3	0%	0%	0%	83%	84%	90%	88%	88%	88%	88%	85%	88%	88%	88%	88%						
Engine 4	90%	90%	88%	92%	85%	68%	93%	88%	85%	88%	93%	93%	91%	85%	91%						
Cumulative by engine																					
Engine operating run hours in tl																					
Max Cumulative Available,	408	432	456	480	504	528	552	576	600	624	648	672	696	720	744						
Engine 1	405	429	453	477	501	519	519	519	519	519	519	519	519	519	519						
Engine 2	232	256	280	294	308	332	356	380	404	428	452	476	500	523	547						
Engine 3	176	176	176	189	212	236	260	284	308	332	354	378	402	426	450						
Engine 4	408	432	456	476	488	492	516	540	564	588	612	636	660	681	705						
Engine operating run hours tota																					
Engine 1	116,883	116,907	116,931	116,955	116,979	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997						
Engine 2	104,367	104,391	104,415	104,429	104,443	104,467	104,491	104,515	104,539	104,563	104,587	104,611	104,635	104,658	104,682						
Engine 3	114,386	114,386	114,386	114,399	114,422	114,446	114,470	114,494	114,518	114,542	114,564	114,588	114,612	114,636	114,660						
Engine 4	113,391	113,415	113,439	113,459	113,471	113,475	113,499	113,523	113,547	113,571	113,595	113,619	113,643	113,664	113,688						
Cumulative availability, %																					
Engine 1	99%	99%	99%	99%	99%	98%	94%	90%	87%	83%	80%	77%	75%	72%	70%						
Engine 2	57%	59%	61%	61%	61%	63%	64%	66%	67%	69%	70%	71%	72%	73%	74%						
Engine 3	43%	41%	39%	39%	42%	45%	47%	49%	51%	53%	55%	56%	58%	59%	60%						
Engine 4	100%	100%	100%	99%	97%	93%	93%	94%	94%	94%	94%	95%	95%	95%	95%						
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	12,660	13,398	14,147	14,911	15,682	16,483	16,483	16,483	16,483	16,483	16,483	16,483	16,483	16,483	16,483						
Engine 2	7,172	7,900	8,648	9,367	10,024	10,785	11,543	12,289	13,062	13,836	14,594	15,335	16,078	16,814	17,539						
Engine 3	5,451	5,451	5,451	6,131	6,823	7,564	8,287	9,010	9,734	10,457	11,159	11,882	12,605	13,328	14,051						
Engine 4	12,479	13,223	13,951	14,707	15,407	15,971	16,742	17,466	18,164	18,894	19,664	20,435	21,186	21,889	22,636						
Cumulative capacity factor, %																					
Engine 1	90%	90%	90%	90%	91%	91%	87%	83%	80%	77%	74%	71%	69%	67%	64%						
Engine 2	51%	53%	55%	57%	58%	59%	61%	62%	63%	65%	66%	67%	68%	68%	69%						
Engine 3	39%	37%	35%	37%	39%	42%	44%	46%	47%	49%	50%	51%	53%	54%	55%						
Engine 4	89%	89%	88%	89%	89%	88%	88%	88%	88%	88%	88%	88%	89%	88%	89%						

	Sunday 1/17/2021	Monday 1/18/2021	Tuesday 1/19/2021	Wednesday 1/20/2021	Thursday 1/21/2021	Friday 1/22/2021	Saturday 1/23/2021	Sunday 1/24/2021	Monday 1/25/2021	Tuesday 1/26/2021	Wednesday 1/27/2021	Thursday 1/28/2021	Friday 1/29/2021	Saturday 1/30/2021	Sunday 1/31/2021	TOTAL	Biogas	LFG
Cumulative by Facility in month																		
Max cumulative available engine run 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 hours	1,221	1,293	1,365	1,436	1,509	1,579	1,651	1,723	1,795	1,867	1,937	2,009	2,081	2,149	2,221			
Cumulative Availability, %	74.8%	74.8%	74.8%	74.8%	74.9%	74.8%	74.8%	74.8%	74.8%	74.8%	74.7%	74.7%	74.7%	74.6%	74.6%			
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	893,595	946,793	1,000,282	1,052,768	1,104,825	1,157,591	1,211,621	1,264,236	1,316,882	1,370,290	1,422,343	1,475,929	1,529,134	1,578,092	1,630,737			
Cumulative Capacity Factor	66.4%	66.4%	66.5%	66.5%	66.4%	66.4%	66.5%	66.5%	66.5%	66.5%	66.5%	66.6%	66.6%	66.4%	66.4%			
Cumulative fuel input, MMBtu	11,605	12,310	13,009	13,712	14,402	15,102	15,790	16,465	17,141	17,831	18,497	19,167	19,835	20,462	21,104			
Cumulative gross output, kWh	893,595	946,793	1,000,282	1,052,768	1,104,825	1,157,591	1,211,621	1,264,236	1,316,882	1,370,290	1,422,343	1,475,929	1,529,134	1,578,092	1,630,737			
Heat Rate																		
Daily heat rate, Btu/kWe gross	12,059	11,923	11,777	12,047	11,930	11,940	11,478	11,537	11,561	11,627	11,523	11,259	11,294	11,542	10,969			
Daily heat rate, Btu/kWe net	13,396	13,245	13,083	13,383	13,253	13,264	12,750	12,816	12,842	12,916	12,800	12,507	12,546	12,821	12,185			
Cumulative heat rate, Btu/kWe gross	11,691	11,704	11,708	11,725	11,734	11,744	11,732	11,724	11,717	11,714	11,707	11,690	11,677	11,672	11,650			
Cumulative heat rate, Btu/kWe net	12,987	13,001	13,006	13,024	13,035	13,046	13,032	13,023	13,016	13,012	13,005	12,986	12,971	12,966	12,941			
Cumulative by Facility starting C																		
Max cumulative available engine run 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 hours	1,221	1,293	1,365	1,436	1,509	1,579	1,651	1,723	1,795	1,867	1,937	2,009	2,081	2,149	2,221			
Cumulative Availability, %	74.8%	74.8%	74.8%	74.8%	74.9%	74.8%	74.8%	74.8%	74.8%	74.8%	74.7%	74.7%	74.7%	74.6%	74.6%			
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	893,595	946,793	1,000,282	1,052,768	1,104,825	1,157,591	1,211,621	1,264,236	1,316,882	1,370,290	1,422,343	1,475,929	1,529,134	1,578,092	1,630,737			
Cumulative Capacity Factor	66.4%	66.4%	66.5%	66.5%	66.4%	66.4%	66.5%	66.5%	66.5%	66.5%	66.5%	66.6%	66.6%	66.4%	66.4%			
Cumulative fuel input, MMBtu	11,605	12,310	13,009	13,712	14,402	15,102	15,790	16,465	17,141	17,831	18,497	19,167	19,835	20,462	21,104			
Cumulative gross output, kWh	893,595	946,793	1,000,282	1,052,768	1,104,825	1,157,591	1,211,621	1,264,236	1,316,882	1,370,290	1,422,343	1,475,929	1,529,134	1,578,092	1,630,737			
Cumulative heat rate, Btu/kWe gross	11,691	11,704	11,708	11,725	11,734	11,744	11,732	11,724	11,717	11,714	11,707	11,690	11,677	11,672	11,650			
Cumulative heat rate, Btu/kWe net	12,987	13,001	13,006	13,024	13,035	13,046	13,032	13,023	13,016	13,012	13,005	12,986	12,971	12,966	12,941			
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	Sunday 1/17/2021	Monday 1/18/2021	Tuesday 1/19/2021	Wednesday 1/20/2021	Thursday 1/21/2021	Friday 1/22/2021	Saturday 1/23/2021	Sunday 1/24/2021	Monday 1/25/2021	Tuesday 1/26/2021	Wednesday 1/27/2021	Thursday 1/28/2021	Friday 1/29/2021	Saturday 1/30/2021	Sunday 1/31/2021	TOTAL		
Hour																		
1	2,118	2,121	2,151	2,168	2,130	2,183	2,185	2,131	2,109	2,100	2,173	2,129	2,124	2,048	2,097			
2	2,120	2,122	2,154	2,167	2,127	2,189	2,185	2,132	2,109	2,099	2,173	2,129	2,122	2,048	2,096			
3	2,120	2,120	2,153	2,166	2,128	2,186	2,185	2,131	2,108	2,099	2,174	2,128	2,122	2,048	2,096			
4	2,119	2,120	2,152	2,169	2,127	2,185	2,184	2,129	2,108	2,098	2,172	2,131	2,122	2,047	2,093			
5	2,119	2,123	2,152	2,170	2,128	2,186	2,182	2,132	2,107	2,098	2,173	2,130	2,122	2,047	2,095			
6	2,119	2,123	2,147	2,167	2,128	2,186	2,182	2,131	2,108	2,099	2,171	2,129	2,118	2,045	2,092			
7	2,120	2,120	2,144	2,164	2,130	2,184	2,182	2,129	2,108	2,095	2,148	2,127	2,155	2,046	2,093			
8	2,119	2,122	2,144	2,171	2,138	2,192	2,183	2,131	2,108	2,095	2,123	2,123	2,160	2,047	2,093			
9	2,119	2,116	2,145	2,221	2,189	2,194	2,184	2,104	2,103	2,096	2,119	2,117	2,162	2,048	2,094			
10	2,120	2,115	2,146	2,222	2,200	2,199	2,184	2,063	2,096	2,097	2,119	2,115	2,163	2,052	2,098			
11	2,117	2,104	2,149	2,064	2,161	2,203	2,183	2,066	2,097	2,101	1,756	2,116	2,167	2,054	2,098			
12	2,112	2,103	2,150	1,899	2,149	2,207	2,186	2,058	2,104	2,102	1,462	2,115	2,167	2,057	2,104			
13	2,108	2,105	2,150	2,004	2,027	2,199	2,187	2,059	2,102	2,104	1,536	2,135	2,170	2,059	2,103			
14	2,115	2,103	2,150	1,545	2,038	2,183	2,186	2,097	2,105	2,139	2,001	2,170	2,168	2,059	2,103			
15	2,113	2,109	2,161	2,090	2,012	2,205	2,184	2,116	2,104	2,170	2,172	2,174	2,167	2,059	2,104			
16	2,116	2,118	1,688	2,019	2,170	2,210	2,184	2,113	2,104	2,174	2,176	2,175	2,135	2,059	2,103			
17	2,116	2,154	2,161	2,134	2,134	2,194	2,148	2,113	2,105	2,173	2,177	2,176	2,121	2,044	2,102			
18	2,117	2,149	2,165	2,129	1,455	2,165	2,135	2,111	2,100	2,172	2,174	2,176	2,096	1,412	2,099			
19	2,113	2,152	2,160	2,128	1,589	1,932	2,133	2,109	2,100	2,173	2,171	2,174	2,048	1,413	2,099			
20	2,116	2,152	2,163	2,128	2,056	1,459	2,133	2,110	2,099	2,171	2,171	2,173	2,047	1,156	2,098			
21	2,117	2,150	2,165	2,127	2,166	1,493	2,133	2,109	2,098	2,171	2,152	2,153	2,048	1,670	2,098			
22	2,115	2,153	2,165	2,126	2,183	2,030	2,133	2,108	2,098	2,173	2,131	2,125	2,047	2,075	2,097			
23	2,118	2,155	2,165	2,130	2,183	2,185	2,132	2,108	2,099	2,173	2,128	2,124	2,049	2,091	2,096			
24	2,120	2,152	2,166	2,129	2,183	2,184	2,130	2,108	2,102	2,171	2,127	2,123	2,048	2,098	2,097			
TOTAL	50,805	51,061	51,246	50,437	49,931	50,733	52,023	50,598	50,481	51,143	49,879	51,367	50,848	46,782	50,348			
Cumulative Output Sold, kWh	858,626	909,687	960,933	1,011,370	1,061,301	1,112,034	1,164,057	1,214,655	1,265,136	1,316,279	1,366,158	1,417,525	1,468,373	1,515,155	1,565,503			
Transformer and line efficiency	99.8%	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%	99.7%			
Hourly average	2,117	2,128	2,135	2,102	2,080	2,114	2,168	2,108	2,103	2,131	2,078	2,140	2,119	1,949	2,098	2,104		

February 2021		Monday 2/1/2021	Tuesday 2/2/2021	Wednesday 2/3/2021	Thursday 2/4/2021	Friday 2/5/2021	Saturday 2/6/2021	Sunday 2/7/2021	Monday 2/8/2021	Tuesday 2/9/2021	Wednesday 2/10/2021	Thursday 2/11/2021	Friday 2/12/2021	Saturday 2/13/2021	Sunday 2/14/2021	Monday 2/15/2021	Tuesday 2/16/2021
LFG and Biogas Flow to the Engines (KSCF)		908	707	1,285	1,287	1,272	1,280	1,274	1,287	1,276	1,259	1,254	1,275	1,284	1,271	1,250	1,259
LFG and Biogas Flow to the Engines (MMBTU HHV)		481	390	670	651	660	658	663	653	667	649	656	662	671	667	666	691
LFG and Biogas Flow to the Flare (KSCF)		349	544	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Flow to the Flare (MMBTU HHV)		185	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LFG and Biogas Total Flow (KSCF)		1,258	1,250	1,285	1,287	1,272	1,280	1,274	1,287	1,276	1,259	1,254	1,275	1,284	1,271	1,250	1,259
LFG and Biogas Total Flow (MMBTU HHV)		666	690	670	651	660	658	663	653	667	649	656	662	671	667	666	691
Average Methane Content (%)		52.4	54.5	51.5	50.0	51.3	50.8	51.4	50.1	51.6	50.9	51.7	51.3	51.6	51.8	52.7	54.2
Engine 1 Hours		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine 2 Hours		18	14	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Engine 3 Hours		18	14	24	24	24	24	24	24	24	24	24	24	24	24	24	23
Engine 4 Hours		18	13	25	24	24	24	24	24	24	24	24	24	24	24	24	24
Generator 1 Power Output (kWhr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 2 Power Output (kWhr)		11,900	10,044	18,448	17,404	17,400	17,400	17,648	16,736	17,368	16,872	16,944	15,972	17,272	17,400	17,408	18,228
Generator 3 Power Output (kWhr)		11,852	10,036	18,536	17,368	17,356	17,352	17,356	16,772	17,120	16,312	17,328	17,424	17,364	17,366	17,356	16,952
Generator 4 Power Output (kWhr)		12,164	10,100	18,500	17,684	17,344	17,348	17,328	17,068	17,928	17,932	17,048	17,948	17,940	17,932	17,928	19,000
Gross Power Output (kWhr)		35,970	30,226	55,423	52,397	52,057	52,064	52,311	50,499	52,378	51,041	51,262	51,280	52,530	52,652	52,650	54,146
Net Power Output (kWhr)		34,432	29,168	53,496	50,440	50,112	50,064	50,344	48,528	50,440	49,304	49,488	49,216	50,608	50,752	50,744	52,256
Power Sold as metered by NStar, (kWhr)		35,274	29,106	53,383	50,331	49,994	49,958	50,209	48,426	50,353	49,186	49,392	49,073	50,514	50,645	50,620	52,122
Offgrid RECs (kWhr)		1,538	1,058	1,927	1,958	1,944	2,001	1,966	1,971	1,937	1,737	1,777	2,062	1,922	1,899	1,905	1,893
Calculated Performance Results																	
Daily																	
Power output (kW average when running)																	
Generator 1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generator 2		661	717	769	725	725	725	735	697	724	703	706	666	720	725	725	760
Generator 3		658	717	772	724	723	723	723	699	713	680	722	726	724	723	723	737
Generator 4		676	777	740	737	723	723	722	711	747	747	710	748	748	747	747	792
Power output (kW average over 24-hrs)																	
Facility Gross		1,499	1,259	2,309	2,183	2,169	2,169	2,180	2,104	2,182	2,127	2,136	2,137	2,189	2,194	2,194	2,256
Facility Net		1,435	1,215	2,229	2,102	2,088	2,086	2,098	2,022	2,102	2,054	2,062	2,051	2,109	2,115	2,114	2,177
In-plant load		64	44	80	82	81	83	82	82	81	72	74	86	80	79	79	79
Daily availability factor																	
Facility		56%	43%	76%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	74%
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 2		75%	58%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Engine 3		75%	58%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96%
Engine 4		75%	54%	104%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Daily capacity factor																	
Facility		45%	38%	70%	66%	66%	66%	66%	64%	66%	64%	65%	65%	66%	66%	66%	68%
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 2		80%	87%	93%	88%	88%	88%	89%	85%	88%	86%	87%	88%	88%	88%	88%	92%
Engine 3		80%	87%	94%	88%	88%	88%	88%	85%	86%	82%	88%	88%	88%	88%	88%	89%
Engine 4		82%	94%	90%	89%	88%	88%	88%	86%	91%	91%	86%	91%	91%	91%	91%	96%
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	0	0	0	0	0	0	0	0
Engine 2		18	32	56	80	104	128	152	176	200	224	248	272	296	320	344	368
Engine 3		18	32	56	80	104	128	152	176	200	224	248	272	296	320	344	367
Engine 4		18	31	56	80	104	128	152	176	200	224	248	272	296	320	344	368
Engine operating run hours total from 0 hours																	
Engine 1		116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997
Engine 2		104,682	104,700	104,714	104,738	104,762	104,786	104,810	104,834	104,858	104,882	104,906	104,930	104,954	104,978	105,002	105,050
Engine 3		114,660	114,678	114,692	114,716	114,740	114,764	114,788	114,812	114,836	114,860	114,884	114,908	114,932	114,956	114,980	115,027
Engine 4		113,688	113,706	113,719	113,744	113,768	113,792	113,816	113,840	113,864	113,888	113,912	113,936	113,960	113,984	114,008	114,056
Cumulative availability, %		February 1, 2020 @ 00:00 hours															
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 2		75%	67%	78%	83%	87%	89%	90%	92%	93%	93%	94%	94%	95%	96%	96%	96%
Engine 3		75%	67%	78%	83%	87%	89%	90%	92%	93%	93%	94%	94%	95%	96%	96%	96%
Engine 4		75%	65%	78%	83%	87%	89%	90%	92%	93%	93%	94%	94%	95%	96%	96%	96%
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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine 2		661	1,379	2,147	2,872	3,597	4,322	5,058	5,755	6,479	7,182	7,888	8,553	9,273	9,998	10,723	11,483
Engine 3		658	1,375	2,148	2,871	3,594	4,317	5,041	5,739	6,453	7,132	7,854	8,580	9,304	10,027	10,750	11,487
Engine 4		676	1,453	2,193	2,930	3,652	4,375	5,097	5,808	6,555	7,302	8,013	8,761	9,508	10,255	11,002	11,794
Cumulative capacity factor, %																	
Engine 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Engine 2		80%	84%	87%	87%	87%	87%	88%	87%	87%	87%	87%	86%	86%	87%	87%	87%
Engine 3		80%	83%	87%	87%	87%	87%	87%	87%	87%	86%	87%	87%	87%	87%	87%	87%
Engine 4		82%	88%	89%	89%	89%	88%	88%	88%	88%	89%	88%	88%	89%	89%	89%	89%

