

**STATE OF VERMONT
PUBLIC UTILITIES COMMISSION**

Case No. _____

Petition of Vermont Renewable Gas, LLC for
a Certificate of Public Good Pursuant to 30)
V.S.A. § 248(j) for a Farm Methane Facility)
in Lyndon, Vermont)

**PREFILED TESTIMONY OF
ALEXANDER SKOROKHODOV
ON BEHALF OF**

VERMONT RENEWABLE GAS, LLC

Summary of Testimony

Mr. Skorokhodov's testimony addresses a General Overview of the proposed Vermont Renewable Gas – Lyndon and the project's compliance the following criteria:

30 V.S.A. § 248(b)(3)	System Stability and Reliability
30 V.S.A. § 248(b)(5)	Natural Resources
10 V.S.A. § 6086(a)(1)(B)	Waste Disposal
10 V.S.A. § 6086(a)(2) and (3)	Water Supply
10 V.S.A. § 6086(a)(5) and 9(K)	Transportation
30 V.S.A. § 248(b)(5)	Public Health and Safety
30 V.S.A. § 248(b)(10)	Existing or Planned Transmission Facilities
30 V.S.A. § 248(b)(11)	Woody Biomass Facilities
PUC Rule 5.900	Decommissioning Plan and Estimate

EXHIBIT LIST

Ex. VRG-AS-0	Alexander Skorokhodov Resume
Ex. VRG-AS-1	NVDA Industrial Park Map
Ex. VRG-AS-2	Topographical and Survey Maps
Ex. VRG-AS-3	Scaled Engineering, Cross-Section, and Elevation Drawings
Ex. VRG-AS-4	LED System Impact Study
Ex. VRG-AS-5	Deed Covenants and Restrictions
Ex. VRG-AS-6	Site Photos
Ex. VRG-AS-7	Building Conceptualization
Ex. VRG-AS-8	System Efficiency Certification
Ex. VRG-AS-9	Decommissioning Plan and Estimate

1 **Q1: Please state your name and position relative to this Petition.**

2 A1: My name is Alexander Skorokhodov. I am Director of Technology and Engineering for
3 Clean Energy Technologies, Inc. (CETY), a NASDAQ publicly traded company on the
4 New York Stock Exchange. CETY's wholly owned subsidiary CETY Capital, LLC is a
5 minority owner in Vermont Renewable Gas, LLC ("VRG"), a Vermont limited liability
6 company with its principal place of business at 145 Pine Haven Shores #1000A
7 Shelburne, Vermont 05482. CETY is also serving as project Engineering, Procurement,
8 and Construction (EPC) contractor for the Project.

9 CETY designs, builds, and markets renewable energy and energy efficient
10 solutions. We offer a suite of zero emission heat recovery solutions, combined heat to
11 power, and biomass energy products. As Director of Technology and Engineering for
12 CETY I lead the CETY Renewables Division. In this capacity I lead engineering and
13 development of the Project and my team will oversee construction and commissioning of
14 the Project. We will also perform long-term service and maintenance of the facility
15 equipment.

16

17 **Q2: Please describe your qualifications and experience.**

18 A2: I am a graduate of Moscow Aviation University where I earned a degree in automated
19 control systems engineering. I also hold a Masters of Business Administration in
20 International Business from Antwerp University's School of Management. I am an
21 inventor and developer of CETY's High Temperature Ablative Pyrolysis (HTAP)
22 renewable fuel gas technology. Over 18 years, I have developed and implemented more

1 than 250 onsite power generation projects for major energy and industrial customers. To
2 date I have developed 6 projects in Europe which rely on the HTAP technology to be
3 used at VRG’s Lyndon site. Additional information about my career can be found in my
4 attached resume’, **Ex. VRG-AS-0 Alexander Skorokhodov Resume.**

5

6 **Q3: What is the purpose of this Petition?**

7 A3: This Petition seeks approval for the construction and operation of a 2,200 kW AC farm
8 methane facility in Lyndon, Vermont (“the Project”).

