

STATE OF VERMONT  
PUBLIC UTILITY COMMISSION

Case No. 24-3359-INV

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Investigation of the standard-offer contract between Vermont Renewable Gas, LLC and the Standard Offer Facilitator	
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Order entered:

**PROPOSAL FOR DECISION ADDRESSING STANDARD-OFFER CONTRACT ELIGIBILITY**

**I. INTRODUCTION**

This proceeding concerns an investigation into the standard-offer contract executed between Vermont Renewable Gas, LLC (“VRG”) and the Standard Offer Facilitator for a 2.2 MW electric generation facility in Lyndon, Vermont (the proposed “Facility”).<sup>1</sup>

VRG and the Standard Offer Facilitator executed a standard-offer contract for the Facility as a “farm methane” plant on August 28, 2023.<sup>2</sup> The Commission opened this investigation, pursuant to 30 V.S.A. §§ 209(a)(8) and 8005a(b)-(d), to review whether the Facility is eligible for a standard-offer contract outside the cumulative capacity limit of the Standard Offer Program as a plant using methane derived from an agricultural operation.

The Facility would convert woody biomass and other materials into synthetic fuel using pyrolysis and is the first plant of its kind to be proposed as a farm methane plant under 30 V.S.A. § 8005a(d)(1). For the reasons described in this proposal for decision, I recommend that the Commission find that VRG’s proposed fast ablative pyrolysis process is better characterized as the combustion of woody biomass instead of methane derived from an agricultural operation. The gases derived from pyrolysis contain significant quantities of combustible gases other than methane and are qualitatively different from the biogas derived from an anaerobic digester. In addition, most of the biomass feedstock sources proposed by VRG do not constitute feedstock from agricultural operations.

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<sup>1</sup> The Vermont Public Utility Commission (“Commission”) is reviewing VRG’s petition for a certificate of public good, pursuant to 30 V.S.A. § 248, to construct and operate the Facility, in a separate proceeding in Case No. 24-2797-PET. The proceeding is stayed until the resolution of this matter.

<sup>2</sup> Standard-offer contract at Attachments A and F. A copy of the standard-offer contract can be found in Case No. 23A-3008.

Therefore, I recommend that the Commission conclude that the Facility is not eligible for a standard-offer contract as a farm methane plant. I recommend that the Commission find the contract executed between the Standard Offer Facilitator and VRG to be null and void *ab initio* because the Facility is not consistent with the statutory requirements of Section 8005a(d)(1) and the Facility is not otherwise eligible for a contract.

## **II. BACKGROUND AND LEGAL STANDARD**

The statute governing the Standard Offer Program establishes a mandate for purchases from specific categories of renewable energy plants.<sup>3</sup> These categories include “methane derived from a landfill; solar power; wind power . . . hydroelectric power; and biomass power using a fuel other than methane derived from an agricultural operation or landfill.”<sup>4</sup> The statute authorizes the Commission to issue up to 127.5 MW of contracts; however, “[p]lants using methane derived from an agricultural operation” are outside the program’s capacity limits.<sup>5</sup> Thus, there are two criteria that a plant must meet to be outside the program’s capacity limit; the plant must: (1) use methane and (2) the methane must be derived from an agricultural operation.

The correct categorization of a plant is essential because it determines how and whether a plant is awarded a standard-offer contract. The Commission has used a market-based mechanism for awarding contracts to categories of plants that are subject to the program’s cumulative capacity limits. The Commission has completed all of the required annual solicitations for new standard-offer plants and is not currently awarding new contracts to plants in the categories subject to the cap at this time.<sup>6</sup> In contrast, the Standard Offer Facilitator may execute a contract with a plant in a category that is outside the statute’s cumulative capacity limits without using the market-based mechanism.

A plant’s category also affects the price contained in a standard-offer contract. The price of most standard-offer plants is determined by the market-based mechanism.<sup>7</sup> However, for plants using methane derived from an agricultural operation, the Commission has established a

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<sup>3</sup> 30 V.S.A. § 8005a.

<sup>4</sup> 30 V.S.A. § 8005a(c)(2).

<sup>5</sup> 30 V.S.A. § 8005a(d).

<sup>6</sup> The Commission has issued contracts to slightly more than 127.5 MW of plants that are subject to the capacity cap.

<sup>7</sup> 30 V.S.A. § 8005a(f)(1).

category-specific price.<sup>8</sup> The Commission has established a price of \$0.145 \$/kWh for energy and capacity produced by “farm methane” plants with a plant capacity greater than 150 kW.<sup>9</sup> Vermont law also permits a plant using methane derived from agricultural operations to retain ownership of renewable energy credits generated by the plant, which is a significant financial benefit for the plant owner.<sup>10</sup>

The term “methane derived from an agricultural operation” has historically been applied to so-called “cow power” plants that use an anaerobic digester to derive methane from manure.<sup>11</sup> This understanding is reflected in the Commission’s use of the costs of constructing and operating a methane digester on a farm in its determination of a technology-specific price.<sup>12</sup> The Commission has held that while the statute does not require a particular technology (such as a turbine) to generate power from methane, the plant must derive the methane from agricultural operations and the Commission assumes that methane is derived by an anaerobic digester.<sup>13</sup> The statute has treated “farm methane” plants as a category of plants distinct from other types of plants using biomass, such as plants that produce energy through the combustion of woody biomass.<sup>14</sup>

Section 248(q)(1) also contains specific requirements for plants using methane derived from an agricultural operation, and the statute contemplates that the methane will be derived from an anaerobic digester. The statute states that for purposes of Section 248, “‘biogas’ means a gas resulting from the action of microorganisms on organic material such as manure or food processing waste.”<sup>15</sup> Similarly, the statutory definition of “renewable energy” contemplates that methane is renewable when it is derived by “anaerobic digestion.”<sup>16</sup>

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<sup>8</sup> 30 V.S.A. § 8005a(f)(2)(B).

<sup>9</sup> Case No. 23-1860-INV, Order of 8/8/23.

<sup>10</sup> 30 V.S.A. § 8005a(f)(3).

<sup>11</sup> The use of anaerobic digesters that convert cow manure into methane is a technology with a long history in Vermont. *See Petition of Foster Brothers Farm Inc. for a certificate of public good under 30 V.S.A. Section 248 authorizing the construction of an electric generation facility and related switchgear on the Foster Brothers Farm in the Town of Middlebury, Vermont*, Docket No. 4585, Order of 11/6/81 (approving construction of a 150-kW electric generation facility using methane produced by a digester on a farm).

<sup>12</sup> Investigation Re: Establishment of a Standard Offer Program for Qualifying Sustainably Priced Energy Enterprise Development (“SPEED”) Resources, Docket 7533, Order of 10/28/09 at 5.

<sup>13</sup> *Id.* at 3.

<sup>14</sup> *Id.*; 30 V.S.A. § 8005a(d).

<sup>15</sup> Section 248(q)(4).

<sup>16</sup> 30 V.S.A. § 8002(21)(A).

The appropriate categorization of a facility within the Standard Offer Program includes an examination of the proposed feedstocks and a determination of whether they constitute products, byproducts, or wastes derived from agricultural operations, as contemplated in 30 V.S.A. §§ 8005a and 8002. In past decisions implementing the Standard Offer Program, the Commission has been guided by the definition of “farming” contained in 10 V.S.A. § 6001(22).<sup>17</sup> The Commission has required that 51% of the feedstocks come from agricultural operations to meet eligibility under the farm methane category.<sup>18</sup>

### **III. EVIDENTIARY RECORD AND PUBLIC COMMENTS**

VRG filed prefiled testimony and exhibits. In addition, participants filed legal briefs in this proceeding: Vermont Department of Public Service (“Department”) brief filed on January 23, 2025 (“Department Brief”); Green Mountain Power Corporation (“GMP”) brief filed on January 23, 2025 (“GMP Brief”); VRG filed on January 23, 2025 (“VRG Brief”); Vermont Agency of Agriculture, Food and Markets (“AAFM”) brief filed on January 27, 2025 (“AAFM Brief”); Vermont Agency of Natural Resources (“ANR”) reply brief filed on February 13, 2025 (“ANR Reply Brief”); Department reply brief filed on February 13, 2025 (“Department Reply Brief”); GMP reply brief filed on February 13, 2025 (“GMP Reply Brief”); and VRG reply brief filed on February 13, 2025 (“VRG Reply Brief”).