		Monday 2/1/2021	Tuesday 2/2/2021	Wednesday 2/3/2021	Thursday 2/4/2021	Friday 2/5/2021	Saturday 2/6/2021	Sunday 2/7/2021	Monday 2/8/2021	Tuesday 2/9/2021	Wednesday 2/10/2021	Thursday 2/11/2021	Friday 2/12/2021	Saturday 2/13/2021	Sunday 2/14/2021	Monday 2/15/2021	Tuesday 2/16/2021
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		54	95	168	240	312	384	456	528	600	672	744	816	888	960	1,032	1,103
Cumulative Availability, %		56.3%	49.5%	58.3%	62.5%	65.0%	66.7%	67.9%	68.8%	69.4%	70.0%	70.5%	70.8%	71.2%	71.4%	71.7%	71.8%
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		35,970	66,196	121,619	174,016	226,073	278,137	330,448	380,947	433,325	484,366	535,628	586,908	639,438	692,090	744,740	798,886
Cumulative Capacity Factor		45.4%	41.8%	51.2%	54.9%	57.1%	58.5%	59.6%	60.1%	60.8%	61.2%	61.5%	61.8%	62.1%	62.4%	62.7%	63.0%
Cumulative fuel input, MMBtu HHV		481	871	1,541	2,193	2,852	3,511	4,173	4,826	5,493	6,142	6,798	7,460	8,131	8,797	9,463	10,154
Cumulative gross output, kWhr		35,970	66,196	121,619	174,016	226,073	278,137	330,448	380,947	433,325	484,366	535,628	586,908	639,438	692,090	744,740	798,886
Heat Rate																	
Daily heat rate, Btu/kWe gross LHV		12,045	11,615	10,882	11,191	11,408	11,380	11,402	11,635	11,460	11,446	11,518	11,625	11,494	11,399	11,389	11,483
Daily heat rate, Btu/kWe gross HHV		13,381	12,903	12,089	12,432	12,673	12,642	12,667	12,635	12,731	12,715	12,795	12,913	12,768	12,662	12,651	12,756
Cumulative heat rate, Btu/kWe gross LHV		12,045	11,849	11,408	11,343	11,358	11,362	11,369	11,404	11,411	11,414	11,424	11,442	11,446	11,442	11,439	11,442
Cumulative heat rate, Btu/kWe gross HHV		13,381	13,162	12,673	12,601	12,617	12,622	12,629	12,668	12,676	12,680	12,691	12,710	12,715	12,711	12,707	12,710
Cumulative by Facility starting Calendar Year																	
Max cumulative available engine run hours		3,072	3,168	3,264	3,360	3,456	3,552	3,648	3,744	3,840	3,936	4,032	4,128	4,224	4,320	4,416	4,512
Actual cumulative engine run hours		2,275	2,316	2,389	2,461	2,533	2,605	2,677	2,749	2,821	2,893	2,965	3,037	3,109	3,181	3,253	3,324
Cumulative Availability, %		74.1%	73.1%	73.2%	73.2%	73.3%	73.3%	73.4%	73.4%	73.5%	73.5%	73.5%	73.6%	73.6%	73.6%	73.7%	73.7%
Max cumulative gross output, kWhr		2,534,400	2,613,600	2,692,800	2,772,000	2,851,200	2,930,400	3,009,600	3,088,800	3,168,000	3,247,200	3,326,400	3,405,600	3,484,800	3,564,000	3,643,200	3,722,400
Actual cumulative gross output, kWhr		1,666,707	1,696,933	1,752,356	1,804,753	1,856,810	1,908,874	1,961,185	2,011,684	2,064,062	2,115,103	2,166,365	2,217,645	2,270,175	2,322,827	2,375,477	2,429,623
Cumulative Capacity Factor		65.8%	64.9%	65.1%	65.1%	65.1%	65.1%	65.2%	65.1%	65.2%	65.1%	65.1%	65.1%	65.1%	65.2%	65.2%	65.3%
Cumulative fuel input, MMBtu HHV		21,585	21,975	22,645	23,297	23,956	24,614	25,277	25,930	26,597	27,246	27,901	28,564	29,234	29,901	30,567	31,258
Cumulative gross output, kWhr		1,666,707	1,696,933	1,752,356	1,804,753	1,856,810	1,908,874	1,961,185	2,011,684	2,064,062	2,115,103	2,166,365	2,217,645	2,270,175	2,322,827	2,375,477	2,429,623
Cumulative heat rate, Btu/kWe gross LHV		11,658	11,657	11,633	11,620	11,614	11,608	11,602	11,603	11,600	11,596	11,594	11,595	11,592	11,588	11,584	11,581
Cumulative heat rate, Btu/kWe gross HHV		12,951	12,950	12,923	12,908	12,902	12,895	12,889	12,890	12,886	12,881	12,879	12,880	12,878	12,873	12,868	12,865
Service																	
Engine 1		Nstar Outage Communications															
Engine 2		from heavy wet snow storm															
Engine 3		Frozen dewatering lines															
Engine 4		Digester Vaughan Pump Maintenance															
Oil - oil and filter change																	
Service - plugs, air filter, valve inspection and adjustment																	
Precipitation																	
NSTAR Power Reports		Monday 2/1/2021	Tuesday 2/2/2021	Wednesday 2/3/2021	Thursday 2/4/2021	Friday 2/5/2021	Saturday 2/6/2021	Sunday 2/7/2021	Monday 2/8/2021	Tuesday 2/9/2021	Wednesday 2/10/2021	Thursday 2/11/2021	Friday 2/12/2021	Saturday 2/13/2021	Sunday 2/14/2021	Monday 2/15/2021	Tuesday 2/16/2021
Date																	
Hour																	
1		2,100	-	2,235	2,160	2,083	2,088	2,078	2,084	2,013	2,088	2,023	2,079	2,109	2,108	2,111	2,110
2		2,099	-	2,236	2,132	2,085	2,084	2,079	2,081	2,012	2,033	2,025	2,078	2,109	2,109	2,111	2,112
3		2,101	-	2,235	2,133	2,083	2,088	2,079	2,081	2,077	2,013	2,024	2,077	2,109	2,110	2,108	2,112
4		2,101	-	2,232	2,134	2,084	2,085	2,080	2,081	2,078	2,014	2,024	2,078	2,108	2,112	2,111	2,112
5		2,099	-	2,234	2,132	2,085	2,083	2,081	2,079	2,085	2,013	2,023	2,077	2,109	2,110	2,113	2,113
6		2,102	-	2,234	2,131	2,082	2,084	2,077	2,074	2,085	2,005	2,021	2,077	2,110	2,110	2,110	2,109
7		2,095	-	2,233	2,126	2,084	2,084	2,080	2,074	2,021	2,003	2,020	2,077	2,108	2,108	2,111	2,107
8		2,117	-	2,232	2,087	2,082	2,083	2,081	2,072	2,010	2,002	2,020	2,002	2,107	2,112	2,107	2,136
9		2,165	-	2,226	2,075	2,083	2,081	2,084	2,071	2,007	2,007	1,535	2,008	2,111	2,111	2,108	2,076
10		2,163	-	2,228	2,076	2,079	2,082	2,084	2,017	2,073	2,060	1,912	2,070	2,111	2,114	2,109	2,118
11		2,162	576	2,229	2,078	2,079	2,082	2,082	1,786	2,087	2,088	2,149	1,646	2,109	2,112	2,106	2,307
12		2,165	1,803	2,230	2,076	2,078	2,083	2,082	1,809	2,145	2,096	2,169	1,955	2,063	2,110	2,106	2,330
13		2,164	2,168	2,229	2,078	2,079	2,084	2,080	1,867	2,153	2,080	2,172	2,055	2,065	2,111	2,105	2,336
14		2,195	2,209	2,228	2,085	2,079	2,085	2,085	1,932	2,154	2,020	2,154	2,086	2,078	2,112	2,108	2,333
15		2,271	2,237	2,223	2,086	2,081	2,085	2,087	1,986	2,154	2,082	2,157	2,109	2,114	2,110	2,108	2,337
16		118	2,231	2,227	2,086	2,087	2,085	2,132	2,093	2,156	2,084	2,155	2,116	2,113	2,108	2,111	2,346
17		26	2,235	2,226	2,079	2,085	2,077	2,130	2,085	2,160	2,099	2,159	2,116	2,111	2,108	2,108	2,315
18		2,100	2,237	2,225	2,076	2,087	2,074	2,132	2,076	2,160	2,096	2,154	2,106	2,110	2,111	2,110	1,552
19		931	2,234	2,226	2,086	2,084	2,074	2,131	2,022	2,156	2,093	2,097	2,108	2,110	2,111	2,110	2,037
20		-	2,234	2,224	2,085	2,083	2,075	2,131	2,006	2,157	2,094	2,079	2,111	2,111	2,109	2,108	2,216
21		-	2,236	2,221	2,082	2,086	2,076	2,086	2,013	2,150	2,045	2,079	2,112	2,107	2,108	2,111	2,244
22		-	2,237	2,208	2,085	2,077	2,082	2,013	2,083	2,022	2,081	2,111	2,110	2,110	2,110	2,109	2,218
23		-	2,234	2,182	2,079	2,084	2,079	2,081	2,012	2,085	2,024	2,081	2,109	2,110	2,111	2,111	2,221
24		-	2,235	2,180	2,084	2,086	2,080	2,085	2,012	2,085	2,025	2,079	2,110	2,112	2,110	2,110	2,225
TOTAL		35,274	29,106	53,383	50,331	49,994	49,958	50,209	48,426	50,353	49,186	49,392	49,073	50,514	50,645	50,620	52,122
Cumulative Output Sold, kWhr		35,274	64,380	117,763	168,094	218,088	268,046	318,255	366,681	417,034	466,220	515,612	564,685	615,199	665,844	716,464	768,586
Transformer and line efficiency		102.4%	99.8%	99.8%	99.8%	99.8%	99.8%	99.7%	99.8%	99.8%	99.8%	99.8%	99.7%	99.8%	99.8%	99.8%	99.7%
Hourly average		1,470	1,213	2,224	2,097	2,083	2,082	2,092	2,018	2,098	2,049	2,058	2,045	2,105	2,110	2,109	2,172

February 2021																	
		Wednesday 2/17/2021	Thursday 2/18/2021	Friday 2/19/2021	Saturday 2/20/2021	Sunday 2/21/2021	Monday 2/22/2021	Tuesday 2/23/2021	Wednesday 2/24/2021	Thursday 2/25/2021	Friday 2/26/2021	Saturday 2/27/2021	Sunday 2/28/2021	TOTAL	Biogas	LFG	
LFG and Biogas Flow to the Engine	1,286	1,269	1,281	1,267	1,254	1,252	1,273	1,236	1,192	1,263	1,247	1,257	34,506	640	33,866		
LFG and Biogas Flow to the Engine	660	660	674	674	650	674	691	666	629	661	662	663	18,117	370	17,747		
LFG and Biogas Flow to the Flare (t)	-	-	-	-	-	-	-	-	-	-	-	-	893	2.0%	98%		
LFG and BiogasFlow to the Flare (t)	-	-	-	-	-	-	-	-	-	-	-	-	485				
LFG and Biogas Total Flow (KSCF)	1,286	1,269	1,281	1,267	1,254	1,252	1,273	1,236	1,192	1,263	1,247	1,257	35,399				
LFG and Biogas Total Flow (MMBT	660	660	674	674	650	674	691	666	629	661	662	663	18,602				
Average Methane Content (%)	50.8	51.3	52.0	52.5	51.2	53.2	53.6	53.2	52.2	51.7	52.4	52.1	51.9				
Engine 1 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-				
Engine 2 Hours	24	24	24	24	24	24	24	24	22	24	24	24	654				
Engine 3 Hours	24	24	24	24	24	24	24	24	23	23	24	24	653				
Engine 4 Hours	24	24	24	24	24	24	24	24	22	24	24	24	654				
Generator 1 Power Output (kWhr)	-	-	-	-	-	-	-	-	-	-	-	-	-				
Generator 2 Power Output (kWhr)	18,060	17,844	17,996	17,756	17,116	18,156	18,500	17,260	15,956	17,968	17,972	17,968	476,996				
Generator 3 Power Output (kWhr)	16,396	16,744	17,364	17,328	16,200	17,528	17,064	16,540	15,472	16,020	16,736	16,736	463,968				
Generator 4 Power Output (kWhr)	18,396	17,460	17,920	17,928	16,968	17,660	18,504	17,572	16,216	16,732	16,728	16,720	479,996				
Gross Power Output (kWhr)	52,824	52,016	53,232	53,000	50,250	53,338	54,073	51,363	47,669	50,722	51,420	51,426	1,420,219				
Net Power Output (kWhr)	50,800	50,024	51,264	51,072	48,312	51,368	52,168	49,456	45,824	48,856	49,592	49,592	1,367,720				
Power Sold as metered by NStar, (t	50,678	49,894	51,135	50,990	48,254	51,302	52,021	49,348	45,743	48,742	49,488	49,483	1,365,664	CRMCB inplant			
Offgrid RECs (kWhr)	2,023	1,992	1,968	1,928	1,937	1,971	1,904	1,908	1,845	1,866	1,828	1,834	52,499	14,007			
Calculated Performance Results															27%		
Daily															of total in-plant power		
Power output (kW average whe																	
Generator 1	-	-	-	-	-	-	-	-	-	-	-	-	-				
Generator 2	753	744	750	740	713	757	771	719	725	749	749	749					
Generator 3	683	698	724	722	675	730	711	689	673	697	697	697					
Generator 4	767	728	747	747	707	736	771	732	737	697	697	697					
Power output (kW average ove																	
Facility Gross	2,201	2,167	2,218	2,208	2,094	2,222	2,253	2,140	1,986	2,113	2,143	2,143					
Facility Net	2,117	2,084	2,136	2,128	2,013	2,140	2,174	2,061	1,909	2,036	2,066	2,066					
In-plant load	84	83	82	80	81	82	79	79	77	78	76	76					
Daily availability factor																	
Facility	75%	75%	75%	75%	75%	75%	75%	75%	70%	74%	75%	75%					
Engine 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%					
Engine 2	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%	100%	100%					
Engine 3	100%	100%	100%	100%	100%	100%	100%	100%	96%	96%	100%	100%					
Engine 4	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%	100%	100%					
Daily capacity factor																	
Facility	67%	66%	67%	67%	63%	67%	68%	65%	60%	64%	65%	65%					
Engine 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%					
Engine 2	91%	90%	91%	90%	86%	92%	93%	87%	88%	91%	91%	91%					
Engine 3	83%	85%	88%	88%	82%	89%	86%	84%	82%	84%	85%	85%					
Engine 4	93%	88%	91%	91%	86%	89%	93%	89%	89%	85%	84%	84%					
Cumulative by engine																	
Engine operating run hours in t																	
Max Cumulative Available,	408	432	456	480	504	528	552	576	600	624	648	672					
Engine 1	0	0	0	0	0	0	0	0	0	0	0	0					
Engine 2	392	416	440	464	488	512	536	560	582	606	630	654					
Engine 3	391	415	439	463	487	511	535	559	582	605	629	653					
Engine 4	392	416	440	464	488	512	536	560	582	606	630	654					
Engine operating run hours tota																	
Engine 1	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997	116,997					
Engine 2	105,074	105,098	105,122	105,146	105,170	105,194	105,218	105,242	105,264	105,288	105,312	105,336					
Engine 3	115,051	115,075	115,099	115,123	115,147	115,171	115,195	115,219	115,242	115,265	115,289	115,313					
Engine 4	114,080	114,104	114,128	114,152	114,176	114,200	114,224	114,248	114,270	114,294	114,318	114,342					
Cumulative availability, %																	
Engine 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%					
Engine 2	96%	96%	96%	97%	97%	97%	97%	97%	97%	97%	97%	97%					
Engine 3	96%	96%	96%	96%	97%	97%	97%	97%	97%	97%	97%	97%					
Engine 4	96%	96%	96%	97%	97%	97%	97%	97%	97%	97%	97%	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					
Engine 1	-	-	-	-	-	-	-	-	-	-	-	-					
Engine 2	12,235	12,979	13,729	14,468	15,182	15,938	16,709	17,428	18,153	18,902	19,651	20,399					
Engine 3	12,171	12,868	13,592	14,314	14,989	15,719	16,430	17,119	17,792	18,488	19,186	19,883					
Engine 4	12,560	13,288	14,035	14,782	15,489	16,224	16,995	17,728	18,465	19,162	19,859	20,555					
Cumulative capacity factor, %																	
Engine 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%					
Engine 2	87%	87%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%					
Engine 3	87%	87%	87%	87%	87%	87%	87%	86%	86%	86%	86%	86%					
Engine 4	90%	89%	90%	90%	89%	89%	90%	90%	90%	89%	89%	89%					

	Wednesday 2/17/2021	Thursday 2/18/2021	Friday 2/19/2021	Saturday 2/20/2021	Sunday 2/21/2021	Monday 2/22/2021	Tuesday 2/23/2021	Wednesday 2/24/2021	Thursday 2/25/2021	Friday 2/26/2021	Saturday 2/27/2021	Sunday 2/28/2021	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			
Actual cumulative engine run time	1,175	1,247	1,319	1,391	1,463	1,535	1,607	1,679	1,746	1,817	1,889	1,961			
Cumulative Availability, %	72.0%	72.2%	72.3%	72.4%	72.6%	72.7%	72.8%	72.9%	72.8%	72.8%	72.9%	73.0%			
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			
Actual cumulative gross output, kWh	851,710	903,726	956,958	1,009,958	1,060,208	1,113,546	1,167,619	1,218,982	1,266,651	1,317,373	1,368,793	1,420,219			
Cumulative Capacity Factor	63.3%	63.4%	63.6%	63.8%	63.7%	63.9%	64.1%	64.1%	64.0%	64.0%	64.0%	64.0%			
Cumulative fuel input, MMBtu	10,814	11,474	12,148	12,822	13,471	14,145	14,836	15,502	16,132	16,792	17,454	18,117			
Cumulative gross output, kWh	851,710	903,726	956,958	1,009,958	1,060,208	1,113,546	1,167,619	1,218,982	1,266,651	1,317,373	1,368,793	1,420,219			
Heat Rate															
Daily heat rate, Btu/kWe gross	11,254	11,415	11,403	11,441	11,635	11,370	11,509	11,672	11,882	11,728	11,586	11,604			
Daily heat rate, Btu/kWe gross	12,502	12,681	12,667	12,709	12,925	12,631	12,785	12,967	13,199	13,028	12,870	12,890			
Cumulative heat rate, Btu/kWe	11,430	11,429	11,428	11,428	11,438	11,435	11,438	11,448	11,465	11,475	11,479	11,483			
Cumulative heat rate, Btu/kWe	12,697	12,696	12,695	12,695	12,706	12,703	12,707	12,717	12,736	12,747	12,752	12,757			
Cumulative by Facility starting C															
Max cumulative available engine run time	4,608	4,704	4,800	4,896	4,992	5,088	5,184	5,280	5,376	5,472	5,568	5,664			
Actual cumulative engine run time	3,396	3,468	3,540	3,612	3,684	3,756	3,828	3,900	3,967	4,038	4,110	4,182			
Cumulative Availability, %	73.7%	73.7%	73.8%	73.8%	73.8%	73.8%	73.8%	73.9%	73.8%	73.8%	73.8%	73.8%			
Max cumulative gross output, kWh	3,801,600	3,880,800	3,960,000	4,039,200	4,118,400	4,197,600	4,276,800	4,356,000	4,435,200	4,514,400	4,593,600	4,672,800			
Actual cumulative gross output, kWh	2,482,447	2,534,463	2,587,695	2,640,695	2,690,945	2,744,283	2,798,356	2,849,719	2,897,388	2,948,110	2,999,530	3,050,956			
Cumulative Capacity Factor	65.3%	65.3%	65.3%	65.4%	65.3%	65.4%	65.4%	65.4%	65.3%	65.3%	65.3%	65.3%			
Cumulative fuel input, MMBtu	31,918	32,578	33,252	33,926	34,575	35,249	35,940	36,606	37,235	37,896	38,558	39,221			
Cumulative gross output, kWh	2,482,447	2,534,463	2,587,695	2,640,695	2,690,945	2,744,283	2,798,356	2,849,719	2,897,388	2,948,110	2,999,530	3,050,956			
Cumulative heat rate, Btu/kWe	11,574	11,571	11,568	11,565	11,566	11,563	11,562	11,564	11,569	11,572	11,572	11,572			
Cumulative heat rate, Btu/kWe	12,858	12,854	12,850	12,847	12,849	12,844	12,843	12,846	12,851	12,854	12,855	12,855			
Service															
Engine 1															
Engine 2								Wellfield jetting plug							
Engine 3									Nstar Outage						
Engine 4															
Oil - oil and filter change															
Service - plugs, air filter, valve insp															
Precipitation															
NSTAR Power Reports	Wednesday 2/17/2021	Thursday 2/18/2021	Friday 2/19/2021	Saturday 2/20/2021	Sunday 2/21/2021	Monday 2/22/2021	Tuesday 2/23/2021	Wednesday 2/24/2021	Thursday 2/25/2021	Friday 2/26/2021	Saturday 2/27/2021	Sunday 2/28/2021	TOTAL		
Hour															
1	2,224	2,083	2,130	2,139	2,038	2,038	2,235	2,157	2,111	2,056	2,058	2,060			
2	2,225	2,084	2,131	2,139	2,038	2,036	2,232	2,156	2,112	2,065	2,063	2,063			
3	2,226	2,081	2,131	2,137	2,034	2,036	2,235	2,124	2,114	2,068	2,060	2,064			
4	2,214	2,080	2,132	2,137	2,036	2,037	2,235	2,081	2,106	2,063	2,062	2,062			
5	2,165	2,083	2,129	2,139	2,007	2,039	2,232	2,081	2,108	2,062	2,063	2,065			
6	2,148	2,082	2,129	2,137	1,988	2,038	2,234	2,081	2,104	2,058	2,063	2,062			
7	2,101	2,080	2,128	2,135	1,987	2,071	2,234	2,081	2,106	2,057	2,063	2,061			
8	2,079	2,066	2,129	2,134	1,986	2,077	2,230	2,053	2,108	2,063	2,059	2,067			
9	2,080	1,984	2,126	2,135	1,991	2,074	2,224	1,943	2,097	2,059	2,057	2,066			
10	2,078	1,981	2,124	2,137	1,994	2,100	2,223	1,790	2,049	2,056	2,056	2,067			
11	2,081	1,989	2,125	2,135	1,993	2,132	2,219	1,796	2,046	2,058	2,055	2,060			
12	2,083	2,031	2,125	2,136	1,991	2,127	1,925	1,882	2,048	2,057	2,059	2,060			
13	2,076	2,050	2,122	2,136	1,991	2,134	1,971	1,984	2,050	2,059	2,058	2,060			
14	2,080	2,074	2,128	2,136	1,991	2,140	2,049	2,036	2,051	2,059	2,059	2,061			
15	2,084	2,080	2,127	2,135	1,996	2,172	2,134	2,107	2,057	2,000	2,066	2,055			
16	2,080	2,081	2,131	2,137	1,996	2,202	2,156	2,110	2,037	1,466	2,065	2,061			
17	2,086	2,085	2,134	2,139	1,992	2,232	2,161	2,111	2,019	2,016	2,069	2,057			
18	2,084	2,113	2,139	2,138	1,989	2,232	2,159	2,110	2,017	2,060	2,070	2,058			
19	2,080	2,132	2,138	2,135	2,031	2,230	2,158	2,113	2,018	2,057	2,064	2,058			
20	2,080	2,132	2,136	2,089	2,036	2,228	2,157	2,113	2,008	2,061	2,069	2,059			
21	2,080	2,129	2,134	2,086	2,036	2,231	2,149	2,110	2,014	2,062	2,063	2,065			
22	2,083	2,130	2,136	2,087	2,037	2,231	2,158	2,110	354	2,061	2,063	2,066			
23	2,080	2,133	2,136	2,084	2,038	2,232	2,155	2,108	338	2,061	2,064	2,063			
24	2,081	2,131	2,135	2,048	2,038	2,233	2,156	2,111	1,671	2,058	2,060	2,063			
TOTAL	50,678	49,894	51,135	50,990	48,254	51,302	52,021	49,348	45,743	48,742	49,488	49,483			
Cumulative Output Sold, kWh	819,264	869,158	920,293	971,283	1,019,537	1,070,839	1,122,860	1,172,208	1,217,951	1,266,693	1,316,181	1,365,664			
Transformer and line efficiency	99.8%	99.7%	99.7%	99.8%	99.9%	99.9%	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	0.0%		
Hourly average	2,112	2,079	2,131	2,125	2,011	2,138	2,168	2,056	1,906	2,031	2,062	2,062	2,032		

[illegible]

		Monday 3/1/2021	Tuesday 3/2/2021	Wednesday 3/3/2021	Thursday 3/4/2021	Friday 3/5/2021	Saturday 3/6/2021	Sunday 3/7/2021	Monday 3/8/2021	Tuesday 3/9/2021	Wednesday 3/10/2021	Thursday 3/11/2021	Friday 3/12/2021	Saturday 3/13/2021	Sunday 3/14/2021	Monday 3/15/2021	Tuesday 3/16/2021	Wednesday 3/17/2021
Cumulative Capacity Factor		68.7%	64.7%	65.3%	65.1%	65.4%	65.1%	64.4%	64.4%	64.4%	64.3%	64.4%	64.5%	64.5%	64.2%	64.0%	63.8%	63.7%
Cumulative fuel input, MMBtu HHV		684	1,318	1,979	2,622	3,314	3,965	4,610	5,263	5,923	6,574	7,237	7,915	8,599	9,256	9,924	10,586	11,257
Cumulative gross output, kWhr		54,439	102,406	155,092	206,383	258,913	309,373	357,138	408,235	459,348	508,919	561,181	613,143	663,717	712,043	760,040	808,048	857,634
Heat Rate																		
Daily heat rate, Btu/kWe gross LHV		11,312	11,898	11,292	11,276	11,872	11,614	12,141	11,511	11,626	11,820	11,415	11,753	12,175	12,235	12,534	12,404	12,182
Daily heat rate, Btu/kWe gross HHV		12,566	13,217	12,544	12,527	13,189	12,901	13,487	12,787	12,915	13,131	12,680	13,056	13,525	13,591	13,924	13,779	13,532
Cumulative heat rate, Btu/kWe gross LHV		11,312	11,587	11,487	11,434	11,523	11,538	11,619	11,605	11,607	11,628	11,608	11,621	11,663	11,702	11,754	11,793	11,815
Cumulative heat rate, Btu/kWe gross HHV		12,566	12,871	12,760	12,702	12,801	12,817	12,907	12,892	12,894	12,917	12,895	12,909	12,956	12,999	13,057	13,100	13,125
Cumulative by Facility starting Calendar Year																		
Max cumulative available engine run hours		5,760	5,856	5,952	6,048	6,144	6,240	6,336	6,432	6,528	6,624	6,720	6,816	6,912	7,004	7,100	7,196	7,292
Actual cumulative engine run hours		4,254	4,326	4,398	4,469	4,541	4,612	4,681	4,753	4,825	4,897	4,969	5,043	5,115	5,184	5,255	5,327	5,400
Cumulative Availability, %		73.9%	73.9%	73.9%	73.9%	73.9%	73.9%	73.9%	73.9%	73.9%	73.9%	73.9%	74.0%	74.0%	74.0%	74.0%	74.0%	74.1%
Max cumulative gross output, kWhr		4,752,000	4,831,200	4,910,400	4,989,600	5,068,800	5,148,000	5,227,200	5,306,400	5,385,600	5,464,800	5,544,000	5,623,200	5,702,400	5,781,600	5,860,800	5,940,000	6,019,200
Actual cumulative gross output, kWhr		3,105,395	3,153,362	3,206,048	3,257,339	3,309,869	3,360,329	3,408,094	3,459,191	3,510,304	3,559,875	3,612,137	3,664,099	3,714,673	3,762,999	3,810,996	3,859,004	3,908,590
Cumulative Capacity Factor		65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.2%	65.2%	65.2%	65.1%	65.2%	65.2%	65.1%	65.1%	65.0%	65.0%	64.9%
Cumulative fuel input, MMBtu HHV		39,905	40,539	41,200	41,842	42,535	43,186	43,830	44,484	45,144	45,795	46,458	47,136	47,820	48,477	49,145	49,807	50,478
Cumulative gross output, kWhr		3,105,395	3,153,362	3,206,048	3,257,339	3,309,869	3,360,329	3,408,094	3,459,191	3,510,304	3,559,875	3,612,137	3,664,099	3,714,673	3,762,999	3,810,996	3,859,004	3,908,590
Cumulative heat rate, Btu/kWe gross LHV		11,568	11,573	11,568	11,564	11,568	11,569	11,577	11,576	11,577	11,580	11,578	11,580	11,588	11,597	11,609	11,618	11,626
Cumulative heat rate, Btu/kWe gross HHV		12,850	12,856	12,851	12,846	12,851	12,852	12,861	12,860	12,860	12,864	12,861	12,864	12,873	12,882	12,896	12,907	12,915
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 3/1/2021	Tuesday 3/2/2021	Wednesday 3/3/2021	Thursday 3/4/2021	Friday 3/5/2021	Saturday 3/6/2021	Sunday 3/7/2021	Monday 3/8/2021	Tuesday 3/9/2021	Wednesday 3/10/2021	Thursday 3/11/2021	Friday 3/12/2021	Saturday 3/13/2021	Sunday 3/14/2021	Monday 3/15/2021	Tuesday 3/16/2021	Wednesday 3/17/2021
Hour																		
1		2,064	2,174	2,014	2,156	2,117	2,065	2,015	2,065	2,060	1,964	2,016	2,162	2,071	2,023	2,016	1,899	1,950
2		2,065	2,127	2,016	2,156	2,117	2,025	2,010	2,064	2,063	1,965	2,014	2,156	2,074	2,023	2,017	1,901	1,952
3		2,067	2,102	2,018	2,156	2,118	2,016	2,009	2,063	2,065	1,966	2,015	2,163	2,059	2,023	2,020	1,899	1,953
4		2,065	2,098	2,018	2,160	2,116	2,015	2,009	2,062	2,065	1,967	2,058	2,163	2,024	2,023	2,015	1,899	1,953
5		2,065	2,082	2,017	2,156	2,115	2,015	2,012	2,062	2,065	1,967	2,063	2,162	2,024	2,023	2,016	1,900	1,953
6		2,066	2,010	2,018	2,160	2,113	2,015	2,012	2,057	2,060	1,964	2,064	2,155	2,023	2,023	2,012	1,893	1,950
7		2,059	1,784	2,014	2,158	2,110	2,015	1,463	2,056	2,059	1,962	2,059	2,112	2,024	2,023	2,012	1,893	1,947
8		2,072	1,655	2,027	2,137	2,112	2,020	1,386	2,012	2,058	1,968	2,056	2,039	2,024	2,024	1,975	1,880	1,947
9		2,219	1,618	2,143	2,105	2,107	2,018	1,388	2,013	2,048	1,958	2,053	1,978	2,026	2,026	1,513	1,851	1,944
10		2,242	1,614	2,155	2,106	2,107	2,017	1,386	2,011	2,056	1,954	2,055	2,014	2,025	2,026	1,651	1,897	1,946
11		2,238	1,614	2,156	1,745	2,107	2,009	1,469	2,008	2,056	1,949	2,055	2,021	2,024	2,025	1,778	1,897	1,949
12		2,251	1,617	2,156	1,681	2,106	2,010	1,963	2,008	2,058	1,950	2,055	2,025	2,025	2,024	1,900	1,933	1,968
13		2,280	1,613	2,159	2,032	2,105	2,015	2,072	2,010	2,059	1,986	2,056	2,074	2,022	2,026	1,900	1,950	1,992
14		2,281	1,625	2,160	1,428	2,107	2,019	2,071	2,012	2,059	1,968	2,059	2,072	2,025	2,027	1,901	1,949	1,956
15		2,281	2,018	2,163	1,893	2,111	2,009	2,069	2,030	2,060	2,005	2,153	2,068	2,021	2,027	1,902	1,950	1,983
16		2,284	2,020	2,165	2,118	2,105	2,024	2,066	2,059	2,062	2,006	2,155	2,068	2,015	2,027	1,937	1,950	2,039
17		2,266	2,018	2,168	2,116	2,119	2,020	2,066	2,057	2,064	2,012	2,159	2,076	2,022	2,025	1,958	1,954	2,042
18		2,251	2,006	2,153	2,118	2,114	2,019	2,066	2,062	2,063	2,012	2,159	2,074	2,026	2,023	1,955	1,954	2,042
19		2,246	2,012	2,152	2,116	2,111	2,017	2,065	2,059	2,027	2,008	2,159	2,073	2,023	2,014	1,945	1,949	2,043
20		2,245	2,019	2,149	2,118	2,097	2,016	2,066	2,059	2,013	2,007	2,158	2,074	2,015	2,017	1,948	1,952	2,039
21		2,241	2,020	2,151	2,118	2,062	2,013	2,064	2,062	2,010	2,008	2,161	2,074	2,022	2,019	1,948	1,953	2,033
22		2,176	2,017	2,153	2,118	2,062	2,017	2,065	2,061	2,006	2,009	2,161	2,078	2,024	2,017	1,947	1,952	2,018
23		2,180	2,018	2,153	2,117	2,064	2,015	2,063	2,063	2,010	2,012	2,162	2,073	2,023	2,017	1,923	1,952	1,993
24		2,179	2,019	2,153	2,118	2,068	2,015	2,065	2,063	1,980	2,014	2,161	2,074	2,023	-	1,901	1,952	1,993
TOTAL		52,383	45,900	50,631	49,286	50,470	48,439	45,920	49,078	49,126	47,581	50,266	50,028	48,684	46,525	46,090	46,159	47,585
Cumulative Output Sold, kWhr		52,383	98,283	148,914	198,200	248,670	297,109	343,029	392,107	441,233	488,814	539,080	589,108	637,792	684,317	730,407	776,566	824,151
Transformer and line efficiency		99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.9%	99.9%	99.8%	99.8%	99.7%	99.8%	99.8%	99.8%	99.9%	99.9%	99.7%
Hourly average		2,183	1,913	2,110	2,054	2,103	2,018	1,913	2,045	2,047	1,983	2,094	2,085	2,029	1,939	1,920	1,923	1,983

March 2021																				
		Thursday 3/18/2021	Friday 3/19/2021	Saturday 3/20/2021	Sunday 3/21/2021	Monday 3/22/2021	Tuesday 3/23/2021	Wednesday 3/24/2021	Thursday 3/25/2021	Friday 3/26/2021	Saturday 3/27/2021	Sunday 3/28/2021	Monday 3/29/2021	Tuesday 3/30/2021	Wednesday 3/31/2021	TOTAL	Biogas	LFG		
LFG and Biogas Flow to the Engines (KSCF)		1,285	1,251	1,257	1,234	1,250	1,199	1,179	1,210	1,225	1,214	1,231	1,227	1,195	1,159	38,644	872	37,772		
LFG and Biogas Flow to the Engines (MMBTU HHV)		679	662	654	648	664	655	653	672	682	651	675	664	639	646	20,501	571	19,929		
LFG and Biogas Flow to the Flare (KSCF)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8%	97%		
LFG and Biogas Flow to the Flare (MMBTU HHV)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
LFG and Biogas Total Flow (KSCF)		1,285	1,251	1,257	1,234	1,250	1,199	1,179	1,210	1,225	1,214	1,231	1,227	1,195	1,159	38,644				
LFG and Biogas Total Flow (MMBTU HHV)		679	662	654	648	664	655	653	672	682	651	675	664	639	646	20,501				
Average Methane Content (%)		52.2	52.3	51.4	51.8	52.5	53.9	54.8	54.8	55.0	53.0	54.2	53.5	52.9	55.1					
Engine 1 Hours		24	23	24	24	24	24	22	24	24	24	24	24	24	13	458				
Engine 2 Hours		24	24	24	24	24	24	24	24	24	24	24	24	24	24	743				
Engine 3 Hours		24	24	24	24	24	22	24	23	24	24	24	24	24	23	735				
Engine 4 Hours		-	1	-	-	-	-	-	-	-	-	-	-	-	10	283				
Generator 1 Power Output (kWhr)		17,108	15,592	15,600	15,600	15,540	16,204	13,876	15,600	16,248	16,528	16,680	16,840	16,160	9,316	305,764				
Generator 2 Power Output (kWhr)		16,788	16,344	15,612	15,616	16,220	16,344	16,784	17,200	17,304	15,604	16,668	15,788	14,900	15,520	516,568				
Generator 3 Power Output (kWhr)		16,412	16,376	15,568	15,564	16,136	14,336	16,388	16,380	17,084	15,584	16,420	16,124	15,948	15,332	511,764				
Generator 4 Power Output (kWhr)		-	240	-	-	-	-	-	-	-	-	-	-	-	7,840	197,900				
Gross Power Output (kWhr)		50,415	48,652	46,865	46,878	47,980	46,963	47,108	49,277	50,733	47,777	49,838	48,813	47,111	48,109	1,534,153				
Net Power Output (kWhr)		48,552	46,864	45,160	45,200	46,224	45,272	45,464	47,560	48,896	45,904	47,872	46,928	45,200	46,288	1,477,200				
Power Sold as metered by NStar, (kWhr)		48,429	46,758	45,096	45,136	46,135	45,167	45,366	47,424	48,785	45,853	47,813	46,822	45,111	46,170	1,474,216	CRMCB inplant			
Offgrid RECs (kWhr)		1,865	1,788	1,703	1,678	1,758	1,690	1,643	1,717	1,837	1,873	1,966	1,885	1,911	1,821	56,953	14,780	26%		
Calculated Performance Results																				
Daily																		of total in-plant power		
Power output (kW average when running)																				
Generator 1		713	678	650	650	648	675	631	650	677	689	695	702	673	717					
Generator 2		700	681	651	651	676	681	699	717	721	650	695	658	621	647					
Generator 3		684	682	649	649	672	652	683	712	712	649	684	672	665	667					
Generator 4		-	240	-	-	-	-	-	-	-	-	-	-	-	784					
Power output (kW average over 24-hrs)																				
Facility Gross		2,101	2,027	1,953	1,953	1,999	1,957	1,963	2,053	2,114	1,991	2,077	2,034	1,963	2,005					
Facility Net		2,023	1,953	1,882	1,883	1,926	1,886	1,894	1,982	2,037	1,913	1,995	1,955	1,883	1,929					
In-plant load		78	75	71	70	73	70	69	72	77	78	82	79	80	76					
Daily availability factor																				
Facility		75%	75%	75%	75%	75%	73%	73%	74%	75%	75%	75%	75%	75%	73%					
Engine 1		100%	96%	100%	100%	100%	100%	92%	100%	100%	100%	100%	100%	100%	54%					
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%					
Engine 3		100%	100%	100%	100%	100%	92%	100%	96%	100%	100%	100%	100%	100%	96%					
Engine 4		0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	42%					
Daily capacity factor																				
Facility		64%	61%	59%	59%	61%	59%	59%	62%	64%	60%	63%	62%	59%	61%					
Engine 1		86%	82%	79%	79%	78%	82%	76%	79%	82%	83%	84%	85%	82%	87%					
Engine 2		85%	83%	79%	79%	82%	83%	85%	87%	87%	79%	84%	80%	75%	78%					
Engine 3		83%	83%	79%	79%	81%	79%	83%	86%	86%	79%	83%	81%	81%	81%					
Engine 4		0%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	95%					
Cumulative by engine																				
Engine operating run hours in the month																				
Max Cumulative Available, hours		431	455	479	503	527	551	575	599	623	647	671	695	719	743					
Engine 1		160	183	207	231	255	279	301	325	349	373	397	421	445	458					
Engine 2		431	455	479	503	527	551	575	599	623	647	671	695	719	743					
Engine 3		427	451	475	499	523	545	569	592	616	640	664	688	712	735					
Engine 4		272	273	273	273	273	273	273	273	273	273	273	273	273	283					
Engine operating run hours total from 0 hours																				
Engine 1		116,997	117,157	117,180	117,204	117,228	117,252	117,276	117,298	117,322	117,346	117,370	117,394	117,418	117,442	117,455				
Engine 2		105,336	105,767	105,791	105,815	105,839	105,863	105,887	105,911	105,935	105,959	105,983	106,007	106,031	106,055	106,079				
Engine 3		115,313	115,740	115,764	115,788	115,812	115,836	115,858	115,882	115,905	115,929	115,953	115,977	116,001	116,025	116,048				
Engine 4		114,342	114,614	114,615	114,615	114,615	114,615	114,615	114,615	114,615	114,615	114,615	114,615	114,615	114,625	114,625				
Cumulative availability, %	March 1, 2020 @ 00																			
Engine 1		37%	40%	43%	46%	48%	51%	52%	54%	56%	58%	59%	61%	62%	62%					
Engine 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%					
Engine 3		99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%					
Engine 4		63%	60%	57%	54%	52%	50%	47%	46%	44%	42%	41%	39%	38%	38%					
Engine cumulative gross output, kWhr																				
Max cumulative capacity one engine		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		4,614	5,292	5,942	6,592	7,239	7,914	8,545	9,195	9,872	10,561	11,256	11,958	12,631	13,348					
Engine 2		12,807	13,488	14,138	14,789	15,465	16,146	16,845	17,562	18,283	18,933	19,628	20,285	20,906	21,553					
Engine 3		12,831	13,513	14,162	14,810	15,483	16,134	16,817	17,529	18,241	18,890	19,574	20,246	20,911	21,577					
Engine 4		8,369	8,609	8,609	8,609	8,609	8,609	8,609	8,609	8,609	8,609	8,609	8,609	8,609	9,393					
Cumulative capacity factor, %																				
Engine 1		31%	34%	36%	38%	40%	42%	43%	45%	46%	47%	49%	50%	51%	52%					
Engine 2		86%	86%	86%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	84%	84%				
Engine 3		86%	86%	86%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	84%	84%				
Engine 4		56%	55%	52%	50%	47%	45%	43%	42%	40%	39%	37%								

