

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Petition of Salisbury AD 1, LLC for a Certificate	)	
of Public Good, pursuant to 30 V.S.A. § 231, to	)	
own and operate a renewable natural gas facility	)	
in Salisbury, Vermont, and for de minimis	)	Case No. 18-3449-PET
regulation, and to address motions to transfer and	)	
amend the 30 V.S.A. § 248 CPG for the facility	)	
that was issued in Case 8596	)	

SUPPLEMENTAL AFFIDAVIT OF MARIA SOL UCCIANI

1. My name is Maria Sol Ucciani.
2. I previously filed an affidavit in support of Salisbury AD 1, LLC's ("Salisbury AD 1") October 4, 2018 motion to amend the 30 V.S.A. § 248 Certificate of Public Good ("CPG") issued by the Vermont Public Utility Commission ("PUC" or "Commission") in Docket No. 8596, for a renewable natural gas facility to be located on the Goodrich Farm in Salisbury, Vermont (the "Project"). The Project will consist of an anaerobic digester tank system that produces biogas, as well as gas upgrade and purification equipment that refines the biogas into the finished renewable natural gas ("RNG") product.
3. As indicated in my first affidavit, Salisbury AD 1 has modified some aspects of the As-Approved Project's design to prepare the Final Project design. The modifications to the Project's design fall into three categories: the physical layout and location ("the Layout/Location Changes"); equipment selection ("the Equipment Changes"); and to the Project's material inputs and gas output ("the Input/Output Changes") (together, the "Proposed Modifications"). The Proposed Modifications, and their potential for impacts under the criteria of 30 V.S.A. § 248(b), are set forth in my first affidavit and *Exhibits SAD1-1* through -3 thereto.
4. Comments on the Final Project design were filed by the Vermont Department of Public Service ("DPS") and Agency of Natural Resources ("ANR") on November 7, 2018 and October 31,

2018, respectively. In addition, at the Status Conference held on November 20, 2018, the PUC Hearing Officer requested clarification or further information on a number of issues.

5. The purpose of this affidavit is to respond to comments and requests for additional information from the DPS, ANR (with respect to spill prevention and control), and the Hearing Officer. The balance of ANR's comments are addressed in the affidavit of Lydia Lee.

6. In addition, we have updated several documents contained in our 10/4 filing, including the Table of Contents, Assessment of Proposed Modifications by Section 248 Criteria (*Exh. SAD1-1(Rev.)*), Project Comparison Matrix (*Exh. SAD1-2(Rev.)*), and Final Site Plan and Comparison Site Plan (*Exh. SAD1-3(Rev.)*).

ANR Comments

7. ANR has requested information concerning the potential for releases from the nutrient storage tank and any necessary protective measures related thereto. The tanks are engineered systems and are designed per American Water Works Association (AWWA) D103 and/or Natural Resources Conservation Service (NRCS) 313 Code specifications.

Given site space constraints, a passive secondary containment structure for tanks of this size is not practicable, and it is not common industry practice given the engineered design of the tanks in accordance with industry accepted standards. The tanks will be hydro-tested for leaks prior to filling with digestate, and inspected and maintained in accordance with the manufacturer's operation and maintenance manual. In addition, all final design drawings (tank, concrete pad, and accessories) are stamped by the vendor's PE, and will be verified by the Project's civil engineer. See also *Exhibit SAD1-12 - Spill Prevention and Control Plan*.

DPS Comments

8. The Department requested additional information regarding the gas-related components of the Project, including: (i) facility design and construction (gas transmission and pressurization facilities); (ii) facility operation and maintenance (protocols re operations and maintenance, overpressure protection, and integrity management of gas facilities; and (iii) input/output quality control (protocols re pressurization, gas quality, and monitoring/management of the feedstock and gas constituents).

9. Salisbury AD 1 has been in communication with the DPS prior to and since it filed its November 7th comments. In an effort to address the DPS's questions, Salisbury AD 1 provided several documents from DMT Clear Gas Solutions, the consultant and contractor who will design and install the gas-related components of the Project. See ***Exhibit SAD1-13 – DMT 11-20-18 Memo and Attachments; Exhibit SAD1-14 - DMT 11-6-18 Quote***. DMT is the same entity that was utilized by the original Petitioner, Lincoln Renewable Natural Gas LLC ("Lincoln RNG").

10. I have reviewed the Commission's Findings and Order for Lincoln RNG's original project, dated April 8, 2016 ("4/8/16 Order"), including in particular Findings 21-22, 35-39, and 53-63. I have also reviewed Lincoln RNG's underlying testimony and exhibits cited in the 4/8/16 Order.¹

11. It is my understanding that the general range of operating parameters provided by DMT in its Quote to Salisbury AD 1 is consistent with the project as previously outlined by Lincoln RNG. See Table 2.1 of ***Exhibit SAD1-14***.