9

10 **Q4: What is the purpose of your testimony?**

11 A4: My testimony provides a general overview of the Project, and also addresses the Project’s
12 compliance with various Section 248 criteria, including:

13 30 V.S.A. § 248(b)(3) System Stability and Reliability

14 30 V.S.A. § 248(b)(5) Natural Resources

15 10 V.S.A. § 6086(a)(1)(B) Waste Disposal

16 10 V.S.A. § 6086(a)(2) and (3) Water Supply

17 10 V.S.A. § 6086(a)(5) and 9(K) Transportation

18 30 V.S.A. § 248(b)(5) Public Health and Safety

19 30 V.S.A. § 248(b)(10) Existing or Planned Transmission Facilities

20 30 V.S.A. § 248(b)(11) Woody Biomass Facilities

21 PUC Rule 5.900 Decommissioning Plan

22

1 **Q5: What work has CETY performed in connection with this Project?**

2 A5: We have provided design services in the development of the Site Plan for this Petition,
3 with the subcontracting assistance of Truline Land Surveyors, Inc. of Saint Johnsbury,
4 Vermont, MW Soils Engineering, Inc. of Charlestown, New Hampshire, Catamount
5 Engineering Services, Inc. (Catamount) of Burlington, Vermont, and Engineering
6 Services of Vermont, LLC (Engineering Services of Vermont) of Waterbury Center,
7 Vermont. Catamount has offered separate testimony in conjunction with my own
8 testimony to touch on specific Section 248 criteria. Please see Prefiled Testimony of
9 Jeffrey Olesky.

10 We have also analyzed natural resource, environmental, and aesthetic impacts as
11 they relate to the criteria set forth in 30 V.S.A. § 248. CETY has been assisted with the
12 subcontracting assistance of Berkshire Environmental Consultants, Inc. (BEC) of
13 Pittsfield, Massachusetts (see Prefiled Testimony of Maura Hawkins), Horizons
14 Engineering, Inc. of Newport, Vermont (see Prefiled Testimony of Elias Buzzell), and
15 Innovative Natural Resource Solutions, LLC (INRS) of Portland, Maine (see Prefiled
16 Testimony of Eric Kingsley). Our collective efforts included field visits from
17 environmental scientists, land surveyors, geotechnical engineers, and civil engineers.
18 Staff in-house at CETY and within our subcontracting firms aided in the development of
19 supplemental maps used for inventory and analysis.

20 Because the sound generated by this Project will be negligible, and there are no
21 residences within 800 feet of the Project, we did not conduct a sound study. Two
22 structures are located approximately 800 and 2,000 feet, respectively, southeast of the

1 Project site through a densely wooded area on property owned by DPP, LLC, at 657
2 Industrial Parkway in Lyndon. It is unclear if these structures are presently residences.
3 All other residences in the area are further from the Project site. Notably, the Vermont
4 Department of Environmental Conservation (DEC) did not find a sound study to be a
5 necessary component of our Air Pollution Permit.

6

7 **Q6: What are the applicable environmental permits that CETY anticipates the Project**
8 **will need?**

9 A6: With the assistance of subcontractor Catamount, we have applied to the Vermont
10 Department of Environmental Conservation (DEC) for a Wastewater and Water Supply
11 Permit, a Stormwater Construction General Permit and an Operational Stormwater
12 Permit. We have also applied for approval to connect to municipal water supply and
13 wastewater systems. All of these permits are addressed in detail in Jeffrey Olesky's
14 prefiled testimony.

15 We have also applied for, and received, an Air Pollution Permit to Construct and
16 Operate (AOP-23-048), Ex. VRG-MH-2, issued by DEC's Air Quality and Climate
17 Division, which is addressed further in Maura Hawkins' prefiled testimony.

18

19 **Q7: Please describe the property where VRG intends to construct the Project:**

20 A7: The Project will be located within the Saint Johnsbury – Lyndon Industrial Park, on
21 Industrial Parkway in Lyndon, on a +/- 8 acre parcel currently owned by the Northeastern
22 Vermont Development Association. The Project site is identified as Lots C2, C3, and C4

1 on the NVDA map attached as **Exhibit VRG-AS-1, NVDA Industrial Park Map**. The
2 location of the facility is further shown on **Exhibit VRG-AS-2, Topographical and**
3 **survey maps; and Exhibit VRG-MH-4, Agency of Natural Resources Atlas Map**.
4 Photographs of the site are submitted as **Ex. VRG-AS-6, Site Photos**. The Project will
5 be built out on approximately 3 acres of the Property, with the remaining approximately 5
6 acres remaining undisturbed.

