



(2)

Weybridge VT 05753  
(City) (State) (Zip code)

9. Latitude: 44 02' 46.99 Longitude: 73 13' 12.29

10. The name and telephone number of the facility's operator, if different from the owner: Same

\_\_\_\_\_  
(Name) (Telephone number)

11. The ISO-New England asset identification number, if applicable: 14867 or N/A:

12. The GIS facility code, if applicable: NON-33712 or N/A:

13. A description of the facility, including fuel type, gross nameplate generation capacity, the initial commercial operation date, and the date it began operation, if different.

14. If Class I certification is sought for a generation facility that uses biomass, the applicant shall submit:
- (a) quarterly average NOx emission rates over the past rolling year,
  - (b) the most recent average particulate matter emission rates as required by the New Hampshire Department of Environmental Services (NHDES),
  - (c) a description of the pollution control equipment or proposed practices for compliance with such requirements,
  - (d) proof that a copy of the completed application has been filed with the NHDES, and
  - (e) conduct a stack test to verify compliance with the emission standard for particulate matter no later than 12 months prior to the end of the subject calendar quarter except as provided for in RSA 362-F:12, II.
  - (f)  N/A: Class I certification is NOT being sought for a generation facility that uses biomass.

15. If Class I certification is sought for the incremental new production of electricity by a generation facility that uses biomass, methane or hydroelectric technologies to produce energy, the applicant shall:
- (a) demonstrate that it has made capital investments after January 1, 2006 with the successful purpose of improving the efficiency or increasing the output of renewable energy from the facility, and
  - (b) supply the historical generation baseline as defined in RSA 362-F:2, X.
  - (c)  N/A: Class I certification is NOT being sought for the incremental new production of electricity by a generation facility that uses biomass, methane or hydroelectric technologies.

16. If Class I certification is sought for repowered Class III or Class IV sources, the applicant shall:
- (a) demonstrate that it has made new capital investments for the purpose of restoring unusable generation capacity or adding to the existing capacity, in light of the NHDES environmental permitting requirements or otherwise, and

- (b) provide documentation that eighty percent of its tax basis in the resulting plant and equipment of the eligible generation capacity, including the NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.
  - (c)  N/A: Class I certification is NOT being sought for repowered Class III or Class IV sources.
17. If Class I certification is sought for formerly nonrenewable energy electric generation facilities, the applicant shall:
- (a) demonstrate that it has made new capital investments for the purpose of repowering with eligible biomass technologies or methane gas and complies with the certification requirements of Puc 2505.04, if using biomass fuels, and
  - (b) provide documentation that eighty percent of its tax basis in the resulting generation unit, including NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.
  - (c)  N/A: Class I certification is NOT being sought for formerly nonrenewable energy electric generation facilities.
18. If Class IV certification is sought for an existing small hydroelectric facility, the applicant shall submit proof that:
- (a) it has installed upstream and downstream diadromous fish passages that have been required and approved under the terms of its license or exemption from the Federal Energy Regulatory Commission, and
  - (b) when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects.
  - (c)  N/A: Class IV certification is NOT being sought for existing small hydroelectric facilities.
19. If the source is located in a control area adjacent to the New England control area, the applicant shall submit proof that the energy is delivered within the New England control area and such delivery is verified using the documentation required in Puc 2504.01(a)(2) a. to e. *n/a*
20. All other necessary regulatory approvals, including any reviews, approvals or permits required by the NHDES or the environmental protection agency in the facility's state. *att.*
21. Proof that the applicant either has an approved interconnection study on file with the commission, is a party to a currently effective interconnection agreement, or is otherwise not required to undertake an interconnection study. *att.*
22. A description of how the generation facility is connected to the regional power pool of the local electric distribution utility. *att*
23. A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof. *att*
24. A statement as to whether the facility's output has been verified by ISO-New England. *att*



Item 20  
(1)

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7592

Petition of Monument Farms Three Gen, LLC )  
("Monument Farms") for a certificate of public good, )  
pursuant to 30 V.S.A. Section 248(j), authorizing the )  
installation and operation of a 155-kW agricultural- )  
methane electrical generating facility at a dairy farm )  
and milk-bottling plant owned by Monument Farms )  
Dairy, Inc., located on Route 23 in Weybridge, )  
Vermont )

Entered: 8/31/2011

**AMENDED CERTIFICATE OF PUBLIC GOOD ISSUED**  
**PURSUANT TO 30 V.S.A. SECTION 248**

IT IS HEREBY CERTIFIED that the Public Service Board ("Board") of the State of Vermont this day found and adjudged that the Certificate of Public Good issued in this Docket on May 6, 2010, and amended on March 31, 2011, to permit the construction and operation of a farm-based methane-fueled electrical generation facility by Monument Farms Three Gen, LLC, is hereby amended further to allow the facility to operate as a group net metering system as described in the Petition for Amendment filed and supplemented on June 17, 2011, and that such amendment will promote the general good of the State. Said amendment shall be subject to the following conditions, all other conditions previously approved by the Board in this Docket to remain in full force and effect:

1. Operation and maintenance of the project shall be in accordance with the amended plans and evidence submitted in this proceeding. Any material or substantial change in the project is prohibited without prior Board approval.
2. The group net metering system shall comply with applicable existing and future statutory requirements and Board Rules and Orders.
3. In the event this Certificate is transferred pursuant to Board Rule 5.107(B)1, the new owner of the system must file the required certificate transfer form with the Board prior to commencing operation of the system.



STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7592

Petition of Monument Farms Three Gen, LLC )  
("Monument Farms") for a certificate of public )  
good, pursuant to 30 V.S.A. Section 248(j), )  
authorizing the installation and operation of a )  
155-kW agricultural-methane electrical generating )  
facility at a dairy farm and milk-bottling plant )  
owned by Monument Farms Dairy, Inc., located on )  
Route 23 in Weybridge, Vermont )

Order entered: 8/31/2011

**ORDER RE: AMENDMENT TO CERTIFICATE OF PUBLIC GOOD**

**I. BACKGROUND**

On June 17, 2011, Monument Farms Three Gen, LLC ("Monument Farms") filed a Petition for Amendment (the "Amendment") with the Vermont Public Service Board ("Board") concerning a Certificate of Public Good ("CPG") previously issued to Monument Farms on May 6, 2010, and subsequently amended by the Board on March 31, 2011, involving the construction of a 155 kW agricultural-methane electrical generation facility in Weybridge, Vermont (the "Project"). In the Amendment request, Monument Farms seeks Board approval to convert the Facility from a Sustainably Priced Energy Enterprise Development ("SPEED") resource to a group net metering system. The Petition for Amendment was accompanied by an exhibit providing a description of the proposed group net metering system.

In this Order, for the reasons outlined below, we approve the amendment request from Monument Farms and conclude that the Project, as modified, satisfies the requirements for a group net metering system, and continues to satisfy the criteria of 30 V.S.A. § 248.

On June 17, 2011, the Vermont Electric Power Producers, Inc. ("VEPPI")<sup>1</sup> filed a letter notifying the Board of the existence of a SPEED Standard Offer Contract (the "Contract"),

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1. VEPPI serves as the SPEED Facilitator, under contract with the Board. See Board Rule 4.306.

effective September 14, 2010, between Monument Farms and VEPPI. VEPPI notes that, under the "Exclusivity Clause" of the contract, Monument Farms waived its right to seek alternative power sales arrangements.

On June 17, 2011, Monument Farms submitted a supplemental filing in response to VEPPI's letter of June 17, arguing that the Amendment should be approved by the Board.

On July 5, 2011, the Vermont Department of Public Service ("DPS") filed a letter recommending Board approval of the request from Monument Farms for an amended CPG. The DPS stated that it does not object to the proposed amendment provided that Monument can supply the Board with justification that conversion of the Project to a group net metering system will serve the public interest pursuant to the terms of the Contract.

Monument Farms filed a response to the DPS's letter on July 13, 2011, asserting that the Amendment is in the public interest.

On July 29, 2011, the DPS filed comments concluding that, based on Monument Farms' response of July 13, the proposed Amendment will serve the public interest.