12. In an effort to clear up any confusion that may have been created by Salisbury AD 1's earlier materials or in its discussions with the DPS, Salisbury AD 1 will be utilizing the same

¹ See the prefiled testimony and exhibits (direct and/or supplemental) of Steckler, LeForce, and Smith.

fundamental design of the gas components as proposed by Lincoln RNG in its Petition and approved by the Commission.

13. Facility Roles and Responsibilities. The DPS requested that Salisbury AD 1 identify the entities that will be controlling the design and operation of each part of the facility. See ***Exhibit SAD1-15 – Roles and Responsibilities.*** The exhibit provides information on each major segment of project design and operation:

- Feedstock, Manure and Site Management: Salisbury AD 1/Vanguard Renewables in conjunction with CHFour Biogas
- Upgrader: DMT Clear Gas Solutions
- Salisbury AD 1's Gas Pipeline, from the outlet flange of the upgrader to Point of Interconnection with VGS: VGS or another entity with gas engineering expertise
- After the Point of Interconnection: Vermont Gas Systems

14. Timing of Documentation. The DPS requested more detailed design plans, operating protocols, and a quality assurance plan. We discussed with the DPS the fact that detailed design and other plans cannot be created until after the amended CPG is issued and Salisbury AD 1 fully engages DMT and spends the considerable funds needed for such detailed, final construction phase engineering. In addition, as indicated above Salisbury AD 1 is not proposing to change the gas component of the facility which has already been reviewed and approved.

15. As a result, after the Commission approves the motion to amend Salisbury intends to submit the requested plans and protocols to the DPS in a sequenced manner, i.e., prior to construction, prior to start of digester operations, or prior to commissioning (delivery of gas to VGS system), as specifically reflected in ***Exhibit SAD1-16 – Post-CPG Documentation and***

Sequencing.² The documentation, as shown on the exhibit, will include the following categories of information:

- Design review
 - Upgrader: including parts list and design drawings
 - Pipe specifications: including routing and components, joining methods, and coating, cathodic protection (sacrificial anode)
- Operations and Maintenance Manuals
 - Upgrader and associated equipment
 - Pipeline
 - i. corrosion protection
 - ii. emergency plan
 - Digester
- Commissioning
 - Pressure test (Maximum Allowable Operation Pressure, or MAOP) results
 - Cathodic protection test results
 - Leak surveys results
- Quality assurance
 - Quality control program for the gas product
 - Feedstock quality control program

16. On December 11, 2018, the DPS provided Salisbury AD 1 with proposed CPG conditions related to two areas: (i) compliance with specific federal requirements related to the design, operation, testing and maintenance of the gas pipeline, and (ii) submission of a quality assurance plan (“QAP”) for DPS review and approval. See *Exhibit SAD1-19*.

17. Regarding DPS item (i), Salisbury AD 1 has no objection to the DPS’ request.

18. Regarding DPS item (ii), Salisbury AD 1 has no objection to submitting the QAP for DPS review and approval, consistent with the prior PUC decision in this case and with what I have outlined above. I do wish to note that the DPS has requested submission of the QAP “Two weeks before start of pipeline or main construction.” However, the PUC’s 4/8/16 CPG provides for

² This is consistent with how the Quality Assurance Plan was to be handled for the as-approved Project. See 4/8/16 Order at Finding 58 and CPG Condition 8. Any differences in the makeup of feedstocks as between the as-approved Project and revised Project (i.e., utilizing materials other than farm manure) that could affect constituents in the gas will be reflected in the Quality Assurance Plan.

submission of a QAP prior to interconnection with the VGS distribution system. See CPG Condition 8.³ The timeline Salisbury AD 1 has presented in *Exhibit SAD1-16* proposes submission of the QAP 30 days prior to the start of “operations,” which is defined as the date when the facility is ready to start receiving food waste to process (which is approximately 5 months prior to RNG being delivered to the VGS distribution system). Salisbury AD 1 intends to discuss further with the DPS the timing of the QAP submittal in an effort to align these dates.

Hearing Officer Requests

19. **The financing mechanism to be used by Salisbury AD 1 and its parent, Vanguard Renewables** — The Salisbury AD 1 project will be funded in a similar fashion to Vanguard’s existing anaerobic digester asset portfolio. *See my 10/4/18 Affidavit at pages 4-6.* VR Capital Investments LLC (VRCI) will be the sole equity investor in the Project, with debt financing provided by Farm Credit East and CoBank. VRCI is managed by private equity firm Tulum Trust and is comprised of multiple sustainability-driven investors including Vision Ridge Partners and the Skoal Foundation. In 2015, Vanguard secured an initial equity commitment of \$72M from VRCI and 50% LTC commitment from Farm Credit East on project financing. The debt principal will be amortized over 10 years with variable rate interest, consistent with Vanguard’s existing debt portfolio. As shown in the table below, Vanguard has deployed over \$40M in capital (equity and debt) to date across five projects in Massachusetts.