7 VRG has a Purchase and Sale Agreement for the project site with NVDA . Under
8 that agreement, the project site is presently held in escrow pending successful completion
9 of all permits and approvals necessary to construct the facility.

10
11 **Q8: Please give an overview of the Project.**

12 A8: There are two principal components to this project: an organic waste decomposition
13 (High Temperature Ablative Pyrolysis (HTAP)) system which produces biogas, and an
14 electrical generator room. The HTAP system decomposes organic waste in an oxygen-
15 free environment to produce a renewable fuel gas containing methane. The project site
16 and limits of disturbance are depicted in **Ex. VRG-JO-1 - Civil Design Plan Set**. Project
17 components are further illustrated in **Exhibit VRG-AS-3, Scaled Engineering and**
18 **Elevation Drawings**.

19 VRG plans to receive chipped, lignocellulosic fiber that is waste derived from
20 farming operations and a minority of other non-farm clean woody residuals for
21 production of this fuel gas. This gas is used as a fuel for synchronous biogas

1 engine/generator sets. The electricity produced by these generator sets will be sold
2 pursuant to a Vermont Standard Offer Power Purchase Agreement.
3

4 **Q9: Please describe the components of the Project and how the Project operates to**
5 **produce electricity.**

6 A9: Feedstock will arrive by tractor trailer truck or short truck from local producers. All
7 trucks will enter and exit the Facility via Industrial Parkway from existing industrial park
8 access points on U.S. Route 5. Project operations employees and equipment servicing
9 personnel will also enter and exit through these access points. Please see **Exhibit VRG-**
10 **AS-1, NVDA Industrial Park Map; Exhibit VRG-AS-3, Scaled Engineering and**
11 **Elevation Drawings; Ex. VRG-JO-1 - Civil Design Plan Set.**

12 If trucks have self-unloading capability, they can unload directly into a feedstock
13 receiving bin. This is a covered area bordering the southern face of the facility building
14 that houses the major plant equipment. This covered area includes a feedstock hopper that
15 directly feeds the plant. If trucks are unable to unload themselves, then we will employ
16 the use of a truck dumper which is a piece of equipment that safely tips a trailer into the
17 covered feedstock unloading area. Chipped feedstock will enter the building via live
18 bottom floor technology for pre-treatment prior to decomposition.

19 Pre-treatment will ensure organic matter decomposes within a short period of
20 time. Pre-treatment will occur in the building. Feedstock will first pass through a twin-
21 shaft shredder to pre-size it to pieces of 30 millimeters or less. A combination hammer
22 mill/dryer unit will be employed. The hammer mill will grind down the feedstock to a

1 reduced size of 2.5 millimeters or less. Low temperature waste heat from the biogas
2 generator sets (operating in combined heat- and power-generating (CHP) mode) and
3 some residual waste heat from the HTAP system will be used to heat ambient air. This
4 ambient air will pass through the ground feedstock within the confines of the dryer
5 section of the combination hammer mill/dryer unit. Feedstock will be dried consistently
6 to 5% moisture content, which is optimal for decomposition.

7 The ground, dried feedstock is then stored in two buffer silos outside the
8 building's eastern wall. The feedstock is automatically metered and augured back into the
9 building for decomposition in the HTAP system. The Project incorporates dual organics-
10 to-energy reactor vessels. In the first vessel, the self-contained high temperature
11 occurring in the reactor vessel extracts volatiles from the organic matter in an anaerobic
12 environment. Moving into the second vessel, thermos-catalytic cracking of the volatiles
13 occurs, creating a tar-free, high-heating-value fuel gas. Both the extraction and cracking
14 stages take place within a self-contained, high-temperature anaerobic environment. The
15 process in each vessel takes about 5 seconds. There are no air emissions associated with
16 either process.