On August 1, 2011, VEPPI filed comments reaffirming VEPPI's opposition to the proposed Amendment.

On August 4, 2011, Monument Farms filed a letter requesting prompt approval of the Amendment.

No other party filed comments on the amendment request.

**II. FINDINGS**

1. At the time Monument Farms obtained its CPG in 2010, Monument Farms represented that the Project would be a SPEED resource and entered into a SPEED Standard Offer Contract with VEPPI. Amend. Petition at 1.

2. For economic reasons, Monument Farms proposes to operate the Project as a group net metering system rather than a SPEED resource. The proposed group currently consists of shareholders of Monument Farms, Inc., a family corporation, who are also members of Monument Farms Three Gen, LLC. Due to Monument Farms' integrated multi-tiered business format, and the amount of energy that is consumed in processing and bottling milk, Monument

Farms expects its electrical usage to closely approximate the projected output of the Project. As a result, Monument Farms anticipates that the Project, as a group net metering system, has the potential to mitigate the impact of future rate increases on Monument Farms and thereby contribute to the economic viability and sustainability of its overall agribusiness operation. Amend. Petition at 1; exh. 1; letter of Monument Farms dated 7/6/11 at 1.

3. Monument Farms has specified sixteen meters to be included in the group system by account number and location.<sup>2</sup> Monument Farms has also provided a method for adding or removing meters included in the group system. Exh. 1.

4. Monument Farms has designated Cliff Carpenter as the person responsible for receiving all communications regarding the group system. *Id.*

5. Providing for dispute resolution within the designated group will not be necessary because the accounts are all part of the same entity, Monument Farms. In the event that accounts are added for individuals or entities other than Monument Farms, any disputes arising would be submitted to binding arbitration. *Id.*

6. The proposed conversion to a group net metering system will not involve any changes to the physical plant, interconnection, or operation of the Project as originally approved by the Board in this Docket. Amend. Petition at 2.

7. Monument Farms seeks approval to operate its Project as a group net metering system by obtaining an amendment to its existing CPG instead of applying for a new CPG using the Net Metering Application Form under Board Rule 5.100. In obtaining its existing CPG, Monument Farms satisfied all of the procedural and substantive requirements of 30 V.S.A. § 248. *Id.*

8. The SPEED Standard Offer Contract contains the following "Exclusivity Clause" under Section 12:

During the Term of this Agreement, Producer shall not enter into any other agreement for the sale or other conveyance of any portion of the Electricity or any Other Product that is the subject of sale under this Agreement. Producer acknowledges that, by entering into this Agreement, Producer is waiving any and

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2. The group system consists of the following designated accounts: Hamilton Farm Help, Farm Shop, Bingham Barn, Heifer Barn Hamilton, Processing Plant, Hagar Farm, Bittersweet Falls Farm Help, James Road Farm Help, Hamilton Farm, Gingras Farm Help, Gingras Barn, Weybridge Road Farm Help, James Road Farm Help, and Digester Gen Set Building. Exhibit 1.

all rights to seek an alternative power sales arrangement, including but not limited to an arrangement through Board Rules 4.100, 4.300 and 5.100, at any time throughout the term set forth in this Agreement. Absent an order of the Board to the contrary, this waiver shall extend throughout the full term contemplated under this Agreement, even if this Agreement is terminated early for any reason by default, for cause or otherwise.

Letter of VEPPI dated June 17, 2011, at 1.

9. Construction of the Project has been completed but the facility has not yet begun to produce electricity; therefore, Monument Farms has not received any payments under the standard offer price of the Contract. *Id*; letter of Monument Farms dated June 17, 2011, at 1.

10. Monument Farms anticipates that its departure from the SPEED program will free-up space for new SPEED projects or the expansion of existing projects. Letter of Monument Farms dated 7/6/11 at 2.

**III. DISCUSSION & CONCLUSION**

As referenced in the Findings above, Monument Farms proposes to operate the Project as a group net metering system rather than a SPEED resource. The proposed net metering system will be a group system consisting of a total of sixteen utility meters at various facilities and locations owned by Monument Farms. Pursuant to 30 V.S.A. § 219a(a)(2):

"Net metering" means measuring the difference between the electricity supplied to a customer and the electricity fed back by a net metering system during the customer's billing period:

- (A) using a single, nondemand meter or such other meter that would otherwise be applicable to the customer's usage but for the use of net metering; or
- (B) on farm or group systems, using multiple meters as specified in this chapter. The calculation will be made by converting all meters to a nondemand, nontime-of-day meter, and equalizing them to the tariffed kilowatt-hour rate.

Further, pursuant to 30 V.S.A. § 219a(g)(1):

In addition to any other requirements of section 248 of this title and this section and board rules thereunder, before a farm or group net metering system including more than one meter may be formed and served by an electric company, the proposed farm or group net metering system shall file with the board, with copies to the department and the serving electric company, the following information:

- (A) the meters to be included in the group net metering system, identified by account number and location;

- (B) a procedure for adding and removing meters included in the group net metering system;
- (C) a designated person responsible for all communications from the group net metering system to the serving electric company, for receiving and paying bills for any service provided by the serving electric company for the group net metering system, and for receiving any other communications regarding the group net metering system; and
- (D) a binding process for the resolution of any disputes within the group net metering system relating to net metering that does not rely on the serving electric company, the Board, or the Department.

Monument Farms' Exhibit 1, which was filed with the Amendment, addresses subsections (A), (B) (C) and (D), above. Specifically, Monument Farms has designated the meters to be included in the group system by account number and location, has provided a method for adding or removing meters included in the group system, has appointed Cliff Carpenter as the person responsible for receiving all communications regarding the group system, and has attested that all disputes among users of the group system shall be resolved by binding arbitration. Accordingly, we conclude that the requirements for a group net metering system have been satisfied by Monument Farms. We also note that in our original Order granting approval of the Project, Order dated May 6, 2010, we previously determined that the Project complies with the requirements of 30 V.S.A. § 248(j) as those requirements apply to SPEED projects under Board Rule 4.312, which involves a more stringent standard of review than under § 248(b) which applies to net metering projects under Board Rule 5.100.<sup>3</sup>

VEPPI has filed two objections with the Board opposing the proposed conversion of the Project to a group net metering system and abrogation of the existing Contract. VEPPI is apparently relying on a strict interpretation of the "Exclusivity" provisions under Section 12 of the Contract, an interpretation which we do not adopt here. Essentially, VEPPI argues that Monument Farms' proposal does not constitute a special circumstance under which the Board should grant relief from Section 12, and that the applicability of the Exclusivity provision is not dependent on whether or not the Project has begun to generate and sell power.<sup>4</sup> In addition, VEPPI asserts that granting the requested relief would have substantial precedential significance

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3. Docket No. 7592, Order of 5/6/10 at 3.  
 4. Letter of VEPPI dated 7/29/11 at 1-2.

in that it would weaken the long-term stability of the pricing mechanism for power under the Standard Offer program.<sup>5</sup>

Upon review of the Contract and VEPPI's correspondence filed in this proceeding, we are not persuaded by VEPPI's arguments. The Exclusivity Clause of the Contract explicitly contemplates that circumstances may arise under which the Board should grant relief, with such a determination to be within the full discretion of the Board based on the merits of the request. Moreover, it is also clear that the purpose of the clause is to protect ratepayers from the premature withdrawal from the program by developers after those developers have received a premium for power that is subsidized by the ratepayers.<sup>6</sup> In the present case, Monument Farms has not yet begun to generate power under its Contract with VEPPI and thus has not received any monetary benefit from the agreement (if Monument Farms had received payment our analysis would be very different). Consequently, we conclude that the interests of ratepayers are not at risk in this particular instance, and that ratepayers will not be harmed by Monument Farms' withdrawal from the SPEED program.

In addition, the DPS raised the issue as to whether or not the proposed Amendment will serve the public interest. Under Section 28 of the Contract, the Board may order amendments to the contract, without the consent of the parties, when the amendment will serve the public interest, provided that:

- (1) such amendment does not result in any reduction in the project's economic value to Producer;
- (2) such amendment will not adversely affect Producer's ability to meet the project's financial obligations;
- (3) such amendment will not impose additional operational or other economic costs on Producer without full compensation;
- (4) the amendment results in a benefit to ratepayers.