No participant has requested an evidentiary hearing or any additional process. Accordingly, I recommend that the following be admitted into the record: prefiled testimony of Evan Dell’Olio, VRG, filed on December 12, 2024 (“Dell’Olio pf.”), and exhibits VRG-INV-ED-1 through VRG-INV-ED-4; prefiled testimony of Alexander Skorokhodov, VRG, filed on December 12, 2024 (“Skorokhodov pf.”), and exhibits VRG-INV-AS-0 through VRG-INV-AS-6; supplemental testimony of Evan Dell’Olio, VRG, filed on February 13, 2025 (“Dell’Olio pf. supp.”); *Biogas Cleaning and Upgrading Technologies*, Liangcheng Yang, Yebo Li, Ohio State University Extension, March 26, 2014 (“OSU Extension Factsheet”); Case No. 24-2794-PET, exh. VRG-MH-2: Case No. 23A-3008, standard-offer contract, executed on August 28, 2023.<sup>19</sup>

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<sup>17</sup> 10 V.S.A. § 6001(22)(A)-(H).

<sup>18</sup> See Docket 7533, Order of 10/28/09 at 4; Docket 7533, Order of 3/28/11.

<sup>19</sup> If any party has an objection to any of these documents being entered into evidence, the party must submit its objection with its comments on the proposal for decision.

In addition, public comments were filed on November 7, 2024, January 23, 2025, January 24, 2025, February 12, 2025, and February 14, 2025.

#### **IV. FINDINGS OF FACT**

Based on the petition and the accompanying record in this proceeding, I have determined that this matter is ready for decision. Based on the evidence of record, I report the following proposed findings to the Commission in accordance with 30 V.S.A. § 8(c).

##### **Facility Description**

1. The Facility would be a 2.2 MW electric generation plant. The Facility would use a high-temperature ablative pyrolysis (“HTAP”) system to produce biochar and recover volatiles in the form of a synthetic fuel gas. The Facility would capture the synthetic fuel gas and combust it to generate heat and electricity. DellOlio pf. at 4-5.

2. The Facility would be located in the Saint Johnsbury-Lyndon industrial park in Lyndon, Vermont. DellOlio pf. at 3.

3. The owners of VRG are Synergy Bioproducts Corporation of Shelburne, Vermont, and CETY Capital, LLC, a wholly owned subsidiary of Clean Energy Technologies, Inc., a Nevada Corporation with its principal place in Irvine, California. DellOlio pf. at 3.

4. The Facility would use feedstock composed mostly of woody biomass, and most of this biomass material will be sourced within the 25-mile radius surrounding the Facility. Skorokhodov pf. at 6-13; DellOlio pf. supp. at 8-9.

5. The Facility’s components include: (1) a shredder and hammer mill/dryer grinder to prepare the biomass feedstock; (2) cyclone separators and a baghouse filter to capture particulate from biomass preparation; (3) oil-fired boiler to dry the biomass; (4) the HTAP reactor vessels to derive the synthetic fuel gas; and (5) internal combustion engines and electric generators to combust the gas to produce electricity. Skorokhodov pf. at 14-15; DellOlio pf. at 4-5; Case No. 24-2794-PET, exh. VRG-MH-2.

6. The woody biomass received at the Facility would be passed through a shredder to pre-size it to pieces of 30 mm or less. The biomass then passes through the hammer mill/dryer grinder that simultaneously dries it, using heated air, and reduces it to particles of the proper size for the HTAP reactor. Case No. 24-2794-PET, exh. VRG-MH-2.

7. The drying air and moisture will be vented through cyclone separators and a baghouse filter to remove any captured particulate. Particulate collected in the filters will be returned to the biomass feed. The sized biomass will be transported to two closed storage bins. Dried biomass is transported to the HTAP system using screw conveyors. Case No. 24-2794-PET, exh. VRG-MH-2.

8. The HTAP system implements dual-stage fast pyrolysis in two connected reactor vessels. In the first vessel high-temperature pyrolysis extracts volatiles and produces char; in the second vessel thermo-catalytic cracking of volatiles occurs using char from the first vessel as the catalytic promoter material for the conversion of volatiles into synthetic fuel gas. Exh. VRG-INV-AS-6 at 1.

9. The HTAP system operates at low pressure and high temperature. The first vessel operates at about 950 degrees Celsius. The second vessel operates at 850 to 900 degrees Celsius. Auxiliary electrical power consumption of the plant is approximately 15% of the installed power of the generator sets. At normal operation, the energy source for the plant is waste heat from the HTAP unit and the generator sets and the electrical energy from the generator sets. Skorokhodov pf. at 14.

10. Pyrolysis differs from combustion because the feedstock is heated in the absence of oxygen. Because combustion requires heat, fuel, and an oxidizer, combustion cannot occur within an HTAP system due to the oxygen-free environment. Skorokhodov pf. at 15.

11. The synthetic fuel gas (syngas) would be used as fuel in three reciprocating internal combustion engines to drive electric generators. Each generator engine set would exhaust through an SCR/oxidation catalyst system, to reduce NO<sub>x</sub>, carbon monoxide (“CO”), and non-methane, non-ethane hydrocarbon emissions. DellOlio pf. at 4-5; Case No. 24-2794-PET, exh. VRG-MH-2.

12. The Facility would also include an oil-fired boiler to produce heat to dry the biomass during system startup and an emergency diesel engine powered electrical generator to provide electrical power if utility power is unavailable. Case No. 24-2794-PET, exh. VRG-MH-2.

13. The Facility would require an air pollution control permit from ANR. Emissions covered by the permit would be associated with processing and handling of the wood biomass feedstock, the exhaust from the engines, and a biogas combustion flare. Case No. 24-2794-PET,

exh. VRG-MH-2.

14. The gas derived by volume from the HTAP system is expected to be approximately 36.2% hydrogen (H<sub>2</sub>), 30.2% carbon monoxide (CO), 26.7% methane (CH<sub>4</sub>), and 2.1% nitrogen (N<sub>2</sub>). Other gases derived in amounts less than 1% by volume include carbon dioxide (CO<sub>2</sub>), water vapor (H<sub>2</sub>O), ethane (C<sub>2</sub>H<sub>6</sub>), ethylene (C<sub>2</sub>H<sub>4</sub>), and acetylene (C<sub>2</sub>H<sub>2</sub>). Skorokhodov pf. at 9; exh. VRG-INV-AS-1.

15. The combustion of gas from the HTAP system to produce electricity, using reciprocating internal combustion engines and generators, converts the gases into CO<sub>2</sub> and water vapor. Dell'Olio pf. at 5-6.

#### Facility Feedstocks

16. The Facility would receive biomass feedstocks from off-site locations. VRG refers to the feedstock as lignocellulosic or woody biomass, generated from husks, hulls, straw, branches, trunks, and roots. Skorokhodov pf. at 6.

17. Forty-nine percent of the feedstock for the Facility would be derived from “non-farm clean woody residuals.” Dell'Olio pf. at 20.