17 The remaining waste from the process, a carbon-rich biochar, will be extracted
18 and conveyed for temporary storage into a holding silo, adjacent the feedstock buffer
19 silos outside the eastern wall of the building. All biochar produced by the Project will be
20 removed from the property. Plant staff will periodically deposit biochar from the silo into
21 bulk receptacles within the biochar canopy area of the plant. Farmers and other end users
22 will then directly load trucks from this biochar canopy area to remove biochar from the

1 facility. Biochar is used as a soil amendment and carbon storage commodity. Biochar can
2 also be used to produce green activated carbon and other industrial products. Concepts
3 for use in low-carbon building materials are also being developed through global
4 research.

5 The fuel gas is conditioned for use in three synchronous biogas engines.
6 Conditioning means removal of mechanical particles and droplets, cooling of the gas, and
7 pressurizing to renewable fuel gas specification requirements for biogas engine/generator
8 units. A mechanical separator is used for coarse particles and a ceramic candles filter is
9 used for fine particles removal. For increasing the pressure of the gas, VRG will use a
10 standard centrifugal compressor. These conditioning techniques are standard practice in
11 farm methane and landfill gas applications.

12 The gas is then received in a gas receiver and distributed to the biogas engines
13 with a plant capacity of 2,200 Kwh/hr at 96% capacity, or approximately 18,500 MWh
14 annually.

15 In the event of a shutdown of the engines due to emergency, VRG will employ the
16 use of an emergency flare. This emergency flare, similar to the type used at other farm
17 methane projects and landfill gas projects, will sit to the southeast of the plant building.
18 The emergency flare will also be used during startup of the facility, during initial
19 commissioning, and for planned maintenance events on a limited basis.

20 At the gas-to-power generation stage, the gas is fed into the cylinders within the
21 biogas engines. Spark plugs will ignite the gas. Combustion releases the energy in the gas
22 which is converted into heat and mechanical force to drive the engines' crank shafts. The

1 crank shafts in turn rotate alternators to produce electricity. The electricity will be
2 exported directly through an interconnection point with the Town of Lyndon Electric
3 Department's (LED) electric distribution system at the project site. All electric power
4 produced will be sold through a Vermont Standard Offer Power Purchase Agreement.

5 The engines chosen for this project are Guascor biogas engines. These engines are
6 specifically manufactured to operate on renewable gaseous fuels. The engines will be
7 operated in combined heat and power (CHP) mode. As aforementioned, waste heat will
8 be recovered for pre-treatment of the incoming organic material. Waste heat will also be
9 recovered to operate a small islanded Organic Rankine Cycle (ORC) generator which will
10 turn an electric motor to provide electrical power for the pre-treatment area. This ORC
11 generator will not be interconnected to the utility distribution grid, but instead will only
12 be used to provide electricity on site. Use of waste heat for pre-treatment as well as
13 operation of the ORC unit assures that VRG is maximizing the facility's efficiency to the
14 greatest extent possible. Please see **Ex. VRG-AS-8, System Efficiency Certification**.

15 This process employed in the facility is modular, highly efficient, and simple to
16 install. The emissions associated with the facility are non-major and were found to be
17 such by DEC. in its issuance of AOP-23-048. Selective catalytic reduction (SCR)
18 technology will be incorporated on each engine to bring carbon monoxide and nitric
19 oxide levels within state emissions limitations per the requirements of AOP-23-048. As
20 aforementioned, no emissions will be emitted from production of the fuel gas itself. Any
21 emissions (at low levels) associated with the pre-processing of incoming organic material
22 will be captured through a filtration system.

1 The Project will incorporate an emergency diesel generator and an emergency oil
2 boiler for limited emergency scenarios or in the case of the boiler to assist in a black start
3 scenario.

4
5 **Q10: How long will it take to build out the Project?**

6 A10: The construction phase is anticipated to last approximately 9 months. Construction will
7 be limited to the hours between 7:00 A.M. and 7:00 P.M. Monday through Friday and
8 between 8:00 A.M. and 5:00 P.M. on Saturdays with no construction allowed on state or
9 federal holidays or on Sundays.

10

11

SECTION 248 CRITERIA

12 **Q11: Will the Project adversely affect System Stability and Reliability, pursuant to 30**
13 **V.S.A. § 248(b)(3)?**

14 A11: No. The Town of Lyndon Electric Department (LED) conducted an Interconnection and
15 System Impact Study that concluded interconnection of the Project should not have an
16 adverse impact on safety and reliability of the area electric power system. **Ex. VRG-AS-**
17 **4, LED System Impact Study.** The Study concludes that “The LED system can
18 accommodate the interconnection of the Proposed Facility, subject to” certain conditions,
19 including specific infrastructure upgrades. None of these required infrastructure
20 upgrades include the construction of new utility electric lines, distribution lines, or rights-
21 of-way. The Project will interconnect into the existing distribution system within the
22 industrial park. LED notes in the Study that from a thermal standpoint, the affected 12.47

1 kV and 34.5 kV portions of the LED and Green Mountain Power systems and even the
2 115 kV Vermont Electric Power Company (VELCO) line (the major distribution and
3 transmission components in the vicinity of the Project) are able to accommodate the
4 Project. VRG, with CETY's assistance as Project EPC, will build, operate, and maintain
5 the Project in compliance with the conditions of the System Impact Study. In accordance
6 with Rule 5.500, VRG will enter into an interconnection agreement with LED within 30-
7 days of issuance of a Section 248 Certificate of Public Good for the Project. This
8 interconnection agreement will conform to the requirements of Commission Rule 5.500.
9

10 **Q12: Will the Project have undue adverse effects on the natural environment, pursuant to**
11 **30 V.S.A. § 248(b)(5)?**

12 A12: No, as explained in my detailed answers that follow, and through the testimony of other
13 individuals accompanying this petition, the Project will not have an undue adverse effect
14 on the natural environment as judged by the criteria specified in 10 V.S.A. 1424a(d) and
15 §§ 6086(a)(1)(A)(8), and (8)(A) in whole or in pertinent part.
16

17 **Q13: Will the Project have an undue adverse effect with respect to the use of natural**
18 **resources pursuant to 30 V.S.A. § 248(b)(5)?**

19 A13: No, the Project will not have an undue adverse effect on natural resources. The Project
20 will be located in an industrial park, developed by the town of Lyndon, the town of Saint
21 Johnsbury, and the Northeastern Vermont Development Association for the type of
22 development proposed in this Project. To prepare the Project site, tree clearing or cutting

1 will be kept to a minimum. The Project site is largely already cleared. The Project will
2 require clearing and cutting of a 250-foot section of trees, south to north for purposes of
3 assuring adequate gradation and associated soil retainage. This section of trees will be cut
4 to an average depth of 10 feet to the east, with 20 feet being the deepest section of
5 clearing. Please see the **Prefiled Testimony of Jeffrey Olesky**. The Project will not
6 otherwise use or deplete natural resources at the site. Additionally, the Project will utilize
7 chipped lignocellulosic waste from existing farm production in the Northeast Kingdom
8 region and will turn these byproducts into heat and electricity.

9
10 **Q14: Please describe the height of project features in relation to existing buildings and/or**
11 **vegetation as required under PUC Rule 5.403(A)(10) and (13).**

12 A14: CETY has prepared a cross-section of the site showing existing and proposed conditions
13 and the height of project features in relation to existing vegetation. These proposed
14 features include the Project building, silos, feedstock area, and emergency flare in
15 relationship to the height of trees on the property. All relevant dimensions are detailed in
16 these drawing. As can be seen in the drawings, the height of nearby trees at their highest
17 point (approximately 876 feet above sea level) is of similar height to the proposed Project
18 building. **Ex. VRG-AS-3 – Scaled Engineering, Cross-Section, and Elevation**
19 **Drawings.**

20
21 **Q15: Please describe any elevation drawings prepared by CETY as they relate to Section**
22 **5.403(A)(10) and (13).**

1 A15: The elevation drawings prepared by CETY demonstrate the elevation of the Project
2 building and other associated items including the silos, emergency flare, and feedstock
3 preparation area. This area is approximately 840 – 843 feet above sea level. The elevation
4 drawings are drawn at right angles, showing the ground profile at least 100 feet beyond
5 the edge of the proposed clearing. The heights of surrounding trees are also present. **Ex.**
6 **VRG-AS-3 Scaled Engineering, Cross-Section, and Elevation Drawings.**

7
8 **Q16: Please describe your consideration of waste disposal for the Project, pursuant to 10**
9 **V.S.A. § 6086(a)(1)(B).**

10 A16: The Project will generate minor amounts of scrap and waste material during construction
11 and installation, and this waste will be disposed of or recycled at an approved disposal
12 facility in accordance with Vermont’s *Solid Waste Management Rules*. In addition, we
13 have applied for a state Wastewater and Water Supply Permit and for approval to connect
14 to a municipal sewer system to serve an employee kitchen and bathrooms. Please see the
15 testimony of **Jeffrey Olesky** for further detail.

16
17 **Q17: Does the Project involve the injection of waste material or any harmful or toxic**
18 **substances into groundwater or wells?**

19 A17: No, the Project will not inject harmful or toxic substances into groundwater or wells. The
20 HTAP system will produce a solid biochar that will be shipped offsite for sale as a soil
21 amendment or other uses. Consumables replaced during electrical generator maintenance
22 will be accumulated in separate enclosed vessels and disposed of at approved disposal

1 facilities. Disposables include lubrication oils and glycol. These technical liquids will be
2 disposed at the referenced approved disposal facilities and will not be merged with
3 sanitary wastewater. Consumables also include replaced parts (hardware). We will have a
4 space to store these spare parts inside of the Project building. No onsite treatments are
5 needed for these replaced parts.
6

7 **Q18: Will the Project meet any applicable Health and Environmental Conservation**
8 **regulations regarding the disposal of wastes?**

9 A18: Yes, the Project will not require any sanitary waste treatment or use of public waste
10 treatment facilities for industrial wastes. Small volumes of sanitary water, between 0 and
11 500 gallons per day will be sent to the town of Lyndon public waste treatment facility, in
12 the same manner that other commercial, residential, and industrial businesses in Lyndon
13 currently do.
14

15 **Q19: Will the Project require a Spill Prevention, Control, and Countermeasure (“SPCC”)**
16 **plan?**

17 A19: No. The Project site will not store more than 1,320 gallons of oil or oil products such as
18 diesel fuel, gasoline, lube oil, hydraulic oil, adjuvant oil, crop oil, vegetable oil, or animal
19 fat.
20

21 **Q20: Is there sufficient water supply available to meet the needs of the project under 10**
22 **V.S.A. § 6086(a)(2) and (3)?**

1 A20: Yes. The facility itself will not use any water to produce biogas or electricity. The only
2 water used in association with the Project will be to supply the employee kitchen and
3 bathrooms. This water will be provided via a municipal water supply system, as
4 explained in the Prefiled Testimony of Jeffrey Olesky.

5

6 **Q21: Will the Project have an adverse impact on traffic and highways pursuant to 10**
7 **V.S.A. § 6086(a)(5) and (9)(K)?**

8 A21: No. Once operating, the Facility will require a small amount of truck traffic, taking in 3
9 to 5 trucks daily of feedstock for gas production. Between 0 and 1 trucks daily will
10 remove biochar byproduct from the Facility. Trucks will enter and exit the Facility via
11 Industrial Parkway, using existing access to the industrial park on US Route 5. This is
12 not expected to have any impact on traffic in the area, since frequent truck traffic to and
13 from the industrial park is part of the normal course of business for several industrial park
14 businesses.

15 Employees will also arrive and depart via Industrial Parkway, using the existing
16 access points on US Route 5. Between 10 and 13 employees will arrive daily in
17 passenger vehicles, with 6 to employees arriving at peak hours. Occasional service and
18 maintenance appointments will be scheduled for the plant. These appointments are for
19 routine or emergency maintenance and are not regular vehicle trips associated with the
20 Facility. Such service and maintenance visits would generally involve one commercial
21 truck or van.

1 The Petitioner consulted with the Vermont Agency of Transportation (VTrans),
2 which performed an initial review of the project traffic flow and determined that VTrans
3 does not have any concerns with the Project from a standpoint of traffic safety. **Ex.**
4 **VRG-ED-5, VTrans 1.29.24 email.**

5
6 **Q22: Will the project have an undue adverse effect on public health and safety, pursuant**
7 **to 30 V.S.A. § 248(b)(5)?**

8 **A22:** No, the Project will not have any undue adverse effects on the health, safety, and welfare
9 of the public. The Project will be constructed in accordance with the National Electrical
10 Safety Code and the National Electric Code. VRG will also ensure that all facility
11 equipment complies with applicable UL and IEEE standards and other standards,
12 including OSHA. VRG will also ensure that the facility abides by all fire safety and
13 building regulations of the Vermont Department of Public Safety, Division of Fire
14 Services. The petitioner will ensure the Project uses appropriate safety guards and
15 signage to prevent harm to the public, contractors, and employees alike.

16
17 **Q23: Will the Project have an undue adverse effect on Existing or Planned Transmission**
18 **Facilities under 30 V.S.A. § 248(b)(10)?**

19 **A23:** No. The Project can be served by existing or planned transmission facilities without
20 undue adverse effects on Vermont utilities or customers. The System Impact Study
21 concluded that the Project will not have an adverse impact on LED's electric power
22 system. **Ex. VRG-AS-4, LED System Impact Study.**

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Q24: Is the Project a Woody Biomass Facility and, if so, does it achieve the highest design system efficiency that is commercially available, feasible, and cost-effective for the type and design of the proposed facility as set forth in 30 V.S.A. § 248(b)(11)(B)?

A24: This Project is a Farm Methane facility. It will convert lignocellulosic biomass waste into renewable fuel gas with a constituency of methane into electricity. It does not burn woody biomass for electricity. While the Project is therefore not a woody biomass combustion facility, it will be highly efficient at greater than 60% efficiency as a sum of full load design thermal output and electric output when divided by the heat input, as shown in Engineering Services of Vermont has conducted this calculation and certified it through a stamped report. Please see **Ex. VRG-AS-8, System Efficiency Certification**. This facility is highly efficient. Most biogas generators operate at efficiencies as low as 35% - 45%.

Q25: Does the Project comply with the applicable air pollution control requirements under the federal Clean Air Act 42 U.S.C. § 7401 et seq. as stated in 30 V.S.A. § 248(b)(11)?

A25: Yes, although this Facility does not combust woody biomass, the Project complies with the applicable air pollution control requirements under the federal Clean Air Act. Please see the prefiled testimony of **Maura Hawkins**.

1 **Q26: While a farm methane facility, will the Project meet the harvesting standards as**
2 **defined in § 248(b)(11) for feedstock which is derived from fiber growing operations**
3 **where such fiber is timber?**

4 A26: Yes, the harvesting procedures and procurement standards specific to feedstock sourced
5 from timber growing operations will meet the minimum guidelines and standards
6 developed under 10 V.S.A. § 2570. These standards have been officially published as the
7 *Vermont Biomass Renewable Energy Standard, Tier II*. Please see **Ex. VRG-ED-1,**
8 **Vermont Biomass RES.** Evan Dell'Olio and Eric Kingsley provide further context in
9 their individual Prefiled Testimonies on this subject.

10

11 **Q27: Is there a decommissioning plan for the Project as required under PUC Rule 5.900?**

12 A27: Yes, I have prepared a decommissioning plan and cost estimate, submitted as **Ex. VRG-**
13 **AS-9, Decommissioning plan and estimate.** As detailed in that plan, the Project will be
14 decommissioned after 20 years of operation in accordance with the Standard Offer Power
15 Purchase Agreement. Under this plan, all above-grade and below-grade portions of the
16 facility as well as any improvements installed as part of the Project shall be removed
17 from the site, and the site will be restored as close to original conditions as reasonably
18 possible (including areas of Primary Agricultural Soils). This includes demolishing all
19 concrete foundations and removing all crushed rock and asphalt installed as road
20 surfacing. The site will be re-seeded with grasses consistent with the site's present
21 condition. The estimated cost of decommissioning is \$285,000.

22

1 **Q28: Does this conclude your testimony?**

2 A28: Yes.



Alexander Skorokhodov

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DECLARATION OF ALEXANDER SKOROKHODOV

I declare that the testimony and exhibits that I have sponsored are true and accurate to the best of my knowledge and belief and were prepared by me or under my direct supervision. I understand that if the above statement is false, I may be subject to sanctions by the Commission pursuant to 30 V.S.A. § 30.

Dated at Tel Aviv, Israel this 23rd day of August, 2024.



Alexander Skorokhodov