Although Monument Farms is not requesting an amendment to the Contract, we find the public interest standard to be relevant in this proceeding in determining whether or not to grant the

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5. *Id.*

6. Docket No. 7533, Order of 9/30/09 at 32-33.

20(2)

proposed amendment to the CPG. Monument Farms argues that its Amendment serves the public interest in that it promotes the economic viability of its farming operation pursuant to the state of Vermont's policy of promoting and sustaining in-state dairy production, while at the same time freeing up wattage capacity under the SPEED program to accommodate new projects or the expansion of existing projects.<sup>7</sup> The DPS concurs with Monument Farms' argument. Our examination of the evidence in this case indicates that Monument Farms' proposed Amendment complies with subsections 1 through 4 of Section 28 of the Contract referenced above and thus meets the public interest standard.

Therefore, based on the foregoing, we conclude that the requirements for a group net metering system have been satisfied, that the modified Project will continue to satisfy the criteria of Section 248, and that the Project will promote the general good of the state. Accordingly, an amended Certificate of Public Good shall be issued in this matter to reflect a group net-metered facility. We also conclude that the terms of Section 7 of the Contract, "Administrative Fee and Deposit," apply in this case and that Monument Farms is entitled to a 100% refund of its original deposit with VEPPI.

**SO ORDERED.**

---

7. Letter of Monument Farms dated 7/06/11 at 1-2.

Dated at Montpelier, Vermont, this 31st day of August, 2011.

s/ James Volz )  
) PUBLIC SERVICE  
) )  
s/ David C. Coen ) BOARD  
) )  
) OF VERMONT  
) )  
\_\_\_\_\_ )

OFFICE OF THE CLERK

FILED: August 31, 2011

ATTEST: s/ Susan M. Hudson  
Clerk of the Board

*NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.*

Item 20  
(3)



P.O. Box 69 • Chilton, WI 53014  
920-849-9797 • Fax 920-849-9160

September 14, 2010

Mr. Jay Hollingsworth  
State of Vermont  
Department of Environmental Conservation  
Air Pollution Control Division  
Building 3 South  
103 Main Street  
Waterbury, VT 05671-0402

RE: Air Pollution Control Permit  
Monument Farms Dairy/Monument Farms Three Gen, LLC

Dear Mr. Hollingsworth:

This letter will serve as written documentation that the GHD, Inc. supplied flare for the Monument Farms Digester project will meet EPA 40 CFR Part 60, Subpart A, 60.18 and will combust the biogas not consumed in the internal combustion engine. The only deviation from the EPA standard will be the use of an automatic ignition system that utilizes the utility for its power source. I have enclosed specifications of the components that will make up the flare system as well as a field inspection log of an existing GHD digester project for your inspection. This inspection log should satisfy Method 22 of Appendix A of the EPA rule. If you would require additional information related to the proposed flare system, please contact me at (920) 849-9797.

Sincerely,

A handwritten signature in black ink, appearing to read 'Stephen W. Dvorak', written over a horizontal line.

Stephen W. Dvorak, P.E.  
President



State of Vermont  
Department of Environmental Conservation

Agency of Natural Resources

Air Pollution Control Division  
103 South Main Street, 3 South  
Waterbury, VT 05671-0402

Tel: 802-241-3851  
Fax: 802-241-2590

September 24, 2010

Peter James, Managing Partner  
Monument Farms Three Gen, LLC  
2107 James Road  
Weybridge, Vermont 05753

Subject: Biogas-to-Energy Project – Air Permit not Required

Mr. James:

The Vermont Agency of Natural Resources, Air Pollution Control Division (“Agency”) received a letter from Monument Farms Three Gen, LLC located on James Road in the town of Weybridge, Vermont. The letter requests approval for the installation and operation of a 180 kilowatt biogas-fired generator set at Monument Farms as opposed to the originally approved 80 kilowatt unit. The Agency requested documentation to ensure adequate stack height, presence of a back-up flare and clean combustion technology. On September 17, 2010 the requested documentation was received from Monument Farms Three Gen, LLC. The Agency has determined that the proposed engine, back-up flare and exhaust stack configuration meet the Agency’s requirements and consequently, an Air Pollution Control Permit is not required for the Facility at this time. This determination is based on the information submitted and provided the following conditions are met:

- (1) Monument Farms Three Gen, LLC shall only install and operate a MAN Model MMG-180 biogas engine generator set rated at 180 kilowatts. Monument Farms Three Gen, LLC shall not install an alternative engine, including the 80 kilowatt MAN Model E 0836 LE 202, without prior written approval from the Agency. The engine shall be maintained in good working order at all times and operated and maintained in accordance with the manufacturer's operation and maintenance recommendations.
- (2) Monument Farms Three Gen, LLC shall design and operate the biogas-to-energy Facility in such a manner that any biogas which is not combusted in the engine is routed to a flare that is designed and operated in accordance with 40 CFR Part 60, Subpart A, §60.18. The flare shall also be equipped with a properly sized windscreen to prevent blowout of the flame. All elements of the flare system shall be maintained in good working order at all times and operated and maintained

signed

20(4)

Monument Farms Three Gen, LLC Page 2 of 2

accordance with the manufacturer's operation and maintenance recommendations.

- (3) The flare shall be equipped and operated with an automatic ignition system, such as a spark ignition system or a continuous pilot light, to ensure immediate and continuous combustion of any biogas that is routed to it. Spark igniters may be powered by the grid or an acceptable alternative power source.
- (4) Monument Farms Three Gen, LLC shall register its air emissions with the Agency annually in accordance with Subchapter VIII of the *Vermont Air Pollution Control Regulations*. Annual registration is required for all facilities that emit more than five (5) tons of emissions annually. Your facility is estimated to exceed five (5) tons if the engine is operated for more than 4,500 hours per year.

Should Monument Farms Three Gen, LLC alter the proposed biogas-to-energy project in any way from that presented to the Agency, such as by combusting an alternate fuel, altering the proposed engine or flare, or increasing the system capacity, Monument Farms Three Gen, LLC shall notify the Agency prior to making such changes so that a new determination for the need for an Air Permit can be made. If you have any questions, feel free to contact me at any time.

Sincerely,



Richard Valentineti, Director  
Air Pollution Control Division  
([Dick.Valentineti@state.vt.us](mailto:Dick.Valentineti@state.vt.us))

Enclosure

cc: Mike Raker, Agricultural Energy Consultants, 781 Holt Road Plainfield, VT 05667

RAV/JH:jh  
A1: Weybridge

sumd

Item 20 (5)

# Addison County Regional Planning Commission

14 Seminary Street

Middlebury, VT 05753

www.acrpc.org

Phone: 802.388.3141

Fax: 802.388.0038

RECEIVED

July 7, 2009

JUL 09 2009

DEPPMAN & FOLEY, PC

Mr. Eben Punderson, Esq.  
Deppman and Foley, P.C.  
7 Washington Street  
Middlebury, VT 05753

Re: Addison County Regional Planning Commission's Support for Monument Farms Three Gen, LLC's Methane Digester Proposal

Dear Mr. Punderson:

This letter expresses the support of the Addison County Regional Planning Commission ("ACRPC") for Monument Farms application to the Vermont Public Service Board to install a methane digester to generate electricity net-metered to the grid on its farm in Weybridge Vermont. At its full commission meeting on June 10, 2009, upon the recommendation of its Energy Committee, ACRPC voted unanimously to support your project and to authorize me to write this letter of support on its behalf.