18. Fifty-one percent of the feedstock for the Facility would be from sources that include: (1) byproducts from Christmas tree, maple sap, horticultural, and orchard crop production; (2) timber grown and harvested as short-rotation tree crops grown for energy production; (3) timber purposefully harvested from woodlots on farms and grown for energy production; and (4) byproducts from timber grown and harvested from woodlots on farms. Dell'Olio pf. at 20.

19. VRG estimates that 30% of that 51% feedstock would be the first source above, and 70% of the 51% would be from sources two through four. Dell'Olio pf. at 20.

20. The feedstock material would be “primarily sourced from the chipping of branches, limbs, and cull material associated with fiber production (saw logs and pulpwood) and the management of woodlands for maple sap production, with volumes of Christmas [t]ree, orchard, and horticultural crop associated material used when available.” Dell'Olio pf. supp. at 20.

21. The first source of the 51% feedstock includes byproducts from Christmas tree production — the trees and parts of trees not suitable for sale. The first source also includes byproducts associated with maple sap production (trees and parts of trees trimmed in the management of a maple sugarbush), horticultural crop production (plants or trees that are

trimmed or rejected crops not suitable for sale), and orchard crop production (trees and parts of trees pruned, trimmed, or cut as part of management). Dell'Olio pf. supp. at 20-21.

22. The second source of the 51% feedstock includes byproducts and wastes from trees grown in short rotations on farm woodlots. The feedstock includes fast-growing tree crops such as poplars and willows. Dell'Olio pf. at 20-21.

23. The third and fourth sources of the 51% feedstock include timber removed from woodlots on farms and byproducts from that timber. The timber feedstocks would include trees that are maple, beech, birch, ash, and other native species. The byproduct feedstocks would include lumber, pulpwood for papermaking, or in chipping the tops of pre-cut trees. Dell'Olio pf. at 21-23.

#### Anaerobic Digestion Plant Description

24. An anaerobic digestion plant includes (1) an organic waste handling system to collect and store waste that is fed into the digester; (2) an anaerobic digester to derive the biogas fuel; (3) a biogas handling system to collect and treat biogas before combustion; and (4) internal combustion engines and generators to combust the fuel and generate electricity and heat. Skorokhodov pf. at 7-8, 16-17.

25. The anaerobic digester breaks down organic waste in an oxygen-free (anaerobic) environment to derive biogas and recover digestate. Skorokhodov pf. at 10-11; exh. VRG-INV-AS-2.

26. An anaerobic digester is expected to derive a fuel gas that is 53-70% methane by volume when using feedstocks from agricultural crops or residues, livestock manure, and organic waste. An anaerobic digester fed with mostly livestock waste is expected to be 60-70% methane by volume. Skorokhodov pf. 7-8; OSU Extension Factsheet; exh. VRG-INV-AS-3; exh. VRG-INV-AS-5.

27. The combustible gases or fuels derived by anaerobic digestion are almost exclusively methane. The remaining gases include mostly CO<sub>2</sub> by volume (25-50%), some nitrogen (2-8%), and smaller quantities of sulfur, silicone, ammonia, halogenated compounds, and other volatile organic compounds. Skorokhodov pf. 7-8.

28. The combustion of the biogas from the anaerobic digester to produce electricity, using internal combustion engines and generators, converts the gases into CO<sub>2</sub> and water vapor.

Dell’Olio pf. at 5-6.

## **V. DISCUSSION**

In today’s proposal for decision, I recommend that the Commission conclude that the Facility is not eligible for a standard-offer contract as a farm methane plant. To determine whether the Facility qualifies for a standard-offer contract as a farm methane plant, I must analyze the language of the statute: “Plants using methane derived from an agricultural operation.”<sup>20</sup> The first step in any statutory analysis is to look to the plain meaning of the law.<sup>21</sup> Only if the statute’s language is ambiguous do we go beyond the statutory language to determine its meaning.<sup>22</sup>

Section 8005a(d)(1) contains two critical concepts for understanding its meaning: “using methane” and “derived from an agricultural operation.” In making my recommendation, I first examine whether the Facility uses methane as required by Section 8005a(d)(1). Next, I examine whether the Facility’s proposed feedstock sources constitute feedstocks from agricultural operations, as defined under the applicable and relevant portions of Section 8005a(d)(1) and 10 V.S.A. § 6001(22)(F). Finally, I address the validity of the contract between the Standard Offer Facilitator and VRG.

### **A. Examination of Whether the Facility Uses Methane**

I recommend that the Commission find that the Facility is not eligible as a plant that uses “methane” as required by Section 8005a(d)(1). The term “using methane” is not further defined in Section 8005a. The statute is therefore ambiguous, and I must turn to sources beyond the statutory language to determine the plain meaning of the statute. My examination is guided by legislative history, other contextual statutory language, and the Commission’s past orders addressing the farm methane category. As the Commission highlighted in opening this investigation, the farm methane category established under Section 8005a has been understood to apply to anaerobic digester plants using feedstocks mostly composed of cow manure, so-called “cow power” plants. While my examination considers whether the farm methane category applies to facilities using technologies other than anaerobic digestion, ultimately my

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<sup>20</sup> 30 V.S.A. § 8005a(d)(1).

<sup>21</sup> See *Cornelius v. The Chronicle, Inc.*, 2019 VT 4, ¶ 18, 209 Vt. 405, 206 A.3d 710.

<sup>22</sup> *Northfield Sch. Bd. v. Washington S. Educ. Ass’n*, 2019 VT 26, ¶ 13, 210 Vt. 15, 210 A.3d 460.

recommendation is based on the fact that the Facility will generate substantial amounts of power using fuels other than methane.

First, I address the parties' arguments about whether a facility must use an anaerobic digester to qualify as a plant in the farm-methane category. The phrases "methane derived from an agricultural operation" and "farm methane" have been closely linked by the in statute and in legislative history to plants using digesters. For example, Act 159 of 2010, which allowed existing farm methane plants to receive standard-offer contracts, includes legislative findings that highlight the "significant and unique benefits" of "agricultural methane electric generation plants, sometimes called 'cow power.'"<sup>23</sup> "Farm methane projects" are described as plants "producing electricity through anaerobic digestion of wastes from farm animals and other sources."<sup>24</sup> The legislative findings supporting Act 159 of 2010 state that the existing farm methane facilities "create other benefits to Vermont such as support of its farm economy and working landscape, odor control, and nutrient management to reduce negative impacts on state waters."<sup>25</sup> These legislative findings suggest that anaerobic digesters were viewed as the prototypical plant using methane derived from agricultural operations.

Similarly, Section 248(q)(1) describes the components of plants using methane derived from an agricultural operation that are subject to regulation under Section 248. Section 248(q)(1)A) refers to "equipment used to generate electricity from biogas" and defines biogas as "a gas resulting from the action of microorganisms on organic material such as manure or food processing waste." Section 248(q)(1)(B) similarly discusses "the transportation of effluent or digestate back to those farms."

Finally, the statutory definition of "renewable energy" states that "methane gas and other flammable gases produced by the decay of sewage treatment plant wastes or landfill wastes and *anaerobic digestion* of agricultural products, byproducts, or wastes, or of food wastes shall be considered renewable energy resources."<sup>26</sup> These statutory provisions highlight the close association of methane and anaerobic digesters.

The Department and GMP maintain that Act 159 and other authorities illustrate a farm

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<sup>23</sup> Act 159, § 2.

<sup>24</sup> Act 159, § 2.

<sup>25</sup> Act 159, § 2.