Invested Capital	Equity	Debt
Rutland AD1 - 2015	\$4.2m	\$3.0m
Hadley AD1 - 2015	\$3.3m	\$2.9m
Deerfield AD1 - 2016	\$4.2m	\$4.3m
Haverhill AD1 - 2017	\$5.6m	\$5.6m
Spencer AD1 - 2018	\$5.8m	\$5.5m
Total	\$23.0m	\$21.3m

³ There appears to be a typo in the CPG as there are two different conditions that are numbered as 8.

About Tulum Trust:

- Manages private equity investment in an effort to create a low carbon economy and address global climate change issues
- Funds includes family offices, high net worth individuals, and institutional capital partners. Current partners are Skoll Foundation and Vision Ridge.
- Provided 100% of the \$72M Fund One commitment
- Board of Trustees of Rocky Mountain Institute

About CoBank and Farm Credit East:

- CoBank and Farm Credit system federal charter to Ag community nationwide
- Committed to fund 100% of Vanguard's projects
- Attractive debt terms
- CoBank partners with regional Farm Credit Banks
- Experienced lender in agricultural and renewable sectors

20. **Who is the feedstock vendor, if known.** As discussed in my first affidavit, Vanguard Renewables is recognized nationally for its organics-to-energy model. By the close of 2018, the firm's operating portfolio will represent the largest organics disposal destination in Massachusetts, with over 190,000 T/year of combined on-farm and off-farm organics being processed and converted to valuable energy and products for dairy and agricultural use.

In Vanguard's experience, it is not possible to set feedstock providers this early in the project development process. Pending completion of permitting, feedstock for the Project will be secured during Q3 and Q4 2019, to coincide with acceptance of feedstock on-site in Q1 2020. Salisbury AD 1 expects to see similar feedstock sources to those of the other Vanguard Renewables operating projects. Currently, feedstock comes mostly from pre-consumer food production. Examples include food manufacturers (Cedars Mediterranean Foods, Agrimark Dairy), grocery stores (Whole Foods), food de-packaging facilities, and grease traps of restaurants and kitchens. Vanguard currently receives small amounts of post-consumer food waste (MGM Springfield), and byproducts from biodiesel manufacturing. It is also exploring feedstock from brewery operations in Vermont.

Before accepting any new feedstock streams, Vanguard assesses whether the material meets permit requirements and is appropriate and safe for digestion, and if so, then integrates the new feedstock into the broader recipe across our digester fleet.

21. **Confirm that there are no planned changes to the Vermont Gas Systems (“VGS”) distribution line.** There are no planned changes to VGS’ distribution line, gas quality requirements, or ancillary interconnection equipment.

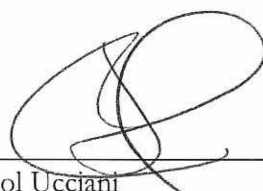
22. **What will fuel the Combined Heat and Power (CHP) unit?** The CHP will run on natural gas provided by VGS from its distribution pipeline. The equipment will not be capable of running on biogas.

23. **Lincoln RNG stated that the operations manual and gas testing requirements would be filed with the DPS before the start of operations. What are Salisbury AD 1’s plans?** Salisbury AD 1 intends to do the same. The operation and maintenance manuals and gas testing requirements will be filed with the DPS before the start of operations. *Exhibit SAD1-16* provides a timeline for the filing of specific documents.

24. **Provide the status of the Phase I archaeological study.** Salisbury AD 1 has engaged the Northeast Archaeology Research Center (“NARC”) to conduct the Phase I study in the two areas specified in the UVMCAP report. *See Exhibit SAD1-11.* NARC’s Phase I Scope of Work was approved by the Vermont Division for Historic Preservation (“VDHP”) on December 6, 2018. The Phase I study will be conducted in the Spring of 2019 as soon as weather and soil conditions permit, and in any event before the start of construction.

Salisbury AD 1 has entered into a Stipulation with VDHP concerning the Phase I study and the necessary steps if archaeological artifacts are discovered. *See Exhibit SAD1-18.*

I, Maria Sol Ucciani, do hereby swear and affirm under the penalty of law that the information provided in my affidavit is accurate to the best of my knowledge and that I have personal knowledge of, and am able to testify as to the validity of the information contained in my testimony and attached exhibits.



Maria Sol Ucciani

STATE OF Massachusetts)
COUNTY OF Norfolk)

The foregoing instrument was signed and acknowledged before me this 12 day of December, 2018 at 20 Walnut St, Wellesley, MA by Maria Sol Ucciani, who acknowledged the act to be her free act and deed.



Notary Public

Name of Notary: Maura B. Shoulkin

Commission Expires: March 2, 2023