The Addison County Regional Plan strongly supports value added manufacturing facilities that support the use of locally grown products and keep our farming land use patterns intact. For example, "Support of development patterns that will maintain the historic character of the region; namely urban centers and villages separated by rural countryside"; and "Strengthen diversified sustainable agricultural and forest industries" are listed as two of the Overall Goals of the Plan. Addison County Regional Plan, Overall Goals, Subsections A and I, page 1.0-3 (May, 2008). Additionally, Addison County Regional Planning Commission's Energy Plan strongly supports the local generation of electricity. Goal A of Section 7.2 of the Energy Section of the plan states its goal: "To increase local energy production in an effort to move towards a less centralized and more reliable energy production system in the Addison Region." Addison County Regional Plan, Section 7.2 Energy, Goal A, page 7-27 (May, 2008). Subsection (d) listing the objectives supporting Goal A elaborates that to meet this goal, it is our (ACRPC's) objective, "To support efforts to reduce costs for the regions farms through the development of farm based sources of energy such as bio-gas and bio-diesel." Id. Monument Farm's proposal to strengthen its dairy business by utilizing its waste products to generate electricity and bedding material meets each of these goals contained within the Regional Plan.

This letter constitutes the support of the Addison County Regional Planning Commission of Monument Farm's application and a finding of the Commission that the project will not interfere with the orderly development of the region. In fact, we believe it supports the development envisioned in the regional plan. ACRPC hereby waives its right to 45 days notice to receive the application prior to it being filed at the Public Service Board. ACRPC also hereby waives its right to hold a public hearing on the application.

Addison  
Lincoln  
Salisbury

Bridport  
Middlebury  
Shoreham

Bristol  
Monkton

Starksboro

Cornwall  
New Haven

Vergennes

Ferrisburgh  
Orwell

Waltham

Goshen  
Panton

Weybridge

Leicester  
Ripton

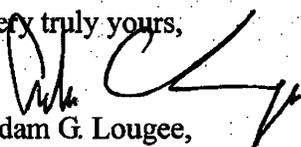
Whiting



2015

Please call me if we can provide you with any further assistance or if you have any questions or concerns regarding this letter. Good luck with the application process.

Very truly yours,



Adam G. Lougee,  
Executive Director

agl

cc: Executive Board

Item 21 (1)



P.O. Box 69  
Chilton, WI 53014  
920-849-9797

**MONUMENT FARMS THREE GEN, LLC  
ANAEROBIC DIGESTER  
COMMISSIONING REPORT**

September 13, 2011

GHD, Inc. certifies that the anaerobic digester system for Monument Farms Three Gen, LLC, located at 3467 Weybridge Road, Weybridge, Vermont, has been installed and tested. The anaerobic digester system is operating as intended for the generation of electricity as of the above date.

This certification is based on system inspection, testing by the gen-set installer, and utility interconnection. The new gen-set consists of one 155 kW Man gen-set installed by Martin Machinery.

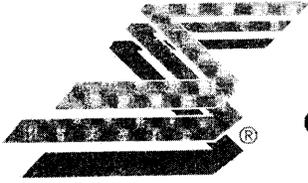
GHD, Inc.

*Bradd Seegers*

Bradd Seegers  
Project Administrator

*didn't have  
pictures  
(pgs 2-8)*

Item 21(2)



**Central Vermont Public Service Corporation**

October 11, 2011

Mr. Peter C. James  
Monument Farms Three Gen, LLC  
2107 James Road  
Weybridge, VT 05753

Dear Mr. James:

Central Vermont Public Service Corporation (CVPS) has successfully commissioned the Monument Farms' generator and associated interconnection equipment on September 14, 2011. CVPS has also executed an Interconnection Agreement and Operating Protocol Agreement with Monument Farms.

CVPS has paralleled the generator to the power system grid on that date and by doing so granted Permission to Operate.

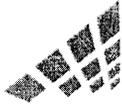
Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gregory A. White". The signature is written in a cursive, flowing style with some loops and flourishes.

Gregory A. White  
Director, Engineering and Systems Operations

GW:ksg

Item 21(3)



P: 920-926-9800 • F: 920-926-9801  
100 Caswell Drive • Bond Cliffs, WI 54915  
[www.excelengineer.com](http://www.excelengineer.com)

July 26, 2010

Monument Farms Three Gen, LLC  
2107 James Road  
Weybridge, VT 05753

RE: Review of 9007 Renewable Energy Grant Request

Site Name: Monument Dairy Farms  
Excel Project No. 1010730

Dear Sirs:

I have reviewed Section H, items 1 through 10 (Technical Report) of your USDA grant application for installation of plug flow digester and cogeneration system.

The purpose of this letter is to certify that the proposed technical requirements are adequate and appropriate for a project of this size and complexity. The technical description, as stated, should satisfy the technical requirements of the local electrical utility, CVPS (Central Vermont Public Service), for interconnection of a generating facility.

The generated power and projected costs are consistent with other projects of this scope and complexity.

Sincerely,

Andrew P. Seibel, P.E.  
Excel Engineering, Inc.

Phone: 920 - 926 - 9800 ext. 107  
Fax: 920 - 926 - 9801  
Email: [karl.s@excelengineer.com](mailto:karl.s@excelengineer.com)  
Web: [www.excelengineer.com](http://www.excelengineer.com)

Item 21(4)

**GENERATION INTERCONNECTION AGREEMENT**

BETWEEN

**CENTRAL VERMONT PUBLIC SERVICE CORPORATION**

AND

**MONUMENT FARMS THREE GEN, LLC**

FOR THE

**155 KVA FARM METHANE  
ELECTRIC GENERATING PROJECT**

The purpose of this Agreement is to allow the operation of electrical generation facilities interconnected with and operated in parallel with the Vermont Utility's electrical system.

*Signed*

Effective Date: 1/26/11.

## GENERATION INTERCONNECTION AGREEMENT

This AGREEMENT ("Agreement") made as of January 16 2011 ("Effective Date"), by and between CENTRAL VERMONT PUBLIC SERVICE CORPORATION, ("Interconnecting Utility"), a Vermont corporation, and MONUMENT FARMS THREE GEN, LLC ("Non-Utility Generator" or "NUG"), a Vermont limited liability company (individually a "Party" and together the "Parties").

## WITNESSETH:

WHEREAS, the NUG proposes to own and operate a 155 kVA electrical generating facility that utilizes methane to produce electricity (the "Generation Facility" or "Facility") located at 3467 Weybridge Road in the Town of Weybridge, Vermont, for the purpose of generating electric power; and

WHEREAS, the NUG intends to interconnect and operate the Generation Facility on the Interconnecting Utility's distribution system pursuant to Vermont Public Service Board ("VPSB" or "Board") Rule 5.500; and

WHEREAS, under the terms contained in this Agreement the NUG desires to operate the Generation Facility interconnected in parallel with Interconnecting Utility's electric system;

NOW, THEREFORE, in consideration of the mutual promises herein contained, the Parties hereto agree that the following terms and conditions shall govern the operation and maintenance of the interconnection of the NUG's Generation Facility with Interconnecting Utility's electric system.

## 1.0 DEFINITIONS

For the purposes of this Agreement, the terms shall have the following meanings:

- 1.0.1 "Interconnection Point" ("PCC" or "Point of Common Coupling") shall be the point where Interconnecting Utility's distribution system connects with the NUG's facility, specifically Line 422 Pole 13-3 PT in Weybridge, Vermont to allow the NUG's generation equipment to operate interconnected in parallel with the Interconnecting Utility's electric system.
- 1.0.2. "Prudent Engineering and Operating Practices" shall mean the practices, methods and acts (including, but not limited to, the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry) that at a particular time, in the exercise of reasonable judgment in light of the facts known or that should have been known at the time a decision was made, would have been expected to accomplish the desired result in a manner consistent with law, regulation, including, but not limited to the National Electric Safety Code, the National Electric Code and other applicable codes, reliability, safety, environmental protection, economy and expedition. With respect to the Facility, Prudent Engineering and

Operating Practices include but are not limited to taking reasonable steps to ensure that:

(1) Preventative, routine and non-routine maintenance and repairs are performed on a basis that ensures reliable long-term and safe operation, and are performed by knowledgeable, trained and experienced personnel utilizing proper equipment and tools.

(2) Equipment is not operated in a reckless manner, or in a manner unsafe to the public or the environment.

## 2.0 DESCRIPTION OF THE FACILITY AND THE SITE

The Facility shall have the characteristics as described in Section 6, Generation and Interconnection Facilities, and in the **Technical Requirements** attachment to this Agreement.

## 3.0 GOVERNMENTAL ACTIONS

NUG and the Interconnecting Utility shall at all times comply with all valid and applicable Federal, State and Local laws, rules, regulations, orders and other governmental actions.