<sup>26</sup> 30 V.S.A. § 8002(21).

methane category with limited and restricted scope.<sup>27</sup> The farm methane category represents a notable departure from the structure of the wider program and creates special treatment for farm methane plants, including a contract outside the program's capacity limits, a technology-specific price, and ownership of renewable energy credits generated by the plant.<sup>28</sup> The Department and GMP maintain that this special treatment can create significant cost for ratepayers, without necessarily contributing to Renewable Energy Standard requirements.<sup>29</sup> The Department acknowledges that farm methane plants as currently understood can provide benefits to ratepayers and the public, including diversifying the energy mix, displacing fossil fuel, capturing or reducing greenhouse gases, helping to sustain working farms, and improving nutrient management.<sup>30</sup> However, in the context of the broader standard-offer framework, which contemplates a measured pace of renewable deployment "at the lowest feasible cost,"<sup>31</sup> the Department contends that the special treatment for the farm methane category only makes sense if the category was intended to accomplish specific objectives related to a niche group of facilities that are deeply integrated with and support existing farm operations.<sup>32</sup>

In contrast, VRG argues that the standard-offer category is intended to be broad enough to allow for other technologies. With respect to Section 8002(21) and Section 248(q), participants in the proceeding generally agree that these statutes can be read as technology-agnostic and that there are no barriers to a facility using HTAP to qualify as renewable under Section 8002(21) assuming the feedstocks are being consumed at a harvest rate at or below its natural regeneration rate.<sup>33</sup>

The consistent connection between anaerobic digestion and methane throughout Title 30 strongly supports the conclusion that a facility using methane derived from anaerobic digestion qualifies for the farm methane category under Section 8005a(d)(1). In past decisions, the Commission has determined that the farm methane category is not technology-based because the language in the statute does not address the type of technology that would be fueled by methane

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<sup>27</sup> Department Reply Brief at 5-6; GMP Brief at 2-3.

<sup>28</sup> 30 V.S.A. §§ 8005a(d), (f)(2)(B), and (f)(3).

<sup>29</sup> GMP Brief at 4-5; Department Brief at 11.

<sup>30</sup> Department Brief at 11.

<sup>31</sup> 30 V.S.A. §§ 8005a(f)(1)(B) and 8005a(c)(1).

<sup>32</sup> Department Brief at 11; Department Reply Brief at 5.

<sup>33</sup> VRG Brief at 101-2; Department Brief at 5-7, 9-10; GMP Brief at 2-3.

derived from agricultural operations.<sup>34</sup> However, the Commission does not need to decide whether the phrase “plants using methane derived from agricultural operations” applies only to facilities using an anaerobic digester.

Irrespective of how methane is derived, for purposes of Section 8005a(d)(1), the statute reads that plants participating in this category must *use* methane. Otherwise, against the principles of statutory interpretation, the word “using” is read out of the statute.<sup>35</sup> Section 8005a(d)(1) does not explicitly address whether a facility must generate power exclusively from methane or whether other fuels may be blended with methane. However, when read in concert with the definition of “renewable energy” in Section 8002(21), methane may be mixed with “other flammable gases” to the extent they are the product of “anerobic digestion.”

I also note that the use of methane in itself is not what characterizes the farm methane category as renewable. The statute does not consider natural gas (primarily methane) to be a renewable energy supply.<sup>36</sup> Rather, the category recognizes that the use of methane to produce electricity avoids the negative outcome associated with certain farm management practices. The collection of manure waste in pits or lagoons leads to anerobic conditions that result in methane emissions, or the manure placed on cropland results in nutrient loading that has negative effects on waterways. The capture and combustion of methane from the anerobic digester to produce electricity avoids the release of potent greenhouse gases, and the collection of the digestate improves nutrient management.<sup>37</sup> In these instances, the plants are integrated with farm operations, with the farm receiving the revenue from the electricity produced and the sale of renewable energy credits.

Thus, in considering the question of whether the fuel gas used by the Facility is compliant with Section 8005a(d)(1), I recommend that the Commission consider the characteristics of the methane derived from plants recognized in Act 159 as consistent with the statute. In these

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<sup>34</sup> See *Second Order Re Implementation Issues*, Docket 7533, Order of 10/28/09 at 5.

<sup>35</sup> See *State v. Stevens*, 137 Vt. 473, 481, 408 A.2d 622, 627 (1979) (“In construing a statute, every part of the statute must be considered, and every word, clause, and sentence given effect if possible.”).

<sup>36</sup> See 30 V.S.A. § 8002(21)(D).

<sup>37</sup> See Act 159 at Finding 5 (finding that existing farm methane plants create other benefits to Vermont such as “nutrient management to reduce negative impacts on state waters”); see also *Petition of Chaput Family Farms*, Docket 7542, Order of 9/18/09 at 6 (finding that the facility will result “in the reduction of the release of greenhouse gases” and improve “the quality of the runoff from the farm fields”).

instances, the gases derived from the anaerobic digester were mostly methane by volume and did not contain substantial amounts of other combustible gases.<sup>38</sup> The remaining gases derived from anaerobic digestion are mostly CO<sub>2</sub> by volume with some nitrogen and other trace gases.<sup>39</sup>

The evidence concerning anaerobic digesters in this proceeding is consistent with the Commission's past cases and shows that an anaerobic digester is expected to derive a fuel gas that is 53-70% methane by volume and that most remaining gases are incombustible.<sup>40</sup> Therefore, when considering what is required for a plant to *use* methane, the Commission should hold that the majority of the combustible component of the fuel must be methane by volume, with lesser amounts of other flammable gases allowed.

Applying this standard, the Facility as proposed fails to use the fuel required by Section 8005a(d)(1). The fuel derived by the Facility's HTAP system is expected to be approximately 36.2% hydrogen, 30.2% carbon monoxide, 26.7% methane, 2.1% nitrogen, and trace amounts of other gases by volume.<sup>41</sup> The fuel derived from HTAP contains substantial amounts of combustible gases other than methane, with hydrogen and carbon monoxide representing 66% by volume. I recommend that the Commission hold that the Facility is not eligible to participate in the category of plants using methane derived from agricultural operations because the Facility will produce electricity using substantial amounts of fuel other than methane.

Rather than evaluating the amount of methane contained in its fuel gas, VRG maintains that eligibility for the farm methane category should be determined based on the effectiveness of methane recovery per volume of input.<sup>42</sup> VRG estimates that HTAP is 5.5 times more effective at recovering methane from lignocellulosic feedstocks than anaerobic digestion and 1.9 times more effective at recovering methane from manure feedstocks using the dry weight of the feedstock to perform the comparison.<sup>43</sup> VRG maintains that HTAP results in higher efficiency

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<sup>38</sup> See *Petition of Michael & Denna Benjamin, Riverview Farm*, Docket 7886, Order of 9/7/12 at 3 (finding that plant fuel will be a mix of approximately 60% methane and 40% carbon dioxide); *Petition of Audet's Cow Power, LLC*, Docket 7198, Order of 9/8/06.

<sup>39</sup> Skorokhodov pf. at 7-8.

<sup>40</sup> Skorokhodov pf. at 7-8; exh. VRG-INV-AS-3. The testimony and exhibit indicate 50-70% methane by volume for anaerobic digesters fed with livestock manure. The OSU Extension Factsheet cited on page 7 of the testimony indicates 53-70% methane by volume for digesters whose feedstocks include agricultural vegetation residues and manure waste.

<sup>41</sup> Exh. VRG-INV-AS-1.

<sup>42</sup> VRG Brief at 5-6.

<sup>43</sup> Exh. VRG-INV-AS-4.

of volatiles recovery per volume of feedstock 15% higher than an anaerobic digester, which supports an effective percentage of methane recovery of 42%.<sup>44</sup> In addition, VRG maintains that HTAP and anaerobic digestion are comparable when the feedstock is lignocellulosic waste. VRG estimates the gas stream derived from an anaerobic digester fed with lignocellulosic waste to be 25% methane and from HTAP to be 27% methane.<sup>45</sup> Further, VRG contends that HTAP is an efficient technology for converting woody agricultural waste or crops and that anaerobic digestion is technically inefficient for converting woody agricultural crops and waste. VRG states that it is difficult for anaerobic microbes to break down lignocellulosic waste because of the lignite covering wood fiber as well as the cellulose and hemicellulose within.<sup>46</sup>

I recommend that the Commission decline to adopt the eligibility standards suggested by VRG because the efficiency of methane recovery is not a standard that makes sense given the wording of the statute. Logically, the volume of the resulting fuel gas is a better fit. The efficiency of methane recovery from waste is not the relevant metric under the statute; the composition of the fuel is. Moreover, the comparisons to anaerobic digestion fail to account for the 15% auxiliary electrical power consumption of the plant, significantly decreasing some of the efficiency gains claimed by VRG. Finally, the comparison to anaerobic digestion of lignocellulosic waste is not relevant because digestion is a technically inefficient process for converting woody agricultural crops and waste, as VRG has noted. A plant using anaerobic digestion to process lignocellulosic feedstock is unlikely to be proposed because the process is technically inefficient and as discussed below, because the available lignocellulosic feedstock to feed such a plant cannot be considered to be “from agricultural operations” for purposes of the statute.

VRG contends that the Facility will provide and promote benefits consistent with the other plants in the farm methane category, further supporting its classification in the farm methane category. VRG maintains that the Facility allows the diversification of the Vermont energy mix and contributes to system reliability by providing baseload power.<sup>47</sup> VRG maintains

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<sup>44</sup> Exh. VRG-INV-AS-5; It is unclear why the 15% increase in volatile recovery is additive and if applied to the hydrogen and carbon monoxide produced would result in effective percentage of gas recovery over 100%.

<sup>45</sup> Exh. VRG-INV-AS-4.

<sup>46</sup> Skorokhodov pf. at 6-7; exh. VRG-INV-AS-2.

<sup>47</sup> VRG Reply Brief at 4; Dell’Olio supp pf. at 3-6.

that the Facility, including the use of biochar, can offer a wide range of environmental, agricultural, and economic benefits that include carbon recovery and storage.<sup>48</sup>

The benefits presented by VRG do not provide a rationale for whether the Facility should be eligible under the farm methane category. In addition, many of these benefits would occur regardless of whether the Facility is placed in the farm methane category. I am persuaded by the Department's and GMP's arguments that the farm methane category is intended to be a limited exception to the general requirements of the Standard Offer Program. Unlike the existing farm methane plants, the Facility would not be located on a farm property, owned by a farm, or integrated directly with farm operations. VRG would receive the revenues from the electricity produced and the sale of the renewable energy credits. All feedstocks would come from off-site locations and be mostly composed of biomass products, wastes, or residues. Unlike manure from "cow power" plants, most woody biomass waste is not typically handled or managed as part of daily farm operations.

Furthermore, VRG suggests that the Facility is the preferable option for handling biomass products, waste, and residues.<sup>49</sup> While the Facility may offer a better option than the direct combustion of biomass, trees can be left in place for continued growth, and tree biomass residues can be left to decompose naturally. VRG suggests, without support, that the natural decomposition of biomass residues is equivalent to the problematic methane emissions and water quality issues that can result from accumulation of agricultural wastes, like manure, at farm sites. Woody biomass waste or residues do not pose the same risk for methane emissions and water quality issues when left in place or accumulated on farm property. The methane emissions avoided using HTAP with a biomass feedstock are not equivalent to those avoided using anaerobic digestion with a manure feedstock. Thus, arguments in favor of the HTAP technology do not overcome the failure to fall under the farm methane exemption provided in the statute.

In summary, I recommend that the Commission conclude that the Facility is not eligible for a standard-offer contract as a farm methane plant because the gases derived from HTAP contain significant quantities of combustible gases other than methane. The Facility is more appropriately characterized as a biomass facility using gasification to generate electricity rather

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<sup>48</sup> Dell'Olio pf. at 9-11.

<sup>49</sup> Skorokhodov pf. at 12.

than a plant using methane derived from an agricultural operation.

### **B. Examination of Whether the Facility’s Feedstock Is Derived from Agricultural Operations**

A plant must not only use methane to qualify for the farm methane category. The methane must be “derived from an agricultural operation.” For the reasons discussed below, I recommend that the Commission find that most of the proposed feedstocks for the Facility do not qualify as products, byproducts, or wastes of agricultural operations, as further defined as farming under 10 V.S.A. § 6001(22). Specifically, most of the feedstock proposed for the Facility constitutes timber harvesting that is not directly related to farming activities.

The phrase “derived from an agricultural operation” is not defined in the standard-offer statute<sup>50</sup> and “agriculture” or “agricultural operation” is not defined in Title 30.<sup>51</sup> The statute is therefore ambiguous, and I must turn to sources beyond the statutory language to determine the legislative intent. In past decisions concerning the farm methane category, the Commission defined agriculture as “the science, art, and business of cultivating soil, producing crops, and raising livestock; farming.”<sup>52</sup> The Commission was further guided by the definition of “farming” contained in 10 V.S.A. § 6001(22) to define what constituted feedstocks from an agricultural operation. The Commission has required that 51% of the feedstocks come from agricultural operations to meet eligibility under the farm methane category.<sup>53</sup> In addition, the Commission concluded that there is no requirement that a farm methane plant be located on a farm and that a plant could be located on a non-farm site, as long as at least 51% of the feedstock is supplied from agricultural operations.<sup>54</sup> Further, the Commission allowed feedstock from energy crops to be eligible in the farm methane category.<sup>55</sup> Finally, the Commission also determined that any facility that generates methane from the use of a biomass feedstock not principally derived from agricultural operations will be placed in the biomass category.<sup>56</sup>

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<sup>50</sup> 30 V.S.A. § 8005a.

<sup>51</sup> AAFM Brief at 3.

<sup>52</sup> Docket 7533, Order of 10/28/09 at 4 (citing to American Heritage College Dictionary, 4th Edition).

<sup>53</sup> Docket 7533, Order of 10/28/09.

<sup>54</sup> Docket 7533, Order of 10/28/09.

<sup>55</sup> *Order Re: Farm Methane Project Eligibility*, Docket 7533, Order of 3/28/11.

<sup>56</sup> Docket 7533, Order of 10/28/09.

The feedstocks for the Facility will include timber supplied from woodlots on farms and wood byproducts from timber grown on farm woodlots. The Commission has not previously considered these biomass feedstocks under the farm methane category. The pertinent question is whether these forestry products or waste constitute feedstock that results in “methane derived from an agricultural operation.”<sup>57</sup> While not making a definitive recommendation, AAFM suggests that there are two interpretations for the meaning of agricultural operation. If an agricultural operation refers to specific farming activities conducted by a farm business, then forestry byproducts supplied from a farm do not appear to be eligible feedstock. If an agricultural operation refers to the farm business entity in aggregate, then forestry activities on farms could produce eligible feedstock.<sup>58</sup>

AAFM states that farming activities, including those defined by Section 6001(22), regularly generate woody agricultural products and/or waste. Relevant farming activities include managing, cleaning up, and harvesting orchards, Christmas trees, and sugarbushes. Even when farmers are not directly using trees to grow crops, they clear trees and other woody biomass from farm fields and ditches so they can grow food and crops, manage trees to shelter or protect animals, and harvest wood for fuel to boil maple sap. Other farm activities could include cutting and splitting wood to heat farm structures and infrastructure, harvesting wood to build farm structures or fences, chipping wood for animal bedding, and managing riparian forest buffers to protect farm water quality. To the extent farms harvest trees and use the resulting products and waste for their farm operations, AAFM maintains that these woody agricultural products and waste can be considered feedstock derived from agricultural operations.<sup>59</sup>

In defining agricultural operations, AAFM does not consider logging for non-farm purposes to constitute “farming” within the meaning of Section 6001(22). AAFM does not interpret the statutory term “farming” to encompass “logging” or “forestry.”<sup>60</sup> While taking the view that cultivating the land to grow fiber crops fits within the definition of farming, AAFM agrees that logging or forestry activities unrelated to farming activities are not properly construed

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<sup>57</sup> 30 V.S.A. § 8005a.

<sup>58</sup> AAFM Brief at 7-10.

<sup>59</sup> AAFM Brief at 5-7.

<sup>60</sup> AAFM Brief at 8; *see also* 10 V.S.A. § 6001 (3)(D)(i).

as farming under Section 6001(22) and are not regulated by AAFM.<sup>61</sup> AAFM states that the cultivation of fiber crops includes “some types of trees for some purposes,” but does not specify what types of trees nor the conditions under which those types of trees could be deemed farming.<sup>62</sup> AAFM further qualifies that it does not regulate typical forestry practices that are unrelated to farming, like harvesting trees for pulp, lumber, or firewood.<sup>63</sup>

AAFM notes that “derived from an agricultural operation” is not defined in the standard-offer statute and suggests that the term is arguably broad and refers to the farm business entity, making room for the argument that wood or wood waste from a farm-owned forestlands is eligible feedstock.<sup>64</sup> AAFM’s broad interpretation departs from the plain reading of the relevant statutes. Silviculture and agroforestry are not included in the definition of farming, while horticulture, maple sap harvesting, maple syrup production, and Christmas tree farming are all explicitly mentioned in the statute.<sup>65</sup> The definition of farming contains no reference to trees, or timber except to state specifically that growing Christmas trees is farming, impliedly disqualifying other timber products due to their conspicuous absence. AAFM’s interpretation is also not consistent with a plain reading of “methane derived from an agricultural operation,” which can refer to specific farming activities on a farm rather than the farm business entity in aggregate.<sup>66</sup> Methane cannot be derived from the mere existence of a farm business entity, and can only be derived from the discrete activities, processes, and types of farming engaged in by a farm business. Thus, logging and forestry activities do not generate eligible feedstocks under the farm methane category unless the activities are related to a specific activity identified in the statutory definition of farming.

AAFM adds that farm diversification and adding revenue streams have long been encouraged and are often critical to farm viability. AAFM contends that the Facility may deliver multiple co-benefits and may provide an important additional revenue stream to help keep farms — or agricultural operations — in business. AAFM contends that the Facility could significantly benefit local working lands in a rural part of the state that depends on farms and benefits from

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<sup>61</sup> AAFM Brief at 8-9.

<sup>62</sup> AAFM Brief at 9.

<sup>63</sup> AAFM Brief at 9.

<sup>64</sup> AAFM Brief at 9.

<sup>65</sup> 10 V.S.A. § 6001(22).

<sup>66</sup> 30 V.S.A. § 8005a.

new economic opportunities.<sup>67</sup> However, the benefits — or policy arguments — presented by AAFM do not guide a statutory interpretation of whether the Facility should be eligible under the farm methane category. The same benefits can be extended to farmers if the Facility is characterized as a biomass plant.

Based on the statutory language and past Commission precedent, I recommend that the Commission take a narrow approach to the phrase “derived from an agricultural operation.” My analysis is informed by Section 6001(22), which defines farming to include:

- (A) the cultivation or other use of land for growing food, fiber, Christmas trees, maple sap, or horticultural and orchard crops; or
  - (B) the raising, feeding, or management of livestock, poultry, fish, or bees;
- or
- (C) the operation of greenhouses; or
  - (D) the production of maple syrup; or
  - (E) the on-site storage, preparation, and sale of agricultural products principally produced on the farm; or
  - (F) the on-site storage, preparation, production, and sale of fuel or power from agricultural products or wastes principally produced on the farm; or
  - (G) the raising, feeding, or management of four or more equines owned or boarded by the farmer, including training, showing, and providing instruction and lessons in riding, training, and the management of equines; or
  - (H) the importation of 2,000 cubic yards per year or less of food residuals or food processing residuals onto a farm for the production of compost, provided that:
    - (i) the compost is principally used on the farm where it is produced; or
    - (ii) the compost is produced on a small farm that raises or manages poultry.<sup>68</sup>

Using the above understanding of the term “farming” and the phrase “derived from an agricultural operation,” I now turn to addressing whether the proposed feedstocks for the Facility qualify as products, byproducts, or wastes from agricultural operations. The Facility will receive biomass feedstocks from off-site locations. VRG states that 49% of the feedstock for the Facility will be derived from non-farm sources and the remaining 51% will include the following:

- 1) wood fiber and wood fiber byproducts from Christmas tree, maple sap, horticultural, and orchard crop production,
- 2) wood fiber from timber grown and harvested as short-rotation tree crops grown for energy production,
- 3) wood fiber from timber purposefully harvested from woodlots on farms and grown for energy production, and
- 4) wood fiber byproducts from timber grown and harvested from

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<sup>67</sup> AAFM Brief at 9-10.

<sup>68</sup> 10 V.S.A. § 6001(22)(A)-(H).

woodlots on farms.<sup>69</sup>

VRG estimates that 30% of that 51% will be the first type above, while 70% of the 51% will be sourced from types 2 through 4 above.<sup>70</sup> VRG further states that the feedstock material will be “primarily sourced from the chipping of branches, limbs, and cull material associated with fiber production (saw logs and pulpwood) and the management of woodlands for maple sap production, with volumes of Christmas [t]ree, orchard, and horticultural crop associated material used when available.”<sup>71</sup> VRG states that the feedstock is “primarily lignocellulosic,” constituting “the woody cell walls of plants.”<sup>72</sup> VRG also refers to the feedstock as lignocellulosic or woody biomass, generated from husks, hulls, straw, branches, trunks, and roots.<sup>73</sup>

Before addressing whether the four types of proposed feedstocks qualify as products, byproducts, or wastes from agricultural operations, I address VRG’s use of the term “wood fiber” in describing feedstocks. VRG uses the terms “wood fiber” and “wood fiber byproducts” to describe its proposed feedstocks and suggests that “wood fiber” equates to the term “fiber” contained in 10 V.S.A. § 6001(22)(A). By extension, VRG contends that the use of wood or wood byproducts grown and harvested from woodlots on farms constitutes feedstock from agricultural operations. I recommend the Commission reject VRG’s attempt to equate the term “wood fiber” with “fiber” because “fiber,” as used in 10 V.S.A. § 6001(22)(A), is not synonymous with the term “wood fiber” as VRG uses it.

First, the definition of farming under Section 6001(22) does not contain the specific term “wood fiber.” The standalone term “fiber” in the context of farming is traditionally associated with the growing or producing of textile fibers that come from farm activities (*e.g.*, cotton fibers from cultivating cotton plants, hemp fibers from growing hemp plants, or possibly wool fiber from using the land to raise sheep). The statutory definition of farming includes “the cultivation or other use of land for growing food, fiber, Christmas trees, maple sap, or horticultural and orchard crops.”<sup>74</sup> The statutory language refers to fiber as something that must be farmed and

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<sup>69</sup> Dell’Olio pf. at 20.

<sup>70</sup> Dell’Olio pf. at 20.

<sup>71</sup> Dell’Olio pf. supp. at 20.

<sup>72</sup> VRG Brief at 5.

<sup>73</sup> Skorokhodov pf. at 6.

<sup>74</sup> 10 V.S.A. § 6001(22)(A).

turns on the action of actually growing the fiber, strongly indicating that fiber is a crop that must be intentionally grown, cultivated, and harvested. AAFM and the Department do not support an interpretation of the meaning of fiber that incorporates the natural growth of trees for forestry purposes as the process of farming fiber.<sup>75</sup>

Moreover, while the definition of farming includes growing certain trees, farming does not encompass “timber” more generally, as VRG suggests through its attempt to expand the understanding of “fiber” to encompass woody biomass. For example, in the case of maple sap crops (a defined category of farming) the natural growth of maple trees alone is not farming, while cultivating them to harvest the sap they produce is clearly an activity within the scope of the definition of farming.<sup>76</sup> Likewise, as noted by GMP, Christmas trees — a variety of evergreen tree species associated with both intentional cultivation and with relatively short-rotation farming cycles — are explicitly included in the definition of farming. No other variety or species of tree is specifically included, implying that the farming of trees in the context of Christmas trees is an exception rather than the rule.<sup>77</sup> Broadening the scope of the term “fiber” as used in Section 6001(22)(A) to encompass “timber” or “trees” more generally is an insupportable interpretation based on a plain reading of the statute, as is expanding the list of tree types that fall within the definition beyond those grown on Christmas tree farms.

I now examine the four types of feedstocks proposed for the Facility. The first type of feedstock includes byproducts from eligible farming activities — namely, Christmas trees, maple sap, horticultural crops, and orchard crops.<sup>78</sup> While VRG incorrectly refers to these feedstocks as wood fiber, the proposed feedstocks are the products, byproducts, and wastes of farming activities. To the extent the woody biomass is produced from specific farming activities — the growing, trimming or cleaning up, and harvesting of Christmas trees; the harvesting of maple sap or the trimming or cleaning up of sugarbushes; and the growing, trimming or cleaning up, and harvesting of horticultural crops and orchard crops — that woody biomass is an eligible feedstock derived from an agricultural operation. Woody biomass that is not specifically sourced

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<sup>75</sup> AAFM Brief at 8-9; Department Reply Brief at 2.

<sup>76</sup> Producing maple syrup is also a clearly enumerated farming activity under 10 V.S.A. § 6001(22)(D).

<sup>77</sup> 10 V.S.A. § 6001(22)(A); GMP Brief at 4; *see* <https://agriculture.vermont.gov/cut-your-own-christmas-trees-plentiful-holiday-season> for a report evidencing AAFM’s regulation of Christmas tree farming.

<sup>78</sup> 10 V.S.A. § 6001(22)(A).

from these types of farming activities — such as the removal of maple trees for off-farm use rather than the trimming or cleaning up of sugarbushes; or the trimming or removal of plant matter that is adjacent to an orchard but is not itself an orchard crop — does not qualify as an eligible feedstock from farming activities.

The second type of feedstock proposed for the Facility includes byproducts and wastes from trees grown in short rotations on farm woodlots. This feedstock includes fast-growing tree crops such as poplars and willows.<sup>79</sup> However, the proposed feedstock comes from tree species that are not identified in the definition of farming.<sup>80</sup> The cutting and removal of trees on woodlots are not specific activities identified in the statutory definition of farming and cannot be classified as an agricultural operation. Further, VRG incorrectly refers to these feedstocks as wood fiber and incorrectly classifies them as crops grown for energy production. The Commission has previously allowed the use of energy crops as eligible feedstocks but only in the case of crops that are classified as an agricultural operation and are consistent with the definition of farming under Section 6001(22).<sup>81</sup> Because the cutting and removal of trees on woodlots are not farming activities, the proposed feedstocks cannot be classified as energy crops. For the above reasons, this type of woody biomass does not constitute an eligible feedstock source under the farm methane category.

The third and fourth types of feedstocks proposed for the Facility include timber removed from woodlots on farms and byproducts from that timber. The feedstocks include maple, beech, birch, ash, and other native trees and the byproducts from lumber, pulpwood for papermaking, or in chipping the tops of pre-cut trees.<sup>82</sup> The proposed feedstocks are from tree species that are not identified in the definition of farming.<sup>83</sup> Like the second type of proposed feedstock, timber and timber byproducts are not activities identified in the statutory definition of farming and cannot be classified as agricultural operations. Moreover, timber byproducts do not come directly from agricultural operations and are the result of the secondary processing of timber from farm woodlots. Further, VRG incorrectly refers to these feedstocks as wood fiber and incorrectly

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<sup>79</sup> Dell’Olio pf. at 20-21.

<sup>80</sup> 10 V.S.A. § 6001(22).

<sup>81</sup> Docket 7533, Order of 3/28/11.

<sup>82</sup> Dell’Olio pf. at 21-23.

<sup>83</sup> 10 V.S.A. § 6001(22).

classifies these feedstocks as energy crops. For the same reasons identified for the second type of proposed feedstock, these types of woody biomass do not constitute eligible feedstock sources under the farm methane category.

In summary, based on the review of the filings and applicable statute, I recommend that the Commission conclude that most of the proposed feedstocks for the Facility are not derived from agricultural operations, and as such the Facility is not eligible under the farm methane category because the methane is not derived from an agricultural operation. The second through fourth types of feedstocks proposed for the Facility are not activities identified in the statutory definition of farming and cannot be classified as agricultural operations. The first type of feedstock proposed for the Facility is supplied by farming activities, with the limitations discussed above, and can be classified as an agricultural operation. However, because most of the proposed feedstocks are not derived from agricultural operations, the Facility is more appropriately characterized as a biomass facility.

#### **D. The Validity of the Standard-Offer Contract**

A standard-offer contract for the Facility, as a “farm methane” plant, was executed between VRG and the Standard Offer Facilitator on August 28, 2023.<sup>84</sup> I recommend that the Commission find the contract executed between the Standard Offer Facilitator and VRG is null and void *ab initio* because the Facility is not eligible as a farm methane plant under the Standard Offer Program.

In making this recommendation, I address two procedural matters raised by VRG: (1) whether the issues discussed in this investigation proceeding are more appropriately considered in VRG’s CPG petition proceeding, and (2) whether the Commission has authority to investigate and oversee contracts executed by the Standard Offer Facilitator. These two issues are interconnected and require consideration alongside each other.

To begin, VRG notes that, “it remains ready and willing to continue through the process designated in Section 248 and Commission rules to obtain a Certificate of Public Good.”<sup>85</sup> VRG claims that it “should be given the opportunity to present its CPG petition and to continue

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<sup>84</sup> A copy of the standard-offer contract can be found in Case No. 23A-3008.

<sup>85</sup> VRG Reply Brief at 10.

through the process established by the [L]egislature and the Commission.”<sup>86</sup> Further, VRG implies that it views the issue of eligible farm methane feedstocks (addressed above), in particular, as an issue that would be more appropriately considered in the context of conditions to a CPG.<sup>87</sup> VRG argues that its stayed CPG petition is a more appropriate proceeding to address the concerns that are the focus of this investigation; that it has expended “significant capital and personnel resources” towards the development and permitting of its Facility; that it has been, “fully transparent about the nature of its proposal” throughout the standard-offer contracting process; and that the rules are being, “changed mid-stream.”<sup>88</sup>

First, the Commission has general jurisdiction to regulate — which includes holding hearings, making determinations, rendering judgments, and issuing orders and decrees — all matters related to a corporation that owns or operates any plant, line, or property subject to the Commission’s statutory supervision.<sup>89</sup> Furthermore, the Commission has express authority to implement the Standard Offer Program.<sup>90</sup> In sum, the Commission has broad general authority and jurisdiction — granted by statute and reinforced by the Commission’s own rules of practice — to regulate all matters related to a developer’s standard-offer contract and any proposed facility and is enabled to do so by opening investigations such as this one.

The Commission has delegated certain aspects of the administration of the Standard Offer Program to the Standard Offer Facilitator, but the Standard Offer Facilitator is not authorized to act in a manner contrary to the statute and the Commission retains ultimate decision-making authority with respect to final determinations about eligibility, standard-offer contracts, and the like. The standard-offer contract also provides that the Commission has jurisdiction to resolve disputes arising under or in connection with the contract, to the fullest extent allowed by law.<sup>91</sup> Thus, considering all the above factors, the Commission is well within its authority to stay the CPG proceeding and exercise its oversight authority over the Standard Offer Program to investigate the contract executed between VRG and the Standard Offer Facilitator.

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<sup>86</sup> VRG Reply Brief at 10.

<sup>87</sup> VRG Reply Brief at 7.

<sup>88</sup> VRG Reply Brief at 10.

<sup>89</sup> 30 V.S.A. § 209.

<sup>90</sup> 30 V.S.A. § 8005a(a).

<sup>91</sup> Case No. 23A-3008, standard-offer contract at Section 40.d.

Further, it is worth addressing what remedies or other actions the Commission can apply to standard-offer contracts it deems invalid or otherwise ineligible for the program. These actions are informed by the principles of contract law given the absence of specific guidance in the form of statutes or rules. In situations where a contract is the product of misrepresentation, mistake, fraud, undue influence, or duress, “recession” — cancellation of a contract — is an appropriate remedy, with the goal of this equitable remedy being to restore the parties to the positions they were in prior to contracting with each other.<sup>92</sup> In situations where a contract is deemed invalid, the contract is determined to be “void *ab initio*” — void from the beginning — which has the effect of rendering the contract never ratified or never validated.<sup>93</sup> Indeed, the Vermont Supreme Court has previously noted that contracts entered into by a public corporation that “restrict” a government entity are *ultra vires* and void *ab initio*.<sup>94</sup> The goal of this remedy is to ensure that contracts comply with laws and statutes, and contracts that are illegal, unenforceable, or otherwise contrary to the law can often be declared void *ab initio* by courts to prevent fraud or violations of the law.<sup>95</sup> If a contract is valid but subject to a defect due to, for example, mistake, misrepresentation, or fraud, it can be rescinded, while a contract that is contrary to the law can be deemed void *ab initio* or nullified.

I now consider these principles in the context of standard-offer contracts and the Commission. Given the considerable degree of authority the Commission holds over administering the Standard Offer Program, and given the Commission’s quasi-judicial role, both recession and declaring a contract void *ab initio* are appropriate remedies, among others, that the Commission can exercise if the circumstances require it. In the event the Commission determines, after an investigation, that a standard-offer contract’s formation involved misrepresentation, mistake, undue influence, fraud, or duress, the Commission may act to rescind that contract. Furthermore, in the event the Commission determines that a contract was improperly granted, that a plant is ineligible for the Standard Offer Program, or that the contract

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<sup>92</sup> See *Rancourt v. Verba*, 165 Vt. 225, 228, 678 A.2d 886, 887 (1996).

<sup>93</sup> See *Progressive Ins. Co. v. Wasoka*, 178 Vt. 337, 885 A.2d 1166 (2005) (providing a general discussion of the “void *ab initio*” concept); see also *Void Ab Initio*, Black’s Law Dictionary 1568 (7th ed. 1999).

<sup>94</sup> See *Vt. Dep. of Pub. Ser. v. Mass. Mun. Wholesale Elec. Co.*, 151 Vt. 73, 82, 558 A.2d 215, 220 (1988).

<sup>95</sup> See *Progressive Ins. Co. v. Wasoka*, 178 Vt. 337, 885 A.2d 1166 (discussing why a fraudulent contract can be declared void *ab initio*).

is otherwise contrary to the Standard Offer Program's regulatory scheme, the Commission may find that the contract is null and void *ab initio*.

Although the Standard Offer Facilitator acts as the Commission's agent in entering a standard-offer contract, a contract executed by an agent of a government agency (the "principal") who enter into an unauthorized or illegal contract on behalf of that agency can be rescinded absent specific statutory limitations on that action.<sup>96</sup> In brief, if the principal is a government agency and the contract is contrary to a statutory scheme administered by that agency, the agency can step in and take corrective action with respect to the contract.

The principle that an unauthorized contract entered into by agents of a government agency can be revoked is applicable here because the Commission is the ultimate decision-maker with respect to the Standard Offer Program under the statutes and Commission rules establishing the Standard Offer Program. The role of the Standard Offer Facilitator is simply to assist the Commission in its administration of the program. The application of this legal concept appears reasonable, given that any other outcome would result in government agencies abiding by illegal contracts or contracts that the agency does not have the power to enter. Though the Standard Offer Facilitator acts as an agent of the Commission when executing standard-offer contracts, the Commission retains ultimate authority over whether a contract was properly executed. Thus, even though the Standard Offer Facilitator acted on the Commission's behalf in entering the contract with VRG, the Commission is not prohibited from taking corrective action with respect to the standard-offer contract.

Accordingly, the Commission has broad authority to investigate and take corrective action with respect to contracts entered by the Standard Offer Facilitator on its behalf, including the contract with VRG. The Commission also has the discretion to examine VRG's standard-offer contract in this proceeding rather than in VRG's stayed petition for a CPG. The Commission is well within the scope of its authority to use this proceeding as a means for assessing whether corrective action is needed with respect to the contract executed by the Standard Offer Facilitator.

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<sup>96</sup> *Alabama Rural Fire Ins. Co. v. Naylor*, 530 F.2d 1221, 1226 (1976).

In summary, for the reasons discussed above, I recommend that the Commission conclude that the Facility is not eligible as a farm methane plant under the Standard Offer Program. Accordingly, I recommend that the Commission find the contract executed between the Standard Offer Facilitator and VRG as null and void *ab initio*.

#### **VI. CONCLUSION**

In today's proposal for decision, based on the review of the filings and the applicable portions of 30 V.S.A. §§ 248, 6001(22)(F), 8002(21), and 8005a, I recommend that the Commission conclude that the Facility is not eligible for a standard-offer contract as a farm methane plant. The Facility cannot be characterized as a plant using methane derived from an agricultural operation because the Facility does not yield methane as the majority output of its engineering process and most of the proposed feedstock sources do not constitute feedstock from an agricultural operation.

The Facility is more appropriately characterized as a biomass facility using gasification to generate electricity rather than a plant using methane derived from an agricultural operation. The classification as a biomass plant does not result in the Facility's inability to sell power. VRG has other options to sell the power produced from the plant besides the Standard Offer Program, including through the opportunities provided under Commission Rule 4.100.

In addition, I recommend that the Commission find the contract executed between the Standard Offer Facilitator and VRG as null and void *ab initio* because the Facility is not eligible as a farm methane plant under the Standard Offer Program.

This proposal for decision is being circulated to the parties pursuant to 3 V.S.A. § 811 because it may be adverse to a party.

Date: June 9, 2025



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Mary Jo Krolewski  
Hearing Officer

**IV. ORDER**

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Utility Commission (“Commission”) of the State of Vermont that:

1. Pursuant to 30 V.S.A. §§ 8002(21) and 8005a, the 2.2 MW electric generation facility in Lyndon, Vermont (the proposed “Facility”) cannot be characterized as a plant using methane derived from an agricultural operation.

2. Pursuant to 30 V.S.A. §§ 6002(22)(F) and 8005a, most of the proposed feedstock sources for the Facility do not constitute feedstock from an agricultural operation.

3. Pursuant to 30 V.S.A. §§ 209(a)(8) and 8005a(b)-(d), the standard-offer contract between Vermont Renewable Gas, LLC and the Standard Offer Facilitator, executed on August 28, 2023, is null and void *ab initio* because the Facility is not eligible as a farm methane plant under the Standard Offer Program.

PUC Case No. 24-3359-INV - SERVICE LIST

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