

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 24-3359-INV

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

BRIEF OF THE VERMONT DEPARTMENT OF PUBLIC SERVICE

On November 7, 2024, the Vermont Public Utility Commission (“Commission”) issued an Order opening the above-captioned investigation into whether the 2.2 MW electric generation facility (“Project”) proposed by Vermont Renewable Gas, LLC (“Petitioner”) is eligible for a standard offer contract in the “farm methane” category as a plant using methane derived from an agricultural operation. The Order requested additional information from the Petitioner, to be followed by briefing from the parties on specific topics relating to: (1) how or whether the feedstocks proposed for the Project meet the statutory definition of agricultural products, byproducts, or wastes, and (2) the Project’s overall alignment with the farm methane standard offer category.

The Petitioner responded to the Commission’s information requests by submitting new testimony and exhibits on December 12, 2024. The Vermont Department of Public Service (“Department”) hereby submits its initial brief on the issues raised by the Commission, beginning with the questions on feedstocks.

I. Whether the Proposed Feedstocks Meet the Statutory Definition of Agricultural Products, Byproducts, or Wastes.

The central question in this investigation is whether the Project is a renewable energy plant using methane derived from agricultural operations, such that it is eligible for a standard offer contract outside the cumulative capacity cap under 30 V.S.A. § 8005a(d)(1). Each of the Commission’s questions tie into this larger determination, but the feedstocks for the Project appear to represent a significant threshold issue. As the Commission noted, it has previously required that at least 51% of the feedstocks for farm methane plants come from agricultural operations, and it has looked to the definition of “farming” under 10 V.S.A. § 6001(22) in determining what constitutes an agricultural operation.¹ If the feedstocks proposed for the Project do not qualify as products, byproducts, or wastes of agricultural operations, the additional issues in this investigation are likely to be moot.

While the feedstock question may be a threshold issue, it also represents an area outside the Department’s expertise. The Commission’s past decisions on this topic have been informed by comments from agricultural perspectives, most notably from the Vermont Agency of Agriculture, Food, and Markets (“AAFM”).² AAFM is a participant in this case, and its analysis will significantly inform the Department’s understanding of the Project’s feedstocks. At this stage the Department can offer its preliminary assessment as to whether any of the proposed feedstocks fit unambiguously within the scope of “farming” as defined under 10 V.S.A. § 6001(22).

¹ See *Second Order re Implementation Issues*, Docket 7533, Order of 10/28/09 at 5–6; *Order Re: Farm Methane Project Eligibility*, Docket 7533, Order of 3/28/11 at 2–3.

² See *Second Order Re Implementation Issues*, Docket 7533, Order of 10/28/09 at 5–6; *Order Re: Farm Methane Project Eligibility*, Docket 7533, Order of 3/28/11 at 2–3.

Section 6001(22) of Title 10 defines farming for purposes of land use and development under Act 250. As relevant here, “farming” includes:

- (A) the cultivation or other use of land for growing food, fiber, Christmas trees, maple sap, or horticultural and orchard crops; or . . .
- (D) the production of maple syrup; or . . .
- (F) the on-site storage, preparation, production, and sale of fuel or power from agricultural products or wastes principally produced on the farm. . . .³

In response to the Commission’s information requests, the Petitioner has provided testimony outlining how it intends to source the required 51% of its feedstocks from agricultural operations.⁴ Specifically, the Petitioner states that it will source at least 51% of its feedstock from the following sources: “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 woodlots on farms.”⁵

The Department sees category (1) above as the most straightforward set of sources, looking at the plain language of the statutory definition. The Petitioner’s testimony elaborates on the wood fiber products and byproducts that will be used as feedstocks under category (1), including “Christmas trees and parts of Christmas trees not suitable for sale by a farmer . . . trees and parts of trees trimmed in the management of a maple sugarbush . . . parts of horticultural plants or trees that are trimmed in the growing of [horticultural] crops or rejected crops of that type not suitable for sale . . . [and] orchard trees and parts of orchard trees pruned, trimmed, or cut as part of regular

³ 10 V.S.A. §§ 6001(22)(A), (D), (F).

⁴ Evan Dell’Olio, Vermont Renewable Gas, LLC, pf. (12/12/24) at 19-23.

⁵ Dell’Olio pf. (12/12/24) at 20.

management of an orchard.”⁶ Based on the specific information provided, the Department’s preliminary conclusion is that these feedstocks can be considered inputs from an agricultural operation in the sense that they are products, byproducts, or wastes from “farming” under 10 V.S.A. § 6001(22)(A).⁷

The other feedstock sources described by the Petitioner in categories (2) – (4) appear to implicate aspects of the statutory definition and the Commission’s prior decisions. The Department recognizes that there is ambiguity here in an area beyond its purview, and anticipates providing any further input after reviewing the briefs of the other participants.

II. The Project’s Alignment with the Farm Methane Category

Beyond the issue of feedstocks, the Commission has asked the parties to consider whether the concept for the Project is consistent with the requirements for the farm methane standard offer category as informed by relevant provisions of 30 V.S.A. §§ 248, 8002(21), and 8005a. Specifically, whether using a pyrolysis process to convert farm-based feedstocks into combustible gas (the “Pyrolysis Concept”) is consistent with the relevant statutory provisions and their underlying intent. It is important to note that for purposes of this analysis, the Commission has assumed that the threshold issue of farm-based feedstocks is satisfied.⁸ The remainder of this brief incorporates the same assumption in addressing each statute.

⁶ *See id.* at 20–21.

⁷ *See* 30 V.S.A. § 8005a(d)(1); 10 V.S.A. § 6001(22)(A). It appears that trees or parts of trees trimmed in the management of a maple sugarbush could also be considered a byproduct or waste of maple syrup production under 10 V.S.A. § 6001(22)(D).

⁸ *See Investigation of the standard-offer contract between Vermont Renewable Gas, LLC and the Standard Offer Facilitator*, Case Nos. 24-2797-PET, 24-3359-INV, Order of 11/7/24 at 7–8.

A. 30 V.S.A. § 248

Broadly speaking, § 248 requires a certificate of public good (“CPG”) for the construction of a new electric generation facility and establishes the associated review criteria. In the Order opening this investigation, the Commission noted that 30 V.S.A. § 248(q)(1) may require plants using methane derived from an agricultural operation to obtain their methane from an anaerobic digester.⁹ Such a requirement might inform how “methane derived from an agricultural operation” is interpreted for purposes of the standard offer program and might bar projects like the one proposed here from receiving a CPG. Based on the plain language and indications of statutory intent, the Department does not interpret § 248(q)(1) as imposing this type of requirement on the technologies used in farm methane plants – instead the provision appears to be aimed at clarifying jurisdictional boundaries.

Jurisdiction under § 248 clearly attaches to electric generation facilities, but it can be difficult to determine where the “facility” itself begins and ends: proposals may include non-jurisdictional elements.¹⁰ It is also clear that § 248 does not regulate farming operations, yet the farm methane plants approved in Vermont thus far have been anaerobic digester systems where farming operations and electric generation are often closely integrated.¹¹ These types of projects can easily raise jurisdictional questions.¹²

The plain language of § 248(q)(1) seems to describe which aspects of a farm methane plant are subject to regulation under § 248, depending on whether the plant “constitutes farming” under

⁹ *See id.* at 5.

¹⁰ *See, e.g., Petition of Beaver Wood Energy*, Docket Nos. 7678 and 7679, Order of 4/1/11 at 7–14 (evaluating whether proposed wood-pellet manufacturing facilities should be considered part of electric generation facilities proposed on the same site).

¹¹ *See id.* at 11–12 and n.22.

¹² *See id.*

10 V.S.A. § 6001(22)(F).¹³ This level of specificity is not necessary to bring farm methane plants generally within the scope of § 248: that is achieved through § 248(a)(2)(A).¹⁴ Instead, § 248(q)(1) appears concerned with reinforcing the boundary between farming operations and regulated electric generation. While it is also evident that § 248(q)(1) specifically contemplates plants using anaerobic digestion, a likely reason for this has already been noted: up to this point, farm methane plants in Vermont have utilized anaerobic digestors – and have often been integrated with farms. Available legislative history supports the idea that § 248(q)(1) was intended to resolve jurisdictional ambiguity in that context. It appears that the language of § 248(q)(1)(A) was first adopted in Act 88 of 2013 (“H.405”).¹⁵ As introduced, H.405 was entitled “An act relating to manure management and anaerobic digesters” and its stated purpose was “to remove Public Service Board oversight of manure management for farm-based anaerobic digester systems.”¹⁶

For the reasons above, the Department does not read § 248(q)(1) to include a requirement that farm methane projects use anaerobic digestors. However, the statute does reflect the historic understanding of the farm methane category as being comprised of digester projects. Section 248(q)(1) further suggests that farm methane plants need not be located on farms, and to the extent

¹³ See 30 V.S.A. § 248(q)(1); 10 V.S.A. § 6001(22)(F) (stating that farming includes “the on-site storage, preparation, production and sale of . . . power from agricultural products or wastes principally produced on the farm”).

¹⁴ 30 V.S.A. § 248(a)(2)(A)–(B) (stating that “no person . . . may begin site preparation for or construction of an electric generation facility” without a CPG).

¹⁵ See Act No. 88 (Vt. Leg. 2013), available at: <https://legislature.vermont.gov/bill/status/2014/H.405>.

¹⁶ See House Bill 405 (Vt. Leg. 2013), As Introduced, available at: <https://legislature.vermont.gov/bill/status/2014/H.405>. It appears that § 248(q)(1)(B) was added in 2015; the Department does not see a meaningful departure from the intent of the initial enactment. See Act No. 51, Sec. F.9 (Vt. Leg. 2015), available at: <https://legislature.vermont.gov/bill/status/2016/S.138>.

applicable, it provides guidance on the plant components and processes subject to regulation under § 248.¹⁷

B. 30 V.S.A. § 8002(21)

The next statute for consideration is 30 V.S.A. § 8002(21), which defines “renewable energy” for purposes of Vermont’s renewable energy programs. The definition applies to the standard offer program, which is found under the same chapter of Title 30.¹⁸ To qualify for any standard offer category, a project must be “a renewable energy plant.”¹⁹ Therefore, an important question is whether the Pyrolysis Concept can be considered renewable under § 8002(21). The most relevant portions of § 8002(21) state:

“Renewable energy” means energy produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate.

(A) For purposes of this subdivision (21), 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, but no other form of solid waste, other than silvicultural waste, shall be considered renewable.

At a high level, the definition is focused on the resource used in producing energy – stating that it must be consumed at a rate “at or below its natural regeneration rate.” In this case the Pyrolysis Concept would use woody biomass from agricultural operations²⁰ which, as the Commission has suggested, is similar to the feedstocks for wood biomass plants under a separate

¹⁷ See 30 V.S.A. § 248(q)(1)(B); 10 V.S.A. § 6001(22)(F) (discussing the “on-site . . . production and sale of . . . power from agricultural products or wastes principally produced on the farm”).

¹⁸ See 30 V.S.A. §§ 8002 (establishing definitions for Chapter 89 of Title 30); 8002(12) (defining “renewable energy”); 8005a (establishing the standard offer program under Chapter 89).

¹⁹ 30 V.S.A. § 8005a(b).

²⁰ As noted earlier, the Department assumes that the feedstocks are indeed farm-based for purposes of this discussion.

standard offer category.²¹ While the renewable status of wood biomass plants may depend on case-specific harvesting details and other required information, they can be (and have been) considered renewable energy resources in Vermont.²² It appears that the Pyrolysis Concept would use the same raw material as wood biomass facilities, and therefore could be considered renewable if the statutory standard is satisfied.

Two distinctions between the Pyrolysis Concept and a typical wood biomass plant are the use of methane and the agricultural origin of the feedstocks. The question becomes whether those differences fall outside the scope of § 8002(21). Section 8002(21)(A) adds specificity to the general definition of renewable energy by discussing fuels, inputs, and technologies, including methane and other gases from “anaerobic digestion of agricultural products, byproducts, or wastes.” The Pyrolysis Concept does not use anaerobic digestion – but a closer look at the statutory text is warranted. While § 8002(21)(A) calls out specific technologies and processes, including methods of producing methane, it does not expressly exclude others. Instead, it excludes any “solid wastes” that are not listed and seems to affirm resources that should be considered renewable.²³ In other words, the provision could be read to limit the types of wastes used in producing renewable energy rather than the technologies or methods employed. The language of § 8002(21) itself is broadly framed as technology-agnostic.²⁴

²¹ See *Investigation*, Case Nos. 24-2797-PET, 24-3359-INV, Order of 11/7/24 at 5–6; 30 V.S.A. § 8005a(c)(2).

²² See, e.g., *Investigation Re: Establishment of the Renewable Energy Standard Program.*, Docket No. 8550, Order of 6/28/16 at 16–17 (directing biomass facilities to demonstrate that their fuel sources are harvested at or below their natural regeneration rate for qualification under the renewable energy standard (“RES”)); 30 V.S.A. §§ 8005a(c)(2) (stating that categories of renewable energy technologies “shall include . . . biomass power”), 8005a(n) (placing additional eligibility requirements on wood biomass resources).

²³ See 30 V.S.A. § 8002(21)(A) (discussing waste from treatment plants, landfills, agriculture, and food, before stating: “no other form of solid waste, other than silvicultural waste, shall be considered renewable.”)

²⁴ See 30 V.S.A. § 8002(21). When a certain technology or fuel should not be considered renewable, the statute has stated as much. See 30 V.S.A. 8002(21)(B) (“[N]o form of nuclear fuel shall be considered renewable.”).

Section 8002(21)(A)'s reference to anaerobic digestion certainly shows that the Legislature had the technology in mind and suggests an intent to support its use. Less clear is whether there was a corresponding intent to limit certain renewable plants to that technology. It appears the core language was enacted in 2003, and it is reasonable to presume that anaerobic digestion was the only viable or accepted technology for farm methane plants at that time.²⁵ It is difficult to ascertain what the Legislature might have included if it had been able to consider a proposal like the Project in this case. In short: the Department does not see a statutory barrier preventing a pyrolysis plant from qualifying as renewable.

C. 30 V.S.A. § 8005a.

Assuming the Pyrolysis Concept could be considered renewable, a key question remains: is the concept fundamentally consistent with the farm methane category of the standard offer program? The text of the standard offer statute does not define any part of “methane derived from an agricultural operation.”²⁶ As the Commission highlighted, the farm methane category established under § 8005a(d) has been understood to apply to anaerobic digester plants. Considering the history of so-called “cow power” in Vermont, it is also likely that these were the facilities contemplated when § 8005a(d) was drafted. A project feeding farm-based biomass into a pyrolysis process is not consistent with the historic understanding of the farm methane category or its implementation to date.

Yet, the Department has not identified specific language precluding farm methane facilities from using a technology like pyrolysis or a specific intent to restrict the category to anaerobic

²⁵ See Act No. 69 (Vt. Leg. 2003), available at: <http://www.leg.state.vt.us/database/status/summary.cfm?Bill=S%2E0057&Session=2004>.

²⁶ See generally 30 V.S.A. §§ 8005a(c)(2), (d)(1), (j)(1), (k)(3).

digestion.²⁷ The Commission has previously found that the farm methane category “is not . . . technology-based,” and that the use of anaerobic digestion itself does not guarantee eligibility.²⁸ It follows that the use of pyrolysis may not be categorically excluded. In evaluating whether the Pyrolysis Concept could be considered farm methane, there is a need to explore the broader implications for the category and the standard offer program in general.

The standard offer program was designed to help achieve Vermont’s renewable energy goals by promoting the development of renewable projects.²⁹ It does this primarily by requiring utilities to purchase the output of qualifying projects at set prices.³⁰ The cumulative capacity cap, which generally limits the amount of generation participating in the program, has been seen as “contain[ing] the overall costs” and reducing the potential for adverse impacts to ratepayers.³¹ As the only discrete category of plants outside the cap, the farm methane category represents a notable departure from the structure of the wider program. The unique position of these plants is further illustrated by the treatment of renewable energy credits (“RECs”): unlike other categories, farm methane projects are entitled to retain the RECs they generate.³²

²⁷ The Commission has asked whether the Pyrolysis Concept would be more appropriate in the biomass standard offer category instead, and certainly the use of woody biomass places a foot firmly in that world. The overlap between the farm methane and biomass categories predates this Project however: anaerobic digesters use biomass as well. *See Second Order Re Implementation Issues*, Docket 7533, Order of 10/28/09 at 5–7 (concluding that “the agricultural-methane category is available only for projects that utilize methane derived from agricultural operations. Any facility that generates methane from the use of biomass feedstock not principally derived from agricultural or landfill operations will be placed in the biomass category.”); 30 V.S.A. § 8005a(c)(2) (establishing a category for “biomass power using a fuel other than methane derived from an agricultural operation or landfill.”).

²⁸ *See Second Order Re Implementation Issues*, Docket 7533, Order of 10/28/09 at 5, 7 (declining to base eligibility on a specific technology “although the . . . projects . . . reviewed to date have all been anaerobic digesters).

²⁹ *See* 30 V.S.A. § 8005a(a); *Investigation Re: Establishment of a Standard Offer Program for Qualifying Sustainably Priced Energy Enterprise Development (“SPEED”) Resources*, Docket No. 7533, Order of 9/30/09 at 2.

³⁰ *See* Docket No. 7533, Order of 9/30/09 at 2.

³¹ *See id.* at 10.

³² *See* 30 V.S.A. § 8005a(f)(3); *Investigation of the standard-offer contract between Vermont Renewable Gas, LLC and the Standard Offer Facilitator*, Case Nos. 24-2797-PET, 24-3359-INV, Order of 11/7/24 at 4.

These exceptions, coupled with the standard offer price set by the Commission, can have significant cost implications for ratepayers. And from a ratepayer perspective, the additional costs from expanding the category may not come with commensurate benefits.³³ In the context of the broader standard offer framework, which contemplates a measured pace of renewable deployment “at the lowest feasible cost,” the exceptions for farm methane suggest that the category was intended to include a comparatively small number of plants.³⁴ This has certainly been true in practice: thus far the category has remained narrow, with limited participation.³⁵ While it is not clear from the statute that the category should be limited to anaerobic digester plants, a significant expansion could undermine the structure of the standard offer program and the generally applicable capacity cap, creating adverse impacts in tension with Vermont’s renewable energy goals.³⁶

With that said, the farm methane category may also have implications for the agricultural sector. The Department has no expertise there but observes that the unique incentives for farm methane projects show a desire to promote farm-based energy and benefit working farms. Farm methane projects have had the potential to enhance the economic viability of agricultural operations, providing revenue streams from the sale of power, RECs, and feedstocks which may

³³ For example, the utility receives the RECs for most standard offer projects and can use them to ratepayers’ benefit. This is not the case with farm methane plants. The Department acknowledges that farm methane projects 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.

³⁴ See 30 V.S.A. §§ 8005a(f)(1)(B); 8005a(c)(1) (establishing annual increases in capacity up to the 127.5 MW cap).

³⁵ See, e.g., *2023 standard-offer prices for existing hydroelectric plants with a nameplate capacity of 5 MW or less and farm methane plants*, Case No. 23-1860-INV, Order of 8/8/23 at 5 (“In the last several years, no farm methane projects have sought a standard offer contract.”).

³⁶ See, e.g., 30 V.S.A. § 8001(a)(1) (stating a goal to “[b]alanc[e] the benefits, lifetime costs, and rates of the State’s overall energy portfolio to ensure that to the greatest extent possible the economic benefits of renewable energy in the State flow to the Vermont economy in general, and to the rate-paying citizens of the State in particular”).

otherwise be less marketable.³⁷ The exclusion from the cumulative capacity cap seems to reinforce these intended benefits by ensuring that incentives and opportunities remain available.

Given the above, the intent surrounding the farm methane category can be viewed from at least two perspectives which may pull against each other: ratepayer and farmer. Historically, it appears that the development of anaerobic digesters has struck a balance: helping to achieve specific goals³⁸ and support working farms without undue costs to ratepayers or unsustainable impacts on Vermont's renewable energy programs. Recognizing that the new technology under consideration here was not contemplated when the category was created, the eligibility question may turn on whether the Pyrolysis Concept can occupy the same niche as the existing technology or effectively strike a similar balance.

The Department has significant concerns regarding the ratepayer impacts from an expansion of the farm methane category – particularly when the expansion threatens to upend the core structure and guiding principles of the standard offer program. The Department does not currently have the information to assess what scale of development might be expected if the category were open to new pyrolysis entrants, but the potential cost impacts alone weigh in favor of great caution. Ratepayers are paying a significant premium for the generation participating in the standard offer program, and this is doubly true in the case of the farm methane category where RECs are retained by the plant owner. While the benefits of anaerobic digester plants have been widely recognized, the same cannot be said for the Pyrolysis Concept. Given the limited statutory guidance available, we believe additional information and input from participants and interested

³⁷ See *Petition of Monument Farms Three Gen, LLC*, Docket No. 7592, Order of 5/6/10 at 7 (discussing economic benefits); see also *Petitions of Lincoln Renewable Nat. Gas, LLC*, Docket No. 8596, Order of 4/8/16 at 17 (describing a project outside the standard offer context, with a “community digester” model where contributing farmers receive payment for feedstock as well as byproducts that can be fed back into the farm).

³⁸ See, e.g., 30 V.S.A. §§ 8001(a)(7)–(8).

parties is essential to determine whether the Pyrolysis Concept fits the intended scope and purpose of the farm methane category.

III. Conclusion

This investigation has raised two distinct sets of issues regarding the Project's eligibility for the farm methane standard offer category. The first set is specific to the Project itself, and whether the proposed feedstocks meet existing eligibility requirements established by the Commission. The second set goes to whether the new concept or technology that the Project represents is consistent with the category, considering the relevant statutes and their underlying intent. The Department respectfully recommends that the Commission resolve the threshold feedstock issue before turning to the broader questions on the farm methane category. To the extent those questions remain relevant, the Department recommends soliciting information from the Petitioner and appropriate stakeholders to better understand the implications of this new technology for farmers, ratepayers as a whole, and the public good.

DATED at Montpelier, Vermont this 23rd day of January 2025.

Respectfully submitted,

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