## 4.0 SCOPE AND LIMITATIONS OF AGREEMENT

4.0.1 This Agreement governs the terms and conditions under which the Generation Facility will interconnect to, and operate in parallel with, Interconnecting Utility's Electric System.

4.0.2 This Agreement does not constitute an agreement to purchase or transmit NUG's power.

4.0.3 Nothing in this Agreement is intended to affect any other agreement between Interconnecting Utility and NUG. However, in the event that the provisions of this Agreement are in conflict with the provisions of an Interconnecting Utility tariff, the Interconnecting Utility tariff shall control.

### 4.0.4 Responsibilities of the Parties

- a. The Parties shall perform all obligations of this Agreement in accordance with all applicable laws and regulations, and operating requirements.
- b. NUG shall arrange for the construction, interconnection, operation and maintenance of the Generation Facility in accordance with the applicable manufacturer's recommended maintenance schedule and Prudent Engineering and Operating Practices, in accordance with this Agreement.

- c. Interconnecting Utility shall construct, own, operate, and maintain its Electric System and its facilities for interconnection ("Interconnection Facilities") in accordance with this Agreement.
- d. NUG agrees to arrange for the construction of the Generation Facility or systems in accordance with applicable specifications that meet or exceed the National Electrical Code, the American National Standards Institute, IEEE, Underwriters Laboratories, and any operating requirements.
- e. Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the Exhibits to this Agreement and shall do so in accordance with Prudent Engineering and Operating Practices.
- f. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Common Coupling.

## 5.0 TERMINATION AND DEFAULT

This Agreement shall remain in effect for a term of 20 years from the effective date unless terminated earlier in accordance with Article 5.1 of this Agreement. Upon the expiration of said term, at the request of the NUG, the Parties may negotiate a replacement interconnection agreement or follow such other applicable procedures as shall be in effect for any necessary generation interconnections.

### 5.1 Termination

No termination shall become effective until the Parties have complied with all applicable laws and regulations applicable to such termination.

- 5.1.1 NUG may terminate this Agreement at any time by giving the Interconnecting Utility thirty (30) calendar days' prior written notice.
- 5.1.2 Either Party may terminate this Agreement pursuant to Article 5.2.
- 5.1.3 Upon termination of this Agreement, the Generation Facility will be disconnected from the Electric System. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.
- 5.1.4 The provisions of this Article shall survive termination or expiration of this Agreement.

### 5.2 Default

- 5.2.1 Default exists where a Party has materially breached any provision of this Agreement, except that no default shall exist where a failure to discharge

an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement, or the result of an act or omission of the other Party.

- 5.2.2 Upon a default, the non-defaulting Party shall give written notice of such default to the defaulting Party. Except as provided in Article 5.2.3, the defaulting Party shall have sixty (60) calendar days from receipt of the default notice within which to cure such default; provided however, if such default is not capable of cure within sixty (60) calendar days, the defaulting Party shall commence efforts to cure within twenty (20) calendar days after notice, and shall continuously and diligently pursue such cure within six (6) months from receipt of the default notice; and, if cured within such time, the default specified in such notice shall cease to exist.
- 5.2.3 If a default is not cured as provided in this Article, or if a default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this Agreement.

6.0 GENERATION AND INTERCONNECTION FACILITIES

Under this Agreement, specific requirements for the interconnection of the NUG's Facility to Interconnecting Utility's electric system are identified below and on the **Technical Requirements** attachment to this Agreement. The NUG is responsible for the design of these interconnection facilities and Interconnecting Utility has the right to approve or disapprove the design of the interconnection facilities. Should a dispute concerning the interconnection facilities exist, either Party may initiate action pursuant to Section 14 Dispute Resolution. These requirements are solely for the protection of the Interconnecting Utility's facilities. Interconnecting Utility takes no responsibility for the adequacy of the required interconnection equipment in protecting the NUG's Facility.

- 6.0.1 The NUG shall install generation and interconnection facilities for the Generation equipment described below and on the **Technical Requirements** attachment to this Agreement, and maintain them in good working order, consistent with Prudent Engineering and Operating Practices, while interconnected with Interconnecting Utility's electric system:

Generation equipment -

Generator	KVA	RPM	Volts
	155	1,800	240

and an electric line to connect said generation equipment through appropriate interconnection facilities to Interconnecting Utility's electric system at the Interconnection Point designated as Line 422, Pole 13-3 PT in the town of Weybridge, Vermont.

- 6.0.2 The NUG shall own and install transformation and associated facilities necessary to convert the output of the generation equipment to the voltage, frequency, and phase of Interconnecting Utility's electric system at the designated Interconnection Point.
- 6.0.3 The NUG shall install a secondary voltage load break disconnect device that provides visual clearance and is adequate to provide safe working clearance for Interconnecting Utility's personnel. It shall be accessible to and available for control by Interconnecting Utility's personnel at all times. When Interconnecting Utility has opened and tagged the disconnect device, the NUG **SHALL NOT OPERATE** the device.
- 6.0.4 The NUG shall install such relaying and protective devices as described in the **Technical Requirements** to automatically and physically disconnect the NUG's generation equipment from the Interconnecting Utility's electric system whenever required by a fault or abnormal frequency or voltage condition on the Interconnecting Utility's electric system, until that system shall return to a normal status. Such devices shall **not** automatically reconnect the NUG's generation equipment to the Interconnecting Utility's electric system after such an occurrence unless automatic phasing equipment is installed.

The NUG owned and operated protective equipment shall include:

- Circuit Breaker (52)
  - Over/Under Voltage Relays (27 / 59)
  - Over/Under Frequency relay (81 O/U)
  - Voltage Restrained Time Over-current Relay (51V)
  - Loss of Excitation Relay (40)
  - Synchronism Check Relay (25)
  - The ability to implement a transfer trip signal initiated by CVPS
  - Additional Required Devices as listed in the Technical Requirements.
- 6.0.5 The NUG shall install such reactive power generating facilities as necessary so that the NUG's generation facilities operate within the power factor requirements specified in Sections 7.0.2 regarding electric characteristics.

- 6.0.6 The NUG shall install and maintain metering equipment as required under Board Rule 5.508(E) adequate to accurately measure and record capacity and energy delivered by its generating facility in a manner consistent with provisions as specified in the Metering Agreement and for payment in any power purchase arrangements entered into by and between the NUG and the purchaser.
- 6.0.7 If required for ISO-NE standards including but not limited to the NEPOOL Generation Information System and/or applicable Interconnecting Utility requirements or the Vermont Sustainably Priced Energy Enterprise Development ("SPEED") Standard Offer Program, the NUG shall install a voice quality phone line or other appropriate communications device so that the hourly production of the NUG Generation Facility can be reported in a timely manner to the SPEED Facilitator. **[X] Required [ ] Not Required**
- 6.0.8 The NUG is responsible to make any future enhancements to its facilities that may become necessary to operate the NUG's Generation Facility in a safe and prudent manner due to improvements and/or changes made to the Interconnecting Utility's electric system. Failure to do so will result in disconnection of the NUG's Generation Facility from the Interconnecting Utility's system.
- 6.1 Cost Responsibility for Interconnection Facilities

6.1.1 Interconnection Facilities

- a. The NUG shall pay for the cost of the Interconnection Facilities required of the interconnection and parallel operation of its Generation Facility as itemized in the Exhibits to this Agreement.
- b. The NUG shall be responsible for all expenses, including overheads, associated with owning, operating, maintaining, repairing, and replacing its Interconnection Equipment as set forth in any exhibits to this Agreement.

6.1.2 System Upgrades

Interconnecting Utility shall design, procure, construct, install, and own any Electric System upgrades ("System Upgrades"). The actual cost of the System Upgrades, including overheads, shall be directly assigned to the Interconnecting Customer. To the extent that Interconnecting Utility's receipt of reimbursement for the cost of System Upgrades, as set forth herein, shall be considered a taxable contribution-in-aid-of-construction ("CIAC"), at any time, now or in the future, NUG shall pay to the Interconnecting Utility a grossed up assessment as required to make Interconnecting Utility whole for the cost of the System Upgrades on account of any applicable federal and state income taxes arising from Interconnecting Utility's receipt of the CIAC.