		Thursday 3/18/2021	Friday 3/19/2021	Saturday 3/20/2021	Sunday 3/21/2021	Monday 3/22/2021	Tuesday 3/23/2021	Wednesday 3/24/2021	Thursday 3/25/2021	Friday 3/26/2021	Saturday 3/27/2021	Sunday 3/28/2021	Monday 3/29/2021	Tuesday 3/30/2021	Wednesday 3/31/2021	TOTAL	Biogas	LFG
Cumulative Capacity Factor		63.7%	63.6%	63.4%	63.2%	63.0%	62.9%	62.7%	62.7%	62.8%	62.7%	62.7%	62.6%	62.5%	62.5%			
Cumulative fuel input, MMBtu HHV		11,935	12,598	13,252	13,899	14,563	15,218	15,871	16,543	17,225	17,876	18,551	19,215	19,855	20,501			
Cumulative gross output, kWhr		908,049	956,701	1,003,566	1,050,444	1,098,424	1,145,387	1,192,495	1,241,772	1,292,505	1,340,282	1,390,120	1,438,933	1,486,044	1,534,153			
Heat Rate																		
Daily heat rate, Btu/kWe gross LHV		12,119	12,256	12,562	12,436	12,454	12,546	12,486	12,269	12,105	12,272	12,190	12,251	12,216	12,086			
Daily heat rate, Btu/kWe gross HHV		13,462	13,615	13,955	13,815	13,835	13,937	13,870	13,629	13,447	13,632	13,542	13,609	13,570	13,426			
Cumulative heat rate, Btu/kWe gross LHV		11,832	11,854	11,887	11,911	11,935	11,960	11,981	11,992	11,997	12,006	12,013	12,021	12,027	12,029			
Cumulative heat rate, Btu/kWe gross HHV		13,144	13,168	13,205	13,232	13,258	13,286	13,309	13,322	13,327	13,338	13,345	13,354	13,361	13,363			
Cumulative by Facility starting Calendar Year																		
Max cumulative available engine run hours		7,388	7,484	7,580	7,676	7,772	7,868	7,964	8,060	8,156	8,252	8,348	8,444	8,540	8,636			
Actual cumulative engine run hours		5,472	5,544	5,616	5,688	5,760	5,830	5,900	5,971	6,043	6,115	6,187	6,259	6,331	6,401			
Cumulative Availability, %		74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%	74.1%			
Max cumulative gross output, kWhr		6,098,400	6,177,600	6,256,800	6,336,000	6,415,200	6,494,400	6,573,600	6,652,800	6,732,000	6,811,200	6,890,400	6,969,600	7,048,800	7,128,000			
Actual cumulative gross output, kWhr		3,959,005	4,007,657	4,054,522	4,101,400	4,149,380	4,196,343	4,243,451	4,292,728	4,343,461	4,391,238	4,441,076	4,489,889	4,537,000	4,585,109			
Cumulative Capacity Factor		64.9%	64.9%	64.8%	64.7%	64.7%	64.6%	64.6%	64.5%	64.5%	64.5%	64.5%	64.5%	64.4%	64.3%			
Cumulative fuel input, MMBtu HHV		51,156	51,819	52,473	53,120	53,784	54,439	55,092	55,764	56,446	57,097	57,772	58,436	59,076	59,721			
Cumulative gross output, kWhr		3,959,005	4,007,657	4,054,522	4,101,400	4,149,380	4,196,343	4,243,451	4,292,728	4,343,461	4,391,238	4,441,076	4,489,889	4,537,000	4,585,109			
Cumulative heat rate, Btu/kWe gross LHV		11,632	11,639	11,650	11,659	11,668	11,678	11,687	11,694	11,699	11,705	11,710	11,716	11,721	11,725			
Cumulative heat rate, Btu/kWe gross HHV		12,921	12,930	12,942	12,952	12,962	12,973	12,983	12,990	12,996	13,002	13,009	13,015	13,021	13,025			
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		3/18/2021	3/19/2021	3/20/2021	3/21/2021	3/22/2021	3/23/2021	3/24/2021	3/25/2021	3/26/2021	3/27/2021	3/28/2021	3/29/2021	3/30/2021	3/31/2021	TOTAL		
Hour																		
1		2,007	2,020	1,879	1,882	1,882	1,994	1,945	1,978	1,999	1,973	1,889	2,096	1,894	1,596			
2		2,039	2,020	1,880	1,881	1,883	1,995	1,952	1,975	1,998	1,944	1,890	2,099	1,894	1,247			
3		2,039	2,020	1,881	1,881	1,883	1,979	1,950	1,976	1,998	1,945	1,892	2,026	1,892	1,566			
4		2,044	2,022	1,876	1,883	1,881	1,948	1,951	1,977	1,998	1,944	1,892	2,014	1,891	1,802			
5		2,040	2,022	1,880	1,880	1,880	1,947	1,950	1,977	1,999	1,942	1,891	2,016	1,887	1,876			
6		2,041	2,022	1,879	1,880	1,880	1,949	1,950	1,977	1,999	1,941	1,891	2,011	1,888	1,872			
7		2,042	2,021	1,875	1,880	1,876	1,947	1,948	1,976	1,998	1,930	1,893	2,008	1,885	1,899			
8		2,034	2,020	1,875	1,880	1,875	1,946	1,987	1,999	1,993	1,898	1,892	1,988	1,839	1,915			
9		1,988	1,988	1,881	1,882	1,831	1,937	1,994	2,013	2,024	1,898	1,895	1,944	1,798	1,918			
10		1,989	1,968	1,880	1,881	1,827	1,932	1,595	2,020	2,034	1,901	1,899	1,943	1,799	1,923			
11		1,990	1,904	1,880	1,882	1,827	1,945	1,752	2,022	2,039	1,897	1,895	1,941	1,799	1,956			
12		1,991	1,724	1,878	1,880	1,844	1,677	2,024	2,023	1,864	1,898	1,951	1,940	1,818	2,003			
13		1,991	1,950	1,879	1,881	1,896	1,616	1,708	2,025	2,060	1,898	2,013	1,939	1,875	2,005			
14		1,986	1,972	1,881	1,883	1,930	1,498	1,673	2,024	2,075	1,900	2,040	1,904	1,741	1,962			
15		2,018	1,960	1,880	1,881	1,970	1,426	1,811	2,022	2,075	1,899	2,086	1,895	1,922	2,015			
16		2,019	1,924	1,880	1,881	1,989	1,789	1,576	1,733	2,081	1,900	2,097	1,900	1,914	2,069			
17		2,024	1,928	1,880	1,881	2,000	1,959	1,741	1,725	2,107	1,904	2,100	1,898	1,923	2,068			
18		2,024	1,929	1,881	1,881	1,999	1,957	1,986	1,993	2,107	1,902	2,102	1,898	1,923	2,068			
19		2,023	1,921	1,880	1,881	1,999	1,959	1,981	1,997	2,088	1,891	2,102	1,897	1,921	2,069			
20		2,016	1,906	1,879	1,880	1,997	1,959	1,980	1,999	2,097	1,890	2,105	1,895	1,921	2,069			
21		2,022	1,878	1,873	1,879	1,996	1,958	1,982	1,998	2,095	1,889	2,099	1,888	1,920	2,069			
22		2,019	1,876	1,878	1,877	1,997	1,955	1,982	1,997	2,026	1,888	2,099	1,896	1,918	2,067			
23		2,023	1,882	1,880	1,878	1,997	1,953	1,976	1,999	2,012	1,891	2,104	1,892	1,923	2,067			
24		2,020	1,881	1,881	1,881	1,996	1,942	1,972	1,999	2,019	1,890	2,096	1,894	1,926	2,069			
TOTAL		48,429	46,758	45,096	45,136	46,135	45,167	45,366	47,424	48,785	45,853	47,813	46,822	45,111	46,170			
Cumulative Output Sold, kWhr		872,580	919,338	964,434	1,009,570	1,055,705	1,100,872	1,146,238	1,193,662	1,242,447	1,288,300	1,336,113	1,382,935	1,428,046	1,474,216			
Transformer and line efficiency		99.7%	99.8%	99.9%	99.9%	99.8%	99.8%	99.8%	99.7%	99.8%	99.9%	99.9%	99.8%	99.8%	99.7%			
Hourly average		2,018	1,948	1,879	1,881	1,922	1,882	1,890	1,976	2,033	1,911	1,992	1,951	1,880	1,924			

CRMC Bioenergy 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,
Data Point	Date	Time	in Period	KSCF		in month	Month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
2020-97	1-Jul-20	0:00	828	1,789.47	33	1,364.69		73%	73%	20.3	1,008.2	73.0	32	46.1
2020-98	1-Jul-20	9:29	569	1,808.37	33			73%	73%	14.0				
2020-99	7-Jul-20	16:00	9,031	2,089.68	31			73%	73%	207.8				
2020-100	7-Jul-20	16:00	-	-		Reset to 0		73%	73%					
2020-101	13-Jul-20	11:35	8,375	231.47	28			73%	73%	171.0				
2020-102	14-Jul-20	10:44	1,389	276.14	32			73%	73%	33.0				
2020-103	15-Jul-20	10:27	1,423	323.52	33			73%	73%	35.0				
2020-104	16-Jul-20	10:08	1,421	371.58	34			73%	73%	35.5				
2020-105	17-Jul-20	10:28	1,460	420.05	33			73%	73%	35.8				
2020-106	20-Jul-20	10:49	4,341	555.17	31			73%	73%	99.8				
2020-107	24-Jul-20	7:15	5,546	716.00	29			73%	73%	118.8				
2020-108	24-Jul-20	7:15	-	-		Reset to 0		73%	73%					
2020-109	27-Jul-20	11:14	4,559	130.00	29			73%	73%	96.0				
2020-110	28-Jul-20	11:22	1,448	174.00	30			73%	73%	32.5				
2020-111	29-Jul-20	8:57	1,295	214.48	31			73%	73%	29.9				
2020-112	30-Jul-20	16:02	1,865	273.41	32			73%	73%	43.5				
2020-113	31-Jul-20	11:12	1,150	311.43	33			73%	73%	28.1				
2020-114	1-Aug-20	0:00	768	336.31	32	1,352.53		73%	73%	18.4	999.2	73.0	30	44.2
2020-115	3-Aug-20	9:52	3,472	448.80	32			73%	73%	83.1				
2020-116	4-Aug-20	13:45	1,673	501.58	32			73%	73%	39.0				
2020-117	4-Aug-20	17:15	210	508.10	31			73%	73%	4.8				
2020-118	5-Aug-20	0:00	405	-		Reset to 0		73%	73%					
2020-119	5-Aug-20	9:05	545	18.25	33			73%	73%	13.5				
2020-120	7-Aug-20	14:53	3,228	125.55	33			73%	73%	79.3				
2020-121	10-Aug-20	10:45	4,072	258.03	33			73%	73%	97.9				
2020-122	11-Aug-20	10:10	1,405	303.23	32			73%	73%	33.4				
2020-123	12-Aug-20	8:00	1,310	344.00	31			72%	73%	29.9				
2020-124	12-Aug-20	15:00	420	-	-	Reset to 0		70%	72%					
2020-125	17-Aug-20	15:16	7,216	247.58	34			65%	70%	169.1				
2020-126	18-Aug-20	11:04	1,188	287.66	34			50%	65%	23.3				
2020-127	20-Aug-20	13:05	3,001	389.05	34			36%	50%	44.1				
2020-128	23-Aug-20	11:40	4,235	524.57	32			38%	36%	50.7				
2020-129	23-Aug-20	13:50	130	-	-	Reset to 0		39%	38%					
2020-130	26-Aug-20	13:36	4,306	146.15	34			40%	39%	58.4				
2020-131	28-Aug-20	11:12	2,736	243.69	36			43%	40%	41.0				
2020-132	31-Aug-20	11:14	4,322	392.68	34			44%	43%	65.6				
2020-133	1-Sep-20	0:00	766	420.00	36	1,460.36		47%	44%	12.6	845.7	57.2	33	37.4
2020-134	1-Sep-20	8:57	537	439.16	36			47%	47%	9.1				
2020-135	8-Sep-20	11:54	10,257	708.82	26			50%	47%	132.8				
2020-136	9-Sep-20	12:42	1,488	742.04	22			51%	50%	17.0				
2020-137	10-Sep-20	13:03	1,461	770.02	19			53%	51%	14.8				
2020-138	11-Sep-20	12:35	1,412	796.30	19			54%	53%	14.2				
2020-139	14-Sep-20	9:23	4,128	870.00	18			56%	54%	40.9				
2020-140	15-Sep-20	10:52	1,529	895.20	16			56%	56%	14.3				

CRMC Bioenergy 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,
Data Point	Date	Time	in Period	KSCF		in month	Month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
2020-141	16-Sep-20	13:20	1,588	920.61	16			58%	56%	14.7				
2020-142	21-Sep-20	11:19	7,079	1,026.79	15			62%	58%	64.5				
2020-143	22-Sep-20	10:07	1,368	1,047.31	15			63%	62%	12.9				
2020-144	28-Sep-20	10:49	8,682	1,177.54	15			63%	63%	82.7				
2020-145	28-Sep-20	10:49	-	-	-	Reset to 0		63%	63%					
2020-146	29-Sep-20	9:27	1,358	21.63	16			63%	63%	13.7				
2020-147	1-Oct-20	0:00	2,313	42.67	9	649.45		63%	63%	13.4	445.1	67.7	15	20.4
2020-148	1-Oct-20	11:54	714	49.16	9			63%	63%	4.1				
2020-149	5-Oct-20	10:06	5,652	143.28	17			60%	63%	58.6				
2020-150	6-Oct-20	14:29	1,703	171.48	17			60%	60%	17.1				
2020-151	12-Oct-20	8:52	8,303	315.37	17			63%	60%	89.6				
2020-152	14-Oct-20	9:59	2,947	355.71	14			38%	63%	20.6				
2020-153	15-Oct-20	13:59	1,680	380.66	15			38%	38%	9.6				
2020-154	16-Oct-20	11:02	1,263	399.62	15			43%	38%	7.8				
2020-155	19-Oct-20	10:22	4,280	459.86	14			48%	43%	27.6				
2020-156	20-Oct-20	8:00	1,298	477.86	14			48%	48%	8.7				
2020-157	20-Oct-20	8:00	-		-	Reset to 0		49%	48%					
2020-158	20-Oct-20	15:40	460	5.43	12			49%	49%	2.7				
2020-159	22-Oct-20	15:55	2,895	49.98	15			49%	49%	22.0				
2020-160	26-Oct-20	13:14	5,599	152.70	18			51%	49%	52.0				
2020-161	27-Oct-20	11:38	1,344	177.83	19			52%	51%	13.1				
2020-162	28-Oct-20	13:30	1,552	206.47	18			52%	52%	15.0				
2020-163	1-Nov-20	0:00	4,950	314.10	22	749.29		53%	52%	57.1	405.4	53.5	17	17.9
2020-164	2-Nov-20	10:24	2,064	358.98	22			53%	53%	24.1				
2020-165	4-Nov-20	10:34	2,890	418.04	20			54%	53%	32.0				
2020-166	6-Nov-20	13:51	3,077	465.91	16			55%	54%	26.4				
2020-167	16-Nov-20	12:01	14,290	712.43	17			57%	55%	139.7				
2020-168	18-Nov-20	10:35	2,794	767.94	20			58%	57%	32.3				
2020-169	19-Nov-20	15:34	1,739	796.21	16			58%	58%	16.6				
2020-170	20-Nov-20	11:00	1,166		-	Reset to 0		58%	58%					
2020-171	20-Nov-20	15:40	280	3.87	14			58%	58%	2.3				
2020-172	23-Nov-20	10:36	4,016	75.99	18			59%	58%	42.7				
2020-173	25-Nov-20	10:47	2,891	133.92	20			62%	59%	35.5				
2020-174	30-Nov-20	16:58	7,571	280.77	19			65%	62%	94.4				
2020-175	1-Dec-20	0:00	422	288.64	19	770.75		67%	65%	5.3	451.1	57.8	18	20.6
2020-176	1-Dec-20	9:14	554	298.98	19			67%	67%	7.0				
2020-177	3-Dec-20	9:23	2,889	353.46	19			68%	67%	37.2				
2020-178	7-Dec-20	12:41	5,958	477.54	21			70%	68%	86.6				
2020-179	14-Dec-20	10:00	9,919	646.16	17			68%	70%	117.7				
2020-180	17-Dec-20	12:52	4,492	722.53	17			70%	68%	53.3				
2020-181	18-Dec-20	10:00	1,268	-				70%	70%					
2020-182	21-Dec-20	13:02	4,502	75.12	17			70%	70%	53.2				
2020-183	22-Dec-20	9:36	1,234	96.33	17			70%	70%	15.0				
2020-184	28-Dec-20	9:50	8,654	238.51	16			70%	70%	100.6				

CRMC Bioenergy 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,
Data Point	Date	Time	in Period	KSCF		in month	Month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
2020-185	29-Dec-20	9:52	1,442	261.77	16			70%	70%	16.4				
2020-186	30-Dec-20	22:42	2,210	295.11	15			70%	70%	23.6				
2021-01	1-Jan-21	0:00	1,518	321.61	17	755.50		70%	70%	18.8	529.5	69.3	17	23.4
2021-02	4-Jan-21	10:08	4,928	407.66	17			70%	70%	60.7				
2021-03	5-Jan-21	9:00	1,372	430.00	16			70%	70%	15.7				
2021-04	5-Jan-21	9:00	-	-				70%	70%					
2021-05	7-Jan-21	14:09	3,189	49.71	16			70%	70%	35.0				
2021-06	11-Jan-21	12:48	5,679	162.50	20			70%	70%	79.3				
2021-07	12-Jan-21	9:36	1,248	187.59	20			70%	70%	17.6				
2021-08	13-Jan-21	17:00	1,884	222.08	18			70%	70%	24.3				
2021-09	15-Jan-21	12:57	2,637	273.53	20			70%	70%	36.2				
2021-10	18-Jan-21	10:03	4,146	358.69	21			70%	70%	59.9				
2021-11	19-Jan-21	11:30	1,527	389.30	20			70%	70%	21.5				
2021-12	20-Jan-21	10:01	1,351	417.50	21			70%	70%	19.8				
2021-13	22-Jan-21	11:02	2,941	481.46	22			69%	70%	45.0				
2021-14	25-Jan-21	10:24	4,282	583.30	24			69%	69%	71.1				
2021-15	1-Feb-21	0:00	9,456	755.57	18	871.34		69%	69%	120.3	606.5	68.8	20	26.9
2021-16	1-Feb-21	6:45	405	762.95	18			69%	69%	5.2				
2021-17	1-Feb-21	6:45	-	-				69%	69%					
2021-18	3-Feb-21	11:25	3,160	53.03	17			69%	69%	37.0				
2021-19	8-Feb-21	11:35	7,210	156.38	14			69%	69%	72.2				
2021-20	9-Feb-21	12:50	1,515	184.72	19			69%	69%	19.8				
2021-21	10-Feb-21	11:58	1,388	212.70	20			69%	69%	19.5				
2021-22	11-Feb-21	11:39	1,421	243.75	22			69%	69%	21.7				
2021-23	16-Feb-21	12:04	7,225	367.21	17			69%	69%	86.2				
2021-24	17-Feb-21	14:20	1,576	393.86	17			50%	69%	16.0				
2021-25	19-Feb-21	11:20	2,700	442.51	18			40%	50%	22.2				
2021-26	22-Feb-21	14:45	4,525	519.70	17			30%	40%	27.3				
2021-27	25-Feb-21	9:56	4,031	586.86	17			37%	30%	22.8				
2021-28	26-Feb-21	8:00	1,324	600.00	10			40%	37%	5.1				
2021-29	26-Feb-21	8:00	-	-				40%	40%					
2021-30	1-Mar-21	0:00	3,840	32.74	9	640.12		50%	40%	14.9	369.9	57.1	16	18.1
2021-31	1-Mar-21	9:55	4,435	70.55	9			63%	50%	21.6				
2021-32	9-Mar-21	10:26	11,551	307.39	21			66%	63%	154.6				
2021-33	9-Mar-21	10:26	-	-	-			66%	66%					
2021-34	11-Mar-21	9:42	2,836	52.43	18			63%	66%	34.2				
2021-35	12-Mar-21	12:00	1,578	79.02	17			63%	63%	17.0				
2021-36	15-Mar-21	14:34	4,474	156.20	17			68%	63%	51.2				
2021-37	16-Mar-21	10:04	1,170	179.12	20			68%	68%	15.8				
2021-38	18-Mar-21	13:27	3,083	234.46	18			65%	68%	37.2				
2021-39	22-Mar-21	17:17	5,990	344.35	18			67%	65%	73.4				
2021-40	24-Mar-21	8:20	2,343	386.52	18			67%	67%	28.6				
2021-41	24-Mar-21	8:20	-	-				67%	67%					
2021-42	24-Mar-21	12:07	227	4.02	18			67%	67%	2.7				

CRMC Bioenergy 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,
Data Point	Date	Time	in Period	KSCF		in month	Month	End	Start	MMBtu	MMBtu	%	ave scfm	ave scfm
2021-43	25-Mar-21	15:04	1,617	33.43	18			62%	67%	19.2				
2021-44	25-Mar-21	15:04	-	-	-			62%	62%					
2021-45	26-Mar-21	12:40	1,296	23.68	18			66%	62%	15.3				
2021-46	29-Mar-21	12:41	4,321	107.49	19			65%	66%	55.6				
2021-47	30-Mar-21	9:44	1,263	133.76	21			62%	65%	16.9				
2021-48	31-Mar-21	9:53	1,449	162.83	20			64%	62%	18.5				
2021-49	1-Apr-21	0:00	847	177.44	17	872.04		66%	64%	9.6	571.4	64.7	20	25.3

EMERGENCY GENERATOR LOG SHEET

PRIOR TO RUNNING

AFTER SHUTTING DOWN

DATE	TIME	RUN HRS	DATE	TIME	RUN HRS	REASON
29-Jan-20	730	310.1	29-Jan-20	1530	318.1	Relay testing
7-Feb-20	1330	318.1	7-Feb-20	1730	322	Utility outage
24-Feb-20	815	322	24-Feb-20	1240	326.5	Breaker Maint.
13-Apr-20	1600	326.5	13-Apr-20	2300	333.2	Windstorm
24-Jul-20	1035	333	24-Jul-20	1407	337.2	Wellfield work
4-Aug-20	2300	337.2	5-Aug-20	315	341.4	Tropical storm
12-Aug-20	800	341.4	12-Aug-20	1300	346.9	Wellfield work
20-Nov-20	822	346.9	20-Nov-20	1553	354.4	Plant work / maint.
1-Feb-21	1930	354.4	2-Feb-21	1015	369.4	Utility outage / Snowstorm
2-Feb-21	0:00	369.4	1-Apr-21	15:02	369.4	No run time

Run time from July 1, 2020 to December 31, 2020

53.1

Run time from January 1, 2021 to March 31, 2021

15

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

USAGE HISTORY

Select an Account :

27461920012(CNBE)

300 SAMUEL-BARNET BLV CGN, NEW BEDFRD MA 02745

Meter Number: 8128229



Download my secure data with
Green Button



Email My Data

View Data From : 13 months



Usage Data



Usage Graph

Read Date	Usage (kWh)	Number of Days	Usage Per Day	Cost Per Day	Total Charge	Average Temp(°F)
03/17/2021	0	28	0	\$0.20	\$5.70	35.0
02/17/2021	0	34	0	\$0.17	\$5.70	31.0
01/14/2021	0	28	0	\$0.21	\$5.88	35.0
12/17/2020	0	30	0	\$0.19	\$5.71	42.0
11/17/2020	0	32	0	\$0.18	\$5.88	52.0
10/16/2020	0	30	0	\$0.20	\$5.88	61.0
09/16/2020	0	30	0	\$0.19	\$5.71	70.0
08/17/2020	0	31	0	\$0.18	\$5.70	77.0
07/17/2020	0	30	0	\$0.20	\$5.88	72.0
06/17/2020	0	30	0	\$0.20	\$5.88	63.0
05/18/2020	0	32	0	\$0.18	\$5.70	48.0
04/16/2020	0	29	0	\$0.20	\$5.70	44.0
03/18/2020	0	29	0	\$0.20	\$5.71	40.0

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 an											
		Engine 1, kW	700	625	700	750	740	740	750	-	-
		Engine 2, kW	675	675	700	600	675	675	700	770	740
		Engine 3, kW	700	725	720	-	-	-	-	770	750
		Engine 4, kW	-	-	-	735	730	730	720	770	700
		Gross, kW	2,075	2,025	2,120	2,085	2,145	2,145	2,170	2,310	2,190
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:			8-Jul-20	5-Aug-20	17-Sep-20	7-Oct-20	30-Nov-20	9-Dec-20	12-Jan-21	23-Feb-21	5-Mar-21
TIME OF MEASUREMENT:			10:00	11:00	12:00	12:00	10:30	11:00	11:00	10:45	11:00
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	0.131	0.144	0.134	0.181	0.156	0.157	0.157	0.159	0.158
Blower Inlet											
Ts	Stack temperature	Degrees Fahrenheit	86	88	85	65	64	63	62	62	64
		Degrees Rankine	546	548	545	525	524	523	522	522	524
Pg	Stack static pressure	inch H2O	-63	-65	-70	-70	-65	-62	-60	-60	-60
		inch Hg	(4.63)	(4.78)	(5.15)	(5.15)	(4.78)	(4.56)	(4.41)	(4.41)	(4.41)
Ps	Absolute stack gas pressure	inch Hg	25.41	24.98	24.75	24.84	25.21	24.94	25.68	25.21	25.29
Blower Outlet											
Ts	Stack temperature	Degrees Fahrenheit	119	115	116	117	116	118	120	118	119
		Degrees Rankine	579	575	576	577	576	578	580	578	579
Pg	Stack static pressure	inch H2O	55.4	52.6	60.9	58.1	65.9	63.7	55.4	52.6	52.6
		inch Hg	4.07	3.87	4.48	4.28	4.85	4.68	4.07	3.87	3.87
		psig	2.00	1.90	2.20	2.10	2.38	2.30	2.00	1.90	1.90
Pbar	Barometric pressure	inch Hg	30.04	29.76	29.90	29.99	29.99	29.50	30.09	29.62	29.70
Ps	Absolute stack gas pressure	inch Hg	34.11	33.63	34.38	34.27	34.84	34.18	34.16	33.49	33.57
Ms	Molecular weight of stack gas, wet	lb/lb-mole	27.20	27.12	26.99	27.56	27.58	27.27	27.32	27.27	27.32
Vs	Average stack gas velocity	feet per second	27.5	29.2	28.3	31.9	29.3	29.7	29.2	29.7	29.6
Qact	Volumetric Flow	actual cubic feet per minute	978	1,038	1,006	1,132	1,040	1,054	1,037	1,055	1,051
Qstd	Volumetric Flow at actual methane content	standard cubic feet per minute *	803	835	806	945	883	887	900	899	895
Qstd corr	Volumetric Flow at 50% methane	standard cubic feet per minute **	835	855	861	953	908	940	947	953	945
Ht HHV	Heat input	MMBtu per hour HHV	25.35	25.95	26.14	28.92	27.56	28.55	28.75	28.93	28.69
Ht LHV	Heat input	MMBtu per hour LHV	22.82	23.36	23.53	26.03	24.81	25.70	25.88	26.05	25.82
	Methane Content	%, vol/vol wet	52.00%	51.18%	53.40%	50.39%	51.40%	53.00%	52.60%	53.00%	52.80%
Diff. between pitot tube and orifice reading:			0.6%	2.2%	-1.5%	2.4%	0.2%	-1.0%	-0.2%	0.4%	-

Landfill Gas Flow Measurements									
Crapo Hill Landfill, New Bedford/Dart									
Measurements by	TY, RB	TY, RB	TY, RB	TY, RB	TY, RB	TY, RB	TY, RB	TY, RB	TY, RB
Date	8-Jul-20	5-Aug-20	17-Sep-20	7-Oct-20	30-Nov-20	9-Dec-20	12-Jan-21	23-Feb-21	5-Mar-21
Time	10:00	11:00	12:00	12:00	10:30	11:00	11:00	10:45	11:00
Flow valve									
Pipe inside diameter, inches	10.42	10.42	10.42	10.42	10.42	10.42	10.42	10.42	10.42
Orifice measurement, cfm	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ambient Temperature, F	74	90	65	65	54	54	32	39	35
Barometric Pressure, In Hg	30.04	29.76	29.90	29.99	29.99	29.50	30.09	29.62	29.70
Blower Inlet Temperature, F	86	88	85	65	64	63	62	62	64
Outlet Temperature, F	119	115	116	117	116	118	120	118	119
Blower Inlet Pressure (SP), In H2O	-63	-65	-70	-70	-65	-62	-60	-60	-60
Blower Outlet Pressure, PSIG	2.0	1.9	2.2	2.1	2.38	2.30	2.00	1.90	1.90
Blower Outlet Pressure, In H2O	55.36	52.59	60.90	58.13	65.88	63.66	55.36	52.59	52.59
Measurement									
Manometer									
Pitot Tube									
Velocity Pressure (dP)									
Point									
1	0.13	0.13	0.12	0.17	0.14	0.14	0.14	0.14	0.14
2	0.14	0.15	0.13	0.18	0.16	0.16	0.16	0.16	0.16
3	0.14	0.18	0.13	0.19	0.16	0.16	0.16	0.16	0.16
4	0.14	0.16	0.14	0.19	0.16	0.16	0.16	0.17	0.17
5	0.14	0.16	0.14	0.19	0.16	0.17	0.17	0.17	0.17
6	0.14	0.16	0.14	0.19	0.16	0.16	0.16	0.17	0.16
7	0.14	0.16	0.14	0.19	0.16	0.16	0.16	0.16	0.16
8	0.12	0.12	0.14	0.19	0.16	0.16	0.16	0.16	0.16
9	0.09	0.08	0.13	0.14	0.14	0.14	0.14	0.14	0.14
Average	0.131	0.144	0.134	0.181	0.156	0.157	0.157	0.159	0.158
Gas Composition									
Compound, %v/v									
Methane (CH4)	52.0%	51.2%	53.4%	50.4%	51.4%	53.0%	52.6%	53.0%	52.8%
Carbon dioxide (CO2)	36.4%	35.5%	36.0%	35.9%	36.8%	36.2%	36.2%	36.2%	36.4%
Oxygen (O2)	1.00%	1.12%	1.00%	1.34%	0.90%	0.80%	0.80%	0.80%	0.90%
Balance gas	10.60%	12.21%	9.60%	12.52%	11.00%	10.00%	10.40%	10.00%	9.90%
Total	100.0%	100.0%	100.0%	100.1%	100.1%	100.0%	100.0%	100.0%	100.0%
Moisture (H2O) (included in balance gas)	4.2%	4.5%	4.0%	2.1%	2.0%	1.9%	1.9%	1.9%	2.0%
Molecular weight, lb/lb-mole wet	27.20	27.12	26.99	27.56	27.58	27.27	27.32	27.27	27.32

Measurement confirmation/calibration for pressure and temperature												
Measurements by			TY	TY	TY	TY	TY, RB	TY	TY	TY	TY	TY
Date			8-Jul-20	5-Aug-20	17-Sep-20	7-Oct-20	30-Nov-20	9-Dec-20	12-Jan-21	23-Feb-21	5-Mar-21	
Time			10:00	11:00	12:00	12:00	10:30	11:00	11:00	10:45	11:00	
Pressure and Temperature Measurements												
Facility Flow Measurement Point												
	Facility Pressure monitor, inches WG		2.0	1.9	2.2	2.1	2.4	2.30	2.00	1.90	1.90	
	Measurement Type	Gauge										
	Independent Pressure monitor, inches WG		2.0	1.9	2.2	2.1	2.38	2.30	2.00	1.90	1.90	
	Measurement Type	Manometer										
	Difference in Pressure, %		0.0%	0.0%	0.0%	0.0%	-0.8%	0.0%	0.0%	0.0%	0.0%	
	Adjusted Pressure, in WG		2.0	1.9	2.2	2.1	2.38	2.30	2.00	1.90	1.90	
	Facility Temperature monitor, F		119	115	116	117	116	118	120	118	119	
	Facility Temperature monitor, R		579	575	576	577	576	578	580	578	579	
	Measurement Type	Gauge										
	Independent Temperature monitor, F		119	115	116	117	116	118	120	118	119	
	Facility Temperature monitor, R		579	575	576	577	576	578	580	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		119	115	116	117	116	118	120	118	119	
Calibration Flow Measurement Point												
	Facility Pressure monitor, inches WG		-63	-65	-70	-70	-65	-62	-60	-60	-60	
	Measurement Type	Transducer										
	Independent Pressure monitor, inches WG		-63	-65	-70	-70	-65	-62	-60	-60	-60	
	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		-63	-65	-70	-70	-65	-62	-60	-60	-60	
	Facility Temperature monitor, F		86	88	85	65	64	63	62	62	64	
	Facility Temperature monitor, R		546	548	545	525	524	523	522	522	524	
	Measurement Type	Gauge										
	Independent Temperature monitor, F		86	88	85	65	64	63	62	62	64	
	Facility Temperature monitor, R		546	548	545	525	524	523	522	522	524	
	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		86	88	85	65	64	63	62	62	64	

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: Jul-20		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
6/28/20	7/2/20	81 Deg F	55%	54.30%	51.32%	-0.01%	54.17%	51.30%
7/5/20	7/10/20	82 Deg F	55%	54.28%	50.71%	-0.02%	54.14%	51.24%
7/12/20	7/17/20	83 Deg F	55%	54.26%	51.64%	0.02%	54.35%	51.55%
7/19/20	7/24/20	87 Deg F	55%	54.17%	55.34%	0.01%	54.32%	54.32%
7/26/20	7/31/20	86 Deg F	55%	54.20%	51.59%	-0.01%	52.32%	52.49%

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Month: Aug-20		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
8/2/20	8/7/20	87 Deg F	55%	54.17%	49.95%	-0.02%	53.23%	51.29%
8/9/20	8/14/20	88 Deg F	55%	54.15%	52.02%	0.02%	53.76%	51.90%
8/16/20	8/21/20	87 Deg F	55%	54.17%	51.46%	-0.01%	53.44%	51.80%
8/23/20	8/28/20	88 Deg F	55%	54.15%	52.02%	0.02%	53.81%	51.49%

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Month: Sep-20		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
8/30/20	9/4/20	88 Deg F	55%	54.15%	52.12%	-0.04%	53.72%	52.36%
9/6/20	9/11/20	87 Deg F	55%	54.17%	52.34%	-0.02%	55.22%	52.46%
9/13/20	9/18/20	79 Deg F	55%	54.34%	53.70%	0.01%	54.40%	53.22%
9/20/20	9/25/20	79 Deg F	55%	54.34%	52.06%	0.05%	53.18%	53.06%

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Month: Oct-20		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
9/27/20	10/2/20	79 Deg F	55%	54.34%	53.92%	-0.09%	54.73%	53.45%
10/4/20	10/9/20	76 Deg F	55%	54.40%	51.96%	0.07%	53.25%	53.16%
10/11/20	10/13/20	77 Deg F	50%	x	49.90%	0.00%	50.00%	50.00%
10/18/20	10/19/20	76 Deg F	50%	x	50.00%	0.00%	50.00%	50.00%
10/25/20	10/26/20	76 Deg F	50%	x	49.95%	0.00%	50.00%	50.00%

x Weeks of 10/11 ,18 and 25 analyzer was removed for factory service. Gas quaity was being taken
 by wellfield techs meter

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Month: Nov-20		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
11/1/20	11/3/20	69 Deg F	55%	54.52%	52.55%	0.15%	54.17%	52.22%
11/8/20	11/12/20	69 Deg F	55%	54.52%	53.65%	0.21%	54.25%	53.67%
11/15/20	11/18/20	70 Deg F	55%	54.50%	50.35%	0.01%	54.85%	50.38%
11/22/20	11/23/20	65 Deg F	55%	54.58%	52.57%	0.10%	54.28%	53.33%

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Month: Dec-20		Methane (% v/v) measurements						
Week	Date	LFG Temp @ blower inlet	Cal Gas dry	Cal Gas wet	Pre-calibration	Zero gas	Span gas	Post-calibration
11/29/20	12/4/20	62 Deg F	55%	54.62%	50.82%	0.02%	54.92%	50.89%
12/6/20	12/11/20	58 Deg F	55%	54.66%	49.75%	1.17%	54.26%	49.48%
12/13/20	12/18/20	55 Deg F	55%	54.70%	50.99%	-1.30%	55.34%	49.97%
12/20/20	12/23/20	55 deg F	55%	54.70%	50.81%	-0.05%	54.02%	50.88%
12/27/20	12/31/20	55 Deg F	55%	54.70%	51.65%	-0.61%	54.29%	52.37%

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Month: Jan-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
1/3/21	1/8/21	55 Deg F	55%	54.70%	52.82%	-0.12%	54.64%	51.93%
1/10/21	1/15/21	52 Deg F	55%	54.73%	53.76%	0.19%	54.55%	54.39%
1/17/21	1/22/21	52 Deg F	55%	54.73%	53.20%	-0.44%	54.04%	53.06%
1/24/21	1/29/21	51 Deg F	55%	54.73%	51.55%	-0.14%	54.20%	51.10%

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Month: Feb-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
1/31/21	2/5/21	51 Deg F	55%	54.73%	51.20%	-0.06%	54.65%	50.54%
2/7/21	2/12/21	51 Deg F	55%	54.73%	51.52%	0.06%	54.85%	51.55%
2/14/21	2/19/21	52 Deg F	55%	54.71%	50.95%	0.03%	54.95%	50.82%
2/21/21	2/26/21	53 Deg F	55%	54.72%	52.09%	-0.05%	54.92%	52.41%

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

Month: Mar-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
2/28/21	3/5/21	58 Deg F	55%	54.66%	52.06%	0.00%	54.00%	52.02%
3/7/21	3/12/21	57 Deg F	55%	54.67%	52.09%	0.18%	54.32%	52.53%
3/14/21	3/17/21	54 Deg F	55%	54.71%	51.18%	0.03%	54.88%	50.83%
3/21/21	3/24/21	54 Deg F	55%	54.71%	54.23%	-0.07%	54.24%	54.04%

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
Jul-20	8-Jul-20	32	0.22	32	-0.9%	32	6	14.92	85
Aug-20	5-Aug-20	33	0.23	33	-0.1%	33	6	14.92	85
Sep-20	17-Sep-20	15	0.05	15	-2.7%	15	6	14.92	85
Oct-20	7-Oct-20	17	0.06	17	0.8%	17	6	14.92	85
Nov-20	30-Nov-20	19	0.08	19	-2.5%	19	6	14.92	85
Dec-20	9-Dec-20	20	0.08	19	2.6%	20	6	14.92	85
Jan-21	12-Jan-21	20	0.08	19	2.6%	20	6	14.92	85
Feb-21	23-Feb-21	17	0.06	17	0.8%	17	6	14.92	85
Mar-21	5-Mar-21	21	0.09	21	1.6%	21	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, %	
Jul-20	8-Jul-20	73.0%	50.0%	50.2%	-0.4%	73.0%	
Aug-20	5-Aug-20	73.0%	50.0%	50.1%	-0.2%	73.0%	
Sep-20	17-Sep-20	58.0%	50.0%	50.0%	0.0%	58.0%	
Oct-20	7-Oct-20	60.0%	50.0%	50.0%	0.0%	60.0%	
Nov-20	30-Nov-20	58.0%	50.0%	49.7%	0.6%	58.0%	
Dec-20	9-Dec-20	70.0%	50.0%	49.6%	0.8%	70.0%	
Jan-21	12-Jan-21	70.0%	50.0%	50.3%	-0.6%	70.0%	
Feb-21	23-Feb-21	32.0%	50.0%	50.0%	0.0%	32.0%	
Mar-21	5-Mar-21	73.0%	50.0%	49.8%	0.4%	73.0%	
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
Jul-20	8-Jul-20	6	6	None	85	85	None
Aug-20	5-Aug-20	6	6	None	85	85	None
Sep-20	17-Sep-20	6	6	None	85	85	None
Oct-20	7-Oct-20	6	6	None	85	85	None
Nov-20	30-Nov-20	6	6	None	85	85	None
Dec-20	9-Dec-20	6	6	None	85	85	None
Jan-21	12-Jan-21	6	6	None	85	85	None
Feb-21	23-Feb-21	6	6	None	85	85	None
Mar-21	5-Mar-21	6	6	None	85	85	None



Testing and Calibration Report

Date: 7/15/2020
 Meter Serial Number: 1901210B

RMA# 0500-4090
 Model # ENV200

Communications Testing

- ☒ PDA
- ☒ Bluetooth

Firmware Testing:

- ☒ Test/Update Firmware

Battery Testing:

- ☒ Battery Charger Check
- ☒ Battery Life Check
- ☒ Number of Cycles

Thermistor Testing

- ☒ Thermistor

Pressure Sensor Testing:

- ☒ Available Pressure
- ☒ Impact Port
- ☒ Static Port

Gas Sensor Testing:

- ☒ O2 Sensor
- ☒ CO2 Sensor
- ☒ CH4 Sensor

Calibration Results:

Gas Sensors:

Gas	Standard %	Reading %	Standard %	Reading %
CH4	0.0%	0.0%	50.0%	50.1
CO2	0.0%	0.0%	35.0%	34.8
O2	0.0%	0.0%	20.9%	21.0

Pressure Sensors (Low Pressure)

Sensor	Pressure	Reading	Pressure	Reading
Applied	0.000	0.000	-4.500	-4.53
Differential	0.000	0.000	4.500	4.500

Pressure Sensors (High Pressure)

Sensor	Pressure	Reading	Pressure	Reading
Available	0.000	0.000	-100.00	-99.62
Differential	0.000	0.000	20.000	19.919
Applied	0.000	0.000	-100.00	-99.45



Testing and Calibration Report

	Lot #	Percent	Analytical Accuracy
CH4 Calibration Cylinder	141-401533865-1	50.00	+/- 1%
CO2 Calibration Cylinder	141-401533865-1	35.00	+/- 1%
O2 Calibration Cylinder	NA	NA	NA
N2 Calibration Cylinder	NA	NA	NA

Calibration Gas directly traceable to NIST ASTM Class 1 weights and/or NIST gas mixture reference materials

This device has passed testing and calibration procedures as specified by Elkins Earthworks, LLC.

Calibrated by (Signature):

Kyle Clifford

At Elkins Earthworks we appreciate your business. We strive for a standard 10 working day turn around on all calibrations and repairs from the time we have received your instrument. Your instrument has been serviced in 7 days. We hope you appreciate our dedication to service and quality.

Thanks,

President
Elkins Earthworks, LLC.

Notes as to why service exceeded 10 day turn

Page 2 of 2

Form:

Inspection and Testing

Rev:

Exhibit 7

Attestation Statement

Attestation Statement

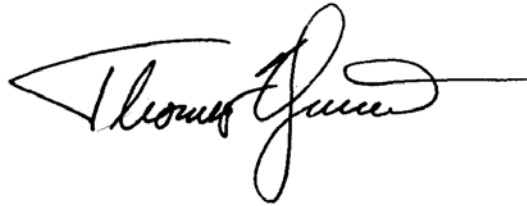
As an officer of Commonwealth New Bedford Energy LLC (CNBE) I hereby certify that the verified carbon units (VCUs) verified under the verified carbon standard (VCS) for the period July 1, 2020 through March 31, 2021 from the Project Activity will be registered on the Markit Environmental Registry (formerly TZ1) only, which is an accredited VCS register.

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.

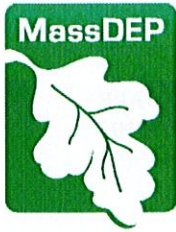
Signature

Date: April 1, 2021

Exhibit 8

Permits and Other Regulatory Documentation

1. Final Air Quality Operation Permit (Renewal) Issued July 23, 2020
2. March 26, 2019 NSPS Design Report and October 9, 2019 NMOC Emission Rate Report. The NMOC Emission Report demonstrates that the NMOCs emissions are below the NSPS applicability threshold and therefore the Crapo Hill Landfill is not subject to the requirements of NSPS.
3. Discharge Monitoring Reports submitted to USEPA providing evidence that EPA ECHO information has not been updated by EPA to show that the USEPA has received the information.



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

Charles D. Baker
Governor

Karyn E. Polito
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.

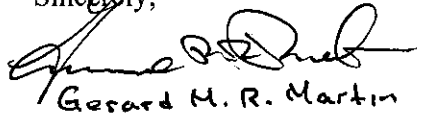
Public notice of the Draft Air Quality Operating Permit was published by the MassDEP in the Environmental Monitor on December 23, 2019 and in the New Bedford Standard-Times also on December 23, 2019, in accordance with the requirements of 310 CMR 7.00: Appendix C. As such, the public comment period ended 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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Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen E. Theoharides
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:

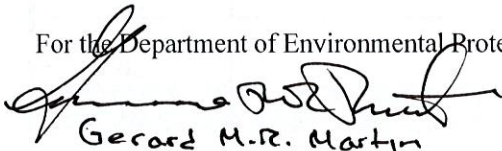
Name: Mr. Thomas Yeransian
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CommonWealth New Bedford Energy

FACILITY CONTACT PERSON:

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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, record-keeping 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.

March 26, 2019 NSPS Design Report and October 9, 2019 NMOC Emission Rate Report for
2019.

101 Industrial Park Road, Suite 205
Taunton, MA 02780

T: 508.923.0879

October 9, 2019



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 2019
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 year 2019.

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 recently 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 a 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 2019, which is 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 USEPA LandGEM Model, Version 3.02, together with the USEPA recommended input values to calculate uncontrolled NMOC quantities contained in LFG in 2019. The USEPA recommended input values included waste input rates from 1995 through 2018, 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 2019 are 6.6 Mg as shown in the USEPA 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 Atmospheric Analysis & Consulting, Inc., which is provided in Attachment 3.

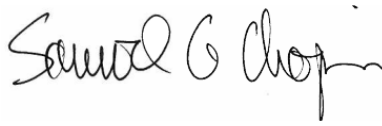
As noted previously, because the uncontrolled NMOC emissions are below the 35 Mg per year threshold as calculated by the Tier 2 methodology, the Crapo Hill Landfill is not subject to the controls, monitoring and most of the reporting requirements under the NSPS for MSW landfills contained in 40 CFR Part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

Please contact me directly at 508-819-1431 with any questions.

Very truly yours,

Brown and Caldwell

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

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

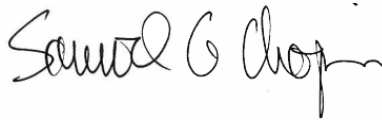
The total permitted waste disposal capacity of the landfill is 2,809,271 cubic meters. A calculation of this permitted capacity is attached. Also attached is a site locus map.

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 of the name.

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

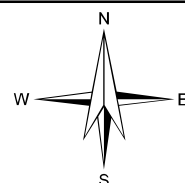
101 Industrial Park Road, Suite 205
Taunton, Massachusetts, 02780
Tel. (508) 923-0879 Fax. (508) 923-0894

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

Crapo 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: Wednesday, October 09, 2019

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) **2019**
Actual Closure Year (without limit) **2019**
 Have Model Calculate Closure Year? **No**
 Waste Design Capacity **2,275,992** *megagrams*

MODEL PARAMETERS

Methane Generation Rate, k **0.050** *year⁻¹*
 Potential Methane Generation Capacity, L₀ **170** *m³/Mg*
 NMOC Concentration **83** *ppmv as hexane*
 Methane Content **50** *% by volume*

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	
	(Mg/year)	(short tons/year)	(Mg)	(short tons)
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	0	0	2,275,922	2,503,514
2020	0	0	2,275,922	2,503,514
2021	0	0	2,275,922	2,503,514
2022	0	0	2,275,922	2,503,514
2023	0	0	2,275,922	2,503,514
2024	0	0	2,275,922	2,503,514
2025	0	0	2,275,922	2,503,514
2026	0	0	2,275,922	2,503,514
2027	0	0	2,275,922	2,503,514
2028	0	0	2,275,922	2,503,514
2029	0	0	2,275,922	2,503,514
2030	0	0	2,275,922	2,503,514
2031	0	0	2,275,922	2,503,514
2032	0	0	2,275,922	2,503,514
2033	0	0	2,275,922	2,503,514
2034	0	0	2,275,922	2,503,514

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	6.312E+00	1.761E+03	1.183E-01	0.000E+00	0.000E+00	0.000E+00
2021	6.004E+00	1.675E+03	1.125E-01	0.000E+00	0.000E+00	0.000E+00
2022	5.711E+00	1.593E+03	1.071E-01	0.000E+00	0.000E+00	0.000E+00
2023	5.433E+00	1.516E+03	1.018E-01	0.000E+00	0.000E+00	0.000E+00
2024	5.168E+00	1.442E+03	9.687E-02	0.000E+00	0.000E+00	0.000E+00
2025	4.916E+00	1.371E+03	9.214E-02	0.000E+00	0.000E+00	0.000E+00
2026	4.676E+00	1.305E+03	8.765E-02	0.000E+00	0.000E+00	0.000E+00
2027	4.448E+00	1.241E+03	8.337E-02	0.000E+00	0.000E+00	0.000E+00
2028	4.231E+00	1.180E+03	7.931E-02	0.000E+00	0.000E+00	0.000E+00
2029	4.025E+00	1.123E+03	7.544E-02	0.000E+00	0.000E+00	0.000E+00
2030	3.828E+00	1.068E+03	7.176E-02	0.000E+00	0.000E+00	0.000E+00
2031	3.642E+00	1.016E+03	6.826E-02	0.000E+00	0.000E+00	0.000E+00
2032	3.464E+00	9.664E+02	6.493E-02	0.000E+00	0.000E+00	0.000E+00
2033	3.295E+00	9.193E+02	6.177E-02	0.000E+00	0.000E+00	0.000E+00
2034	3.134E+00	8.744E+02	5.875E-02	0.000E+00	0.000E+00	0.000E+00
2035	2.982E+00	8.318E+02	5.589E-02	0.000E+00	0.000E+00	0.000E+00
2036	2.836E+00	7.912E+02	5.316E-02	0.000E+00	0.000E+00	0.000E+00
2037	2.698E+00	7.526E+02	5.057E-02	0.000E+00	0.000E+00	0.000E+00
2038	2.566E+00	7.159E+02	4.810E-02	0.000E+00	0.000E+00	0.000E+00
2039	2.441E+00	6.810E+02	4.576E-02	0.000E+00	0.000E+00	0.000E+00
2040	2.322E+00	6.478E+02	4.353E-02	0.000E+00	0.000E+00	0.000E+00
2041	2.209E+00	6.162E+02	4.140E-02	0.000E+00	0.000E+00	0.000E+00
2042	2.101E+00	5.862E+02	3.938E-02	0.000E+00	0.000E+00	0.000E+00
2043	1.999E+00	5.576E+02	3.746E-02	0.000E+00	0.000E+00	0.000E+00
2044	1.901E+00	5.304E+02	3.564E-02	0.000E+00	0.000E+00	0.000E+00

2019 NMOC Result
6.635 Mg/yr

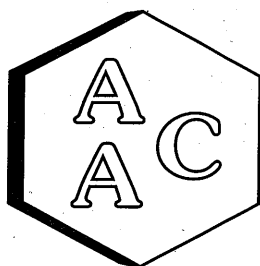
Methane and Non-methane Organic Compounds Analysis Results
Crapo Hill Landfill
3-Oct-19

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	

Attachment 3

Analytical Report
from Atmospheric Analysis and Consulting



Atmospheric Analysis & Consulting, Inc.

CLIENT : Brown and Caldwell
PROJECT NAME : Crapo Hill Landfill
PROJECT NO. : BC/58330
AAC PROJECT NO. : 191581
REPORT DATE : 09/30/2019

On September 20, 2019, Atmospheric Analysis & Consulting, Inc. received three (3) Six-Liter Summa Canisters for TNMOC analysis by EPA 25C and Fixed Gases analysis by EPA 3C. Also received was one (1) Six-Liter Silonite Canister for H₂S analysis by ASTM-D5504. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

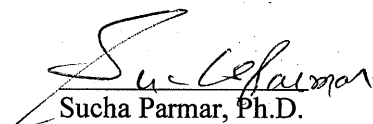
Client ID	Lab No.	Return Pressure (mmHg)
Sample #1 Can 000116	191581-1629	635.7
Sample #2 Can 000145	191581-1630	668.8
Sample #3 Can 000165	191581-1631	656.3
Sample #4 Can 000230	191581-1632	599.9

This analysis is performed in accordance with AAC's Quality Manual. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. No problems were encountered during receiving, preparation, and/or analysis of these samples.

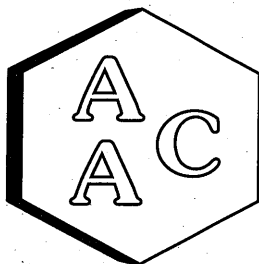
The Technical Director or his/her designee, as verified by the following signature, has authorized release of the data contained in this hardcopy report.

If you have any questions or require further explanation of data results, please contact the undersigned.


Sucha Parmar, Ph.D.
Technical Director

This report consists of 7 pages.





Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Brown and Caldwell
PROJECT NO. : 191581
MATRIX : AIR

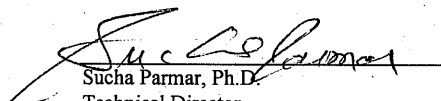
SAMPLING DATE : 09/18/2019
RECEIVING DATE : 09/20/2019
ANALYSIS DATE : 09/25/2019
REPORT DATE : 09/30/2019

EPA 3C & EPA 25C

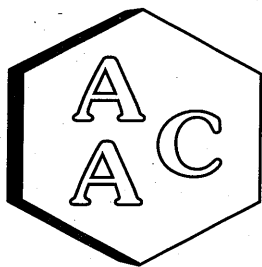
Client ID	Sample #1 Can 000116	Sample #2 Can 000145	Sample #3 Can 000165
AAC ID	191581-1629	191581-1630	191581-1631
Can Dilution Factor	2.40	2.21	2.28
Analyte	Result	Result	Result
H ₂	< 2.4 %	< 2.2 %	< 2.3 %
O ₂ /Ar	1.3 %	1.3 %	1.2 %
N ₂	14.0 %	13.8 %	13.7 %
CO	< 0.2 %	< 0.2 %	< 0.2 %
CO ₂	35.2 %	35.3 %	35.3 %
CH ₄	49.5 %	49.6 %	49.7 %
TNMOC (as Carbon)	544 ppmC	566 ppmC	660 ppmC

All fixed gases have been normalized to 100% on a dry basis

Sample Reporting Limit (SRL) is equal to Reporting Limit x Analysis Dil. Fac x Canister Dil. Fac


Sucha Parmar, Ph.D.
Technical Director





Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

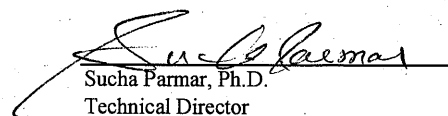
CLIENT : Brown and Caldwell
PROJECT NO. : 191581
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 09/18/2019
RECEIVING DATE : 09/20/2019
ANALYSIS DATE : 09/23/2019
REPORT DATE : 09/30/2019

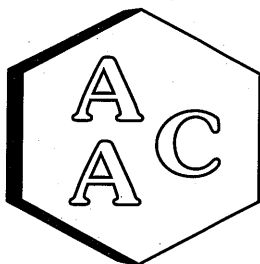
Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	Sample #4 Can 000230
AAC ID	191581-1629
Canister Dil. Fac.	1.5
Analyte	Result
Hydrogen Sulfide	353

Sample Reporting Limit (SRL) is equal to Reporting Limit x Canister Dil. Fac. x Analysis Dil. Fac.


Sucha Parmar, Ph.D.
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Analysis Date : 09/25/2019

Analyst : CH

Units : ppmv

Instrument ID: GCTCA#2-FID

Calibration Date: 8/17/2018

I - Opening Calibration Verification Standard - Method 25C

Analyte	xRF	DRF	%RPD*
Propane	1531741	1586123	3.5

II - TNMOC Response Factor - Method 25C

Analyte	xRF	CV RF	CV dp RF	CV tp RF	Average RF	% RPD***
Propane	1531741	1586123	1640590	1627338	1618017	5.5

III - Method Blank - Method 25C

AAC ID	Analyte	Sample Result
MB	TNMOC	ND

IV - Laboratory Control Spike & Duplicate - Method 25C

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec **	LCSD % Rec **	% RPD***
LCS/LCSD	Propane	202.6	217.0	215.2	107.1	106.2	0.8

V - Closing Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
Propane	1531741	1642584	7.0

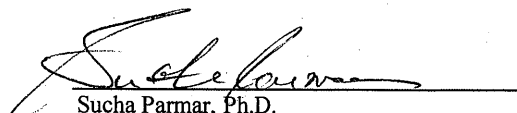
xCF - Average Calibration Factor from Initial Calibration Curve

dCF - Daily Calibration Factor

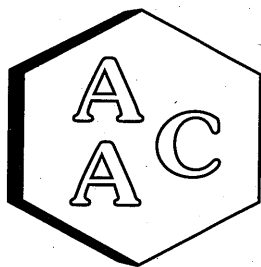
* Must be <15%

** Must be 90-110 %

*** Must be <20%


Sucha Parmar, Ph.D.
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed : 09/25/2019
Analyst : CH
Units : %

Instrument ID : GC-TCA#2
Calb Date : 01/09/19
Reporting Limit : 0.1%

I - Opening Continuing Calibration Verification - EPA 3C

AAC ID	Analyte	H ₂	O ₂	N ₂	CO	CH ₄	CO ₂
CCV	Spike Conc	9.5	10.4	19.9	10.2	10.3	10.2
	Result	10.1	10.6	20.7	10.3	10.4	10.2
	% Rec *	106	101.7	104	101	101	100

II - Method Blank - EPA 3C

AAC ID	Analyte	H ₂	O ₂	N ₂	CO	CH ₄	CO ₂
MB	Concentration	ND	ND	ND	ND	ND	ND

III - Laboratory Control Spike & Duplicate - EPA 3C

AAC ID	Analyte	H ₂	O ₂	N ₂	CO	CH ₄	CO ₂
Lab Control Standards	Sample Conc	0.0	0.0	0.0	0.0	0.0	0.0
	Spike Conc	9.5	10.4	19.9	10.2	10.3	10.2
	LCS Result	10.2	10.5	20.5	10.2	10.3	10.1
	LCSD Result	10.1	10.4	20.4	10.1	10.2	10.1
	LCS % Rec *	107	100.7	103	100.0	99.9	99.1
	LCSD % Rec *	106	100.4	103	99.7	99.6	99.0
	% RPD ***	1.3	0.3	0.3	0.3	0.3	0.1

IV - Sample & Sample Duplicate - EPA 3C

AAC ID	Analyte	H ₂	O ₂	N ₂	CO	CH ₄	CO ₂
191578-1614	Sample	0.0	7.9	42.1	0.0	0.0	2.0
	Sample Dup	0.0	7.9	42.1	0.0	0.0	2.0
	Mean	0.0	7.9	42.1	0.0	0.0	2.0
	% RPD ***	0.0	0.1	0.1	0.0	0.0	0.2

V - Matrix Spike & Duplicate - EPA 3C

AAC ID	Analyte	H ₂	N ₂	CO	CH ₄	CO ₂
191578-1614	Sample Conc	0.0	21.0	0.0	0.0	1.0
	Spike Conc	9.5	9.8	10.2	10.3	10.2
	MS Result	9.9	30.9	10.3	10.4	11.3
	MSD Result	9.9	30.9	10.3	10.4	11.3
	MS % Rec **	104	100.1	101	101	101
	MSD % Rec **	104	100.0	101	101	101
	% RPD ***	0.1	0.1	0.2	0.0	0.0

VI - Closing Continuing Calibration Verification - EPA 3C

AAC ID	Analyte	H ₂	O ₂	N ₂	CO	CH ₄	CO ₂
CCV	Spike Conc	9.5	10.4	19.9	10.2	10.3	10.2
	Result	9.3	10.3	20.2	10.0	10.1	10.0
	% Rec *	98.1	99.0	101.5	98.4	98.5	97.9

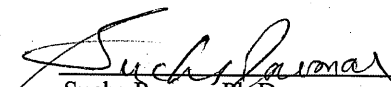
* Must be 85-115%

** Must be 75-125%

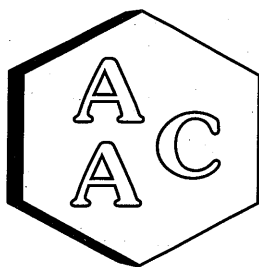
*** Must be < 25%

ND = Not Detected

<RL = less than Reporting Limit


Sucha Parmar, Ph.D.
Technical Director





Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

ASTM D-5504

Date Analyzed: 9/23/2019

Analyst: DL

Units: ppbV

Instrument ID: SCD#10

Calb. Date: 9/17/2019

Opening Calibration Verification Standard

525.0 ppbV H₂S (SS1184)

H ₂ S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	6104	530	100.9	0.4
Duplicate	5971	518	98.7	1.8
Triplicate	6164	535	101.9	1.4

Method Blank

Analyte	Result
H ₂ S	<PQL

Duplicate Analysis

Sample ID 191579-1627

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H ₂ S	<PQL	<PQL	0.0	0.0

Matrix Spike & Duplicate

Sample ID 191579-1627 x10

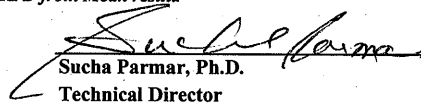
Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H ₂ S	<PQL	262.5	267.3	264.9	101.8	100.9	0.9

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H ₂ S	525.0	565.2	107.6

* Must be 95-105%, ** Must be 90-110%, *** Must be < 10%, **** Must be < 5% RPD from Mean result.

H₂S: PQL = 10.0 ppbV, MDL = 0.95 ppbV


Sucha Parmar, Ph.D.
Technical Director



ATMOSPHERIC ANALYSIS & CONSULTING, INC.
1534 Eastman Avenue, Suite A
Ventura, California 93003
Phone (805) 650-1642 Fax (805) 650-1644
E-mail: info@aacalab.com

AAC Project No 191581

2225

CHAIN OF CUSTODY/ ANALYSIS REQUEST FORM

[illegible]

4x cans + 1x manifest

Discharge Monitoring Reports submitted to USEPA providing evidence that EPA ECHO information has not been updated by EPA to show that the USEPA has received the information.

The screenshot shows the NetDMR web application interface. The header includes the NetDMR logo, the EPA Region 1 logo, and a navigation menu with options like 'Manage Access Requests', 'Search All DMRs & CORs', 'Unscheduled DMRs', 'Import DMRs', 'Update NODI', 'View Permits', and 'Download Blank DMR Form'. The main content area is titled 'DMR/COR Search Results' and displays a table of search results for two DMRs.

DMRs 1 through 2 of 2

Next Step(s)	Permit ID	Facility	Permitted Feature	Discharge #	Discharge Description	Monitoring Period End Date	Scheduled/Unscheduled	DMR Due Date	Status	COR Received Date	Include in Batch Submit Check All On Page Clear All	Include in Batch COR Download Check All On Page Clear All	Update NODI Check All On Page Clear All
View Copy of Submissions Go	MAR053231	CRAPO HILL LANDFILL	003	003-L1	All Landfill, Land Application Sites and Open Dumps	06/30/20	Scheduled	06/31/20	Completed	03/08/20	☐	☐	☐
View Copy of Submissions Go	MAR053231	CRAPO HILL LANDFILL	002	002-L1	All Landfill, Land Application Sites and Open Dumps	06/30/20	Scheduled	06/31/20	Completed	03/08/20	☐	☐	☐

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cdx login - Bing
US EPA
DMR/COR Search Results
https://netdmr.epa.gov/netdmr/protected/permitadmin_access_request.htm?_flowid=permitadmin_access_request_user-flow&_flowExecutionKey=e7s2

Home | My Account | Request Access | Help | Logout
User:acottafloae, Permittee User

Manage
Access Requests

Search
All DMRs & CORs
Permits
Users

Unscheduled DMRs
Unscheduled DMRs

Import DMRs
Perform Import
Check Results

Update NODI
Check Results

View
Permits
Users
DMR Signing Status

Download
Blank DMR Form

Session Lockout Timer: 29:55

New Search | Refine Search | Sign & Submit Checked DHRs | Download Checked CORs | Update NODI

DMR/COR Search Results

One item found

Next Step(s)	Permit ID	Facility	Permitted Facility	Discharge #	Discharges Description	Monitoring Period End Date	Scheduled/Unscheduled	DMR Due Date	Status	COR Received Date	Include in Batch Submit Check All On Page Clear All	Include in Batch COR Download Check All On Page Clear All	Update NODI Check All On Page Clear All
View Copy of Submissions Go	MAR052231	ORAPO HILL LANDFILL	001	001-L1	All Landfill, Land Application Sites and Open Dumps	06/30/20	Scheduled	06/31/20	Completed	05/08/20		☐	☐

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cdx login - Bing

US EPA

DMR/COR Search Results

https://netdmr.epa.gov/netdmr/protected/permitadmin_access_request.htm?flowId=permitadmin_access_request_user-flow&_flowExecutionKey=e5s2

Home | My Account | Request Access | Help | Logout

User:acotta@epa.gov, Permittee User



Manage
Access Requests

Search
All DMRs & CORs
Permits
Users

Unscheduled DMRs
Unscheduled DMRs

Import DMRs
Perform Import
Check Results

Update NODI
Check Results

View
Permits
Users
DMR Signing Status

Download
Blank DMR Form

Session Lockout Timer: 29:51

New Search | Refine Search | Sign & Submit Checked DMRs | Download Checked CORs | Update NODI

DMR/COR Search Results

DMRs 1 through 3 of 3

Next Step(s)	Permit ID	Facility	Permitted Feature	Discharge #	Discharge Description	Monitoring Period End Date	Scheduled/Unscheduled	DMR Due Date	Status	COR Received Date	Include in Batch Submit Check All On Page Clear All	Include in Batch COR Download Check All On Page Clear All	Update NODI Check All On Page Clear All
View Copy of Submissions Go	MA053231	CRAPO HILL LANDFILL	001	001-L1	All Landfill, Land Application Sites and Open Dumps	09/30/20	Scheduled	11/30/20	Completed	12/16/20		☐	☐
View Copy of Submissions Go	MA053231	CRAPO HILL LANDFILL	002	002-L1	All Landfill, Land Application Sites and Open Dumps	09/30/20	Scheduled	11/30/20	Completed	12/16/20		☐	☐
View Copy of Submissions Go	MA053231	CRAPO HILL LANDFILL	003	003-L1	All Landfill, Land Application Sites and Open Dumps	09/30/20	Scheduled	11/30/20	Completed	12/16/20		☐	☐

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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

BROKER: TJM INSTITUTIONAL SERVICES, LLC

CONFIDENTIAL

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:

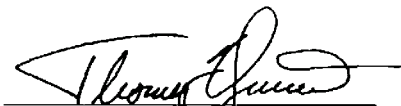
DEPARTMENT	CONTACT	PHONE	FAX	EMAIL
TRADER:	ERIC WINTER	713-230-1000		EMW@VITOL.COM
OPERATIONS:	LEN MESSINA	713-230-1319	713-230-1111	LXM@VITOL.COM
CREDIT:	TOM MORAN	713-230-1437	713-652-9599	TAM@VITOL.COM
PAYMENTS:	CASH DESK	713-230-1008		CASHCONFIRMSHOU@VITOL.COM
INVOICES:				XHOUACCOUNTSINVOICES@VITOL.COM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

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.

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.

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

Very truly yours,

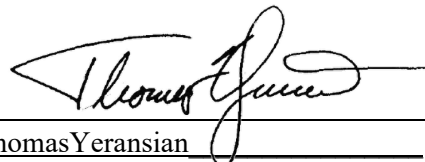
EXELON GENERATION COMPANY, LLC

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

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.

“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:

(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,

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.

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.

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

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