## 7.0 ELECTRIC CHARACTERISTICS

- 7.0.1 The NUG shall generate electricity at its Generation Facility in such a manner that it is compatible with the Interconnecting Utility's electrical system at the Interconnection Point.
- 7.0.2 The NUG shall produce power, from synchronous generators, at power factor levels between 0.98 leading and 0.98 lagging at the Interconnection Point, unless otherwise requested, in writing, from the Interconnecting Utility.
- 7.0.3 Should the NUG fail to meet the power factor levels required under this section of the Agreement, in addition to any other remedies that may be available, the NUG shall pay the Interconnecting Utility a charge for excess reactive power delivered by the Interconnecting Utility to the NUG as determined by the rate schedule for which the NUG takes electric service via the Interconnecting Utility's retail tariff.

## 8.0 TESTING AND MAINTENANCE OF INTERCONNECTION FACILITIES

- 8.0.1 Prior to the initial closing of the interconnection, the NUG shall have a determination made that all interconnection equipment meets the specifications and is functioning properly, and the Interconnecting Utility is notified in writing. The NUG shall promptly certify the results of such testing to the Interconnecting Utility. The NUG shall furnish a copy of all relay settings to the Interconnecting Utility. On-site commissioning shall be performed in cooperation with the Interconnecting Utility and the NUG's generation contractor.
- 8.0.2 The NUG shall be responsible for the maintenance of the interconnection facilities owned by it and for keeping the same in good working order while interconnected with the Interconnecting Utility's system. Maintenance by the NUG shall include regularly scheduled testing of relaying and protective devices in a manner acceptable to the Interconnecting Utility as recommended by the manufacturer of such equipment and consistent with Prudent Engineering and Operating Practice. If required, the NUG shall be responsible for the cost for Interconnecting Utility to perform maintenance and testing of the metering equipment as defined in the Metering Agreement.
- 8.0.3 The Interconnecting Utility shall have the right, at all reasonable times and upon reasonable notice to the NUG, to inspect the NUG's Generation Facility and interconnection facilities, to conduct such operating tests as are necessary to ascertain that the generation, interconnection, and metering facilities function properly, to review any data collected from such facilities, and to independently monitor the energy delivered to the Interconnecting Utility.
- 8.0.4 Any inspection, operational testing, or witnessing of testing by the Interconnecting Utility under the provisions of this Agreement shall not be construed as any warranty of safety, durability or reliability of the NUG's generation interconnection.

The Interconnecting Utility shall not, by reason of such inspection or failure to inspect, be responsible for the strength, safety, design, adequacy, or capacity of the NUG's interconnection equipment.

## 9.0 TEMPORARY DISCONNECTION OF INTERCONNECTION FACILITIES

### 9.1 **Temporary Disconnection**

- 9.1.1 **Emergency Conditions:** The Interconnecting Utility shall have the right to immediately and temporarily disconnect the NUG's Generating Facility without prior notification in cases where, in the reasonable judgment of the Interconnecting Utility, continuance of such service to the Generating Facility is imminently likely to: (1) endanger persons or damage property; or (2) cause a material adverse effect on the integrity or security of, or damage to, the Interconnecting Utility's electric system or to the electric system of others to which the Interconnecting Utility's electric system is directly or indirectly connected. A NUG representative shall notify the Interconnecting Utility promptly when the NUG becomes aware of an emergency condition that affects the Generating Facility's generators that may reasonably be expected to affect the Interconnecting Utility's electric system. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.
- 9.1.2 **Routine Maintenance, Construction and Repair:** The Interconnecting Utility shall have the right to disconnect the NUG's Generating Facility from the Interconnecting Utility's electric system when necessary for routine maintenance, construction and repairs on the Interconnecting Utility's electric system. See the details found in the **Generation Operation Protocol** below regarding routine line maintenance and emergency line work disconnect procedures. If the NUG requests disconnection by the Interconnecting Utility at the Recloser, the NUG will provide a minimum of five business (5) days notice to the Interconnecting Utility. The Interconnecting Utility shall make an effort to schedule such curtailment or temporary disconnection with the NUG.
- 9.1.3 **Forced Outages:** During any forced outage, the Interconnecting Utility shall have the right to suspend interconnection service to effect immediate repairs on the Interconnecting Utility's electric system. The Interconnecting Utility shall use reasonable efforts to provide the NUG with prior notice. Where circumstances do not permit such prior notice to the NUG, the Interconnecting Utility may interrupt interconnection service and disconnect the NUG's Generating Facility from the Interconnecting Utility's electric system without such notice.
- 9.1.4 **Non-Emergency Adverse Operating Effects:** The Interconnecting Utility may disconnect the NUG's Generating Facility if the Facility is having an adverse operating effect on the Interconnecting Utility's electric system or other of the

Interconnecting Utility's customers. The Interconnecting Utility may disconnect the NUG's Generating Facility if the NUG fails to correct such adverse operating effect after written notice has been provided and a minimum of thirty (30) calendar days to correct such adverse operating effect has elapsed.

- 9.1.5 **Modification of the NUG's Generating Facility:** The Interconnecting Utility has the right to immediately suspend interconnection service in cases where material modification to the Generating Facility or interconnection facilities have been implemented by the NUG without prior written authorization from the Interconnecting Utility.
- 9.1.6 **Re-connection:** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The NUG and the Interconnecting Utility will cooperate with each other to restore the NUG's generators and the Interconnecting Utility's electric system, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.
- 9.1.7 Consistent with Rule 5.509(E), the NUG may file a complaint with the Board at any time following disconnection to determine whether the Generation Facility should be reconnected to Interconnecting Utility.

#### 10.0 INTERRUPTION OF INTERCONNECTION

The Interconnecting Utility shall endeavor to make the interconnection under this Agreement as continuous and uninterrupted as it reasonably can. Electric service is subject to variations in its characteristics or interruptions to its continuity. Therefore, the characteristics of the electric service may be varied or such service to the NUG may be interrupted, curtailed, or suspended in the following described circumstances:

- 10.1 When conditions in a part or parts of the interconnected transmission-generation system of which the Interconnecting Utility's facilities are a part make it appear necessary for the common good; or
- 10.2 When such variance, interruption, curtailment or suspension is caused by war, flood, storm, drought, strike or other cause beyond the control of the Interconnecting Utility, or by any cause except willful default on the Interconnecting Utility's part.

#### 11.0 INDEMNIFICATION AND LIMITATION OF LIABILITY

##### 11.0.1 Limitation of Liability.

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for

any indirect, special, consequential, or punitive damages, except as specifically authorized by this Agreement.

#### 11.0.2 Indemnity

This provision protects each Party from liability incurred to third Parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 11.1.

- a. Each Party shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, reasonable attorney fees, and all other obligations by or to third parties, arising out of or resulting from the indemnifying Party's action or failure to meet its obligations under this Agreement on behalf of the indemnified Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.
- b. If an indemnified Party is entitled to indemnification under this Article as a result of a claim by a third party, the indemnifying Party shall, after reasonable notice from the indemnified Party, assume the defense of such claim. If the indemnifying Party fails, after notice and reasonable opportunity to proceed under this Article, to assume the defense of such claim, the indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.
- c. If the indemnifying Party is obligated to indemnify and hold the indemnified Party harmless under this Article, the amount owing to the indemnified Party shall be the amount of such indemnified Party's actual loss, net of any insurance or other recovery.
- d. Promptly after receipt of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this Article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

#### 12.0 CONSEQUENTIAL DAMAGES

Neither Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profits.

13.0 INSURANCE

The NUG shall procure, pay premiums, and maintain at all times during the term hereof sufficient insurance satisfactory to the Interconnecting Utility as may be required by law to protect the Interconnecting Utility from and against all claims, demands and causes of action arising by reason of any action undertaken or omitted by the NUG. Such insurance shall be written in the following minimum amounts.

- (a) Worker's Compensation Insurance as provided by Statute and Employer's Liability Insurance. NUG expressly agrees to comply with all provisions of the Worker's Compensation Laws of the states wherein said NUG performs work.

<b>EMPLOYERS LIABILITY</b>	\$500,000 each accident
	\$500,000 each employee-disease
	\$500,000 policy limit-disease

- (b) Comprehensive General Liability and Property Damage Insurance:

Bodily Injury & Property Damage  
 Combined Single Limit Each Occurrence    \$1,000,000

Such policy will include Contractual Liability, Products and Completed Operations, Owner's and Contractive, (Pollution Liability), Broad Form Property Damage, Premises and Operations.

- (c) Automobile Liability & Property Damage Insurance; including owned, hired, rented, or non-owned automotive equipment.

Bodily Injury & Property Damage  
 Combined Single Limit Each Occurrence    \$1,000,000

- (d) Umbrella Liability Insurance coverage in excess of the limits and terms in (a) through (c) above, with a combined single limit for Bodily Injury and Property Damage of at least                                \$5,000,000 for each occurrence.

NUG agrees to furnish to Interconnecting Utility prior to the beginning of any activities pursuant to this Agreement, proper Certificates of Insurance evidencing the insurance coverages required herein. All policies required shall provide a minimum of thirty (30) days' notice to the Interconnecting Utility prior to cancellation. Interconnecting Utility shall be named as an additional insured under all policies required with the exception of the Worker's Compensation policy. All insurance policies required to be carried hereunder shall contain a waiver of subrogation as to the Interconnecting Utility, its agents, employees and the parties for which it is operating. The carrier of the insurance policies required shall agree that the insurance required shall be considered primary insurance and all insurance carried by the Interconnecting Utility, its agents, employees,

and the parties for which it is operating, shall be considered secondary in relation thereto. Any and all deductibles in the above described insurance policies shall be assumed by, for the account of, and at the sole risk of the NUG.

Should NUG fail to provide the insurance required pursuant hereto, nothing herein shall release NUG of the obligation to pay any claims that arise hereunder.

Upon request of the Interconnecting Utility, NUG shall provide the Interconnecting Utility a copy of each insurance policy required hereunder.

The insurance limits required under this agreement shall be subject to periodic review by the Interconnecting Utility and update in order to take into account changed circumstances.

#### 14.0 DISPUTE RESOLUTION

Any dispute arising from or under the terms of this Agreement shall be subject to the dispute resolution procedures contained in Rule 5.500.

#### 15.0 ASSIGNMENT / SUCCESSORS

This Agreement may be assigned by either Party as provided below upon fifteen (15) business days' prior written notice to the other Party:

- 15.0.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party so long as said affiliate (i) possess the requisite legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement and (ii) can demonstrate to the assigning Party that it is of equal or greater credit quality than the assigning Party;
- 15.0.2 The NUG shall have the right to assign this Agreement, without the consent of the Utility, for collateral security purposes to aid in providing financing for the Generating Facility, provided, however, such assignment for collateral security purposes shall not relieve the NUG from any of its obligations hereunder;
- 15.0.3 All other assignments shall require the prior written consent of the non-assigning Party, such consent not to be unreasonably withheld. Any attempted assignment that violates this Article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof, unless specifically agreed in writing by the non-assigning Party. An assignee (other than an assignee for collateral security purposes) is responsible for meeting the same obligations as the Interconnection Customer.

16.0 NOTICES

Except as otherwise specified in this Agreement, any notice, demand, or request required or authorized by this Agreement to be given in writing to a Party shall be either personally delivered or mailed postage prepaid to such Party at the following address:

**INTERCONNECTING UTILITY:**

**Central Vermont Public Service Corporation  
Attn: Kim Jones, PE  
77 Grove Street  
Rutland, Vermont, 05701-3400**

**NUG:**

**Monument Farm Three Gen, LLC  
Attn: Peter James  
2107 James Road  
Weybridge, Vermont 05753**

The designation of such person and/or address may be changed at any time by either Party upon written notice given pursuant to the requirements of this Section

17.0 APPLICABILITY

This Agreement constitutes the entire understanding between the Parties with respect to the subject matter hereof, supersedes any and all previous understandings between the Parties, and binds and inures to the benefit of the Parties, their successors and, where permitted, assigns.

18.0 WAIVER

No waiver by either Party of the performance of any obligation under this Agreement or with respect to any Default or any other matter arising in connection with this Agreement shall be deemed a waiver with respect to any subsequent performance, default, or matter.

19.0 MODIFICATION

No modification or waiver of all or any part of this Agreement shall be valid unless it is in writing and signed by both Parties.

20.0 INTERPRETATION

Interpretation and performance of this Agreement shall be in accordance with, and shall be controlled by, the laws of the State of Vermont and the United States.

#### 21.0 NO DUTY TO THIRD PARTIES

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest, and, where permitted, their assigns.

#### 22.0 MULTIPLE COUNTERPARTS

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all of which constitute one and the same Agreement.

#### 23.0 NO PARTNERSHIP

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties, nor to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

#### 24.0 SEVERABILITY

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore, insofar as practicable, the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

#### 25.0 ENVIRONMENTAL RELEASES

NUG shall be responsible for its release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Generation Facility or the Interconnection Facilities. Interconnecting Utility shall be responsible for its release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Interconnecting Utility's electric system. A Party shall notify the other Party of any release as may be required by law and where the release may reasonably be expected to affect the other Party. Upon request a Party shall furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

#### 26.0 SUBCONTRACTORS

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain liable for the performance of its subcontractor(s). A Party utilizing subcontractor(s) is a "hiring party".

26.0.1 The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Interconnecting Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

26.0.2 The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

## 27.0 CONDITIONS PRECEDENT

This Agreement shall not become effective until the following conditions precedent shall have been satisfied:

27.0.1 The issuance by the Board of a permit pursuant to 30 V.S.A. § 248 approving the construction, ownership and operation of the Generating Facility in a form acceptable to the NUG; and

27.0.2 If the Parties shall have established relay and protection requirements for the interconnection of the Generating Facility that are necessary to meet the requirements of Rule 5.510 which shall be reflected in a **Technical Requirements** appendix to be made a part hereof, such requirements have been completed; and

27.0.3 The Parties shall have established appropriate **Operating Protocols** for the interconnected operation of the Generating Facility in parallel with the Interconnecting Utility's electric system, which protocol shall be reflected in an **Operating Protocols** appendix to be made a part hereof.

## 28.0 FORCE MAJEURE

28.0.1 As used in this Article, a Force Majeure Event shall mean any act of God, labor disturbance, act of the public enemy, war, acts of terrorism, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional

wrongdoing.

28.0.2 If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (“Affected Party”) shall promptly notify the other Party of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance, and if the initial notification was verbal, it should be promptly followed up with a written notification. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be reasonably mitigated by the Affected Party. The Affected Party shall use reasonable efforts to resume its performance as soon as possible.

IN WITNESS WHEREOF, the Interconnecting Utility and the NUG have caused this Agreement to be executed by their respective duly authorized officers as of the date first above written.

**MONUMENT FARMS THREE GEN LLC.**

By: Peter C James

Its: Managing Partner

Date: January 26, 2011

**CENTAL VERMONT PUBLIC SERVICE CORPORATION**

By: Gregory White  
Gregory White

Its: Director of T&D Planning

Engineering & System  
Operations

DATE:

From Martin Machinery

John 22

**Clarification of Compliance Letter**  
RE: Monument Farm Interconnection Project.

**4.1 General requirements**

**4.1.1 Voltage regulation**

Condition is met. This is addressed in our controls first of all by the automated excitation controls of the generator which can be set to operate in a selectable power factor range of .8 to unity. When the automatic excitation controls are operating at unity power factor the DR "follows" the voltage of the Area EPS. Supervising this function is a utility grade protection relay with voltage measuring elements to trip the DR off line in the event of any deviations to the preset voltage parameters.

**4.1.2 Integration with Area EPS grounding**

Condition is met. Monument Farms is a single phase unit and solidly grounded.

**4.1.3 Synchronization**

This requirement is met by the use of a digital paralleling controller with selectable paralleling parameters. The digital controller drives the DR into synchronism with the Area EPS. When synchronism is attained the digital controller closes the tie breaker.

**4.1.4 Distribution secondary grid networks.**

This item is the responsibility of the hosting utility.

**4.1.5 Inadvertent energization of the Area EPS**

This condition is met by the utility grade protection relay. There is an active trip signal at all times when the Area EPS voltage is not within the nominal range.

**4.1.6 Monitoring provisions**

These parameters are all readily monitored local to the DR. In most cases these parameters can also be monitored remotely. Condition met.

**4.1.7 Isolation device**

This piece of equipment is not supplied by our company. It is typically supplied by the electrical contractor responsible for the installation. If installed per Monument Farms 1-line drawing GTAC104805-1L this condition is met.

**4.1.8 Interconnect integrity**

**4.1.8.1 Protection from electromagnetic interference**

The interconnection system meets the ANSI/IEEE RFI standard of 35V/m.

**4.1.8.2 Surge withstand performance**

The protection system meets the Surge Withstand Capability standard ANSI/IEEE C37.90.1 2002.

**4.1.8.3 Paralleling device**

The voltage and frequency targets and trip settings are all adjustable and meet the specification of 4.2

**4.2.1 Area EPS faults** The controls of the system meet this standard.

**4.2.2 Area EPS reclosing coordination**

The equipment has provision for, and will meet, this standard. This will be included in the trip time programming for the utility grade relay which must be co-ordinated with the hosting utility.

#### **4.2.3 Voltage**

In a typical system the voltage is detected at the PCC. Clearing times are adjustable. Some of this will be determined by the system impact study. **The condition of this standard is met.**

#### **4.2.4 Frequency**

**Standard is met.** Frequency settings are all adjustable and will be co-ordinated with hosting utility.

#### **Table 1—Interconnection system response to abnormal voltages**

This is met by the utility protection relay.

#### **4.2.5 Loss of synchronism**

#### **4.2.6 Reconnection to Area EPS**

This standard is met by use of an adjustable timer in the digital paralleling controller.

### **4.3 Power quality**

#### **4.3.1 Limitation of dc injection**

N/A

#### **4.3.2 Limitation of flicker induced by the DR**

Because the generator is a synchronous unit rather than asynchronous (induction) unit the controls are driving the DR into synchronism with the mains before closing the breaker. This eliminates the issue of flicker. **Conditions of this standard are met.**

#### **4.3.3 Harmonic**

The conditions of this standard are met by setting the % distortion parameter in the digital paralleling controller to the appropriate level.

### **4.4 Islanding**

#### **4.4.1 Unintentional islanding**

The method of detection will be determined by the hosting utility's System Impact Study. This function will be tested as part of commissioning. **Condition of this standard will be met.**

#### **4.4.2 Intentional islanding**

This topic is under consideration for future revisions of this standard.

This project will likely include a scheme for intentional islanding but the island will not include any of the Area EPS. This is only to provide standby power to the customer's loads.

Jan 23



**STATE OF CONNECTICUT**

**DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION  
PUBLIC UTILITIES REGULATORY AUTHORITY  
TEN FRANKLIN SQUARE  
NEW BRITAIN, CT 06051**

**DOCKET NO. 11-10-09 APPLICATION OF MONUMENT FARMS THREE GEN,  
LLC FOR QUALIFICATION OF MONUMENT FARMS AS A  
CLASS I RENEWABLE ENERGY SOURCE**

February 22, 2012

By the following Directors:

Anna M. Ficeto  
Kevin M. DeGobbo  
John W. Betkoski, III

**DECISION**

## DECISION

### I. INTRODUCTION

#### A. SUMMARY

In this Decision, the Public Utilities Regulatory Authority determines that the Monument Farms facility qualifies as a Class I renewable energy source as a methane gas from landfill facility beginning September 13, 2011 and assigns it Connecticut Renewable Portfolio Standard (RPS) Registration Number CT111009.

#### B. BACKGROUND OF THE PROCEEDING

By application dated October 12, 2011 (Application), Monument Farms Three Gen, LLC (MFTG or Applicant) requested that the Public Utilities Regulatory Authority (Authority) determine that Monument Farms qualifies as a Class I renewable energy source as an agricultural methane facility.

#### C. CONDUCT OF THE PROCEEDING

There is no statutory requirement for a hearing, no person requested a hearing, and none was held.

#### D. PARTICIPANTS IN THE PROCEEDING

The Authority recognized Monument Farms Three Gen, LLC, 2107 James Road, Weybridge, VT 05753; and the Office of Consumer Counsel, Ten Franklin Square, New Britain, Connecticut 06051, as participants in this proceeding.

### II. AUTHORITY ANALYSIS

Pursuant to the General Statutes of Connecticut (Conn. Gen. Stat.) §16-1(a) (26), "Class I renewable energy source" is defined as:

(A) energy derived from solar power, wind power, a fuel cell, methane gas from landfills, ocean thermal power, wave or tidal power, low emission advanced renewable energy conversion technologies, a run-of-the-river hydropower facility provided such facility has a generating capacity of not more than five megawatts, does not cause an appreciable change in the river flow, and began operation after July 1, 2003, or a sustainable biomass facility with an average emission rate of equal to or less than .075 pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter, except that energy derived from a sustainable biomass facility with a capacity of less than five hundred kilowatts that began construction before July 1, 2003, may be considered a Class I renewable energy source, or (B) any electrical generation, including distributed generation, generated from a Class I renewable energy source;

As provided in the application, the Monument Farms facility generates electricity by using methane gas produced by farm animals located at 2107 James Road in Weybridge, Vermont. The Monument Farms facility utilizes an anaerobic digester to capture methane released from the decomposition of organic waste material produced by farm animals. Monument Farms is currently owned by MFTG and began commercial operation on September 13, 2011. It has an electrical generating capacity of 155 kW. Application, pp. 1 and 2.

By Decision dated April 2, 2008 in Docket No. 07-06-22, Petition of Cushman Farms for a Declaratory Ruling For Qualification as a Class I Renewable Energy Source, the Authority held that a dairy farm that makes use of manure and organic waste to produce methane gas utilizes the same process to produce energy using methane gas as is utilized by a landfill. Since the Monument Farms agricultural methane facility similarly uses methane gas produced from farm animals to generate electricity, the Authority finds that Monument Farms qualifies as a Class I renewable energy source for energy derived from landfill methane gas.

In its Decision dated October 12, 2004 in Docket No. 04-05-13, Application of Pratt & Whitney for Connecticut Renewable Generator Qualification – Cape Cod Community College Fuel Cell (Cape Cod Decision), the Authority stated that since behind-the-meter and off-grid generators self-report their data to the NEPOOL GIS, the Authority had concerns about the ability to verify the accuracy of the data. Because of these concerns, the Authority stated that it may periodically audit in-state resources, but it was not feasible for the Authority to audit resources located outside of Connecticut. Therefore, the Authority concluded that in order for an out-of-state generator to qualify for Connecticut's RPS, it must submit documentation or evidence showing either that it meets the metering and telemetering requirements for grid-connected generators or that a third party with "competent jurisdiction" is verifying the data and auditing the facility. Cape Cod Decision, p. 8.

In the Cape Cod Decision, the Authority established the standards for behind-the-meter and off-grid generators for qualification in Connecticut's RPS program. The Authority recognized the value of these resources and made eligible those out-of-state generators that can provide documentation that their generation output is "audited and verified quarterly by an entity with competent jurisdiction." Whether the entity can verify and audit the data and provide the same assurances as other entities with competent jurisdiction can be determined by the Authority on a case-by-case basis. Cape Cod Decision, p. 9 and footnote 7.

MFTG proposes to use Vermont Electric Power Producers, Inc. (VEPP) as its third party output verifier. Response to Interrogatory ENG-1. In its Decision dated April 6, 2011 in Docket No. 10-12-09, Application of Gerald Tarrant for Qualification of Dubois Methane Generator Facility as a Class I Renewable Energy Source, the Authority accepted VEPP as a third party verifier. The Authority therefore concludes that the independence of VEPP Inc. provides assurance to the Authority that the behind-the-meter generation that will be afforded Renewable Energy Credits (RECs) is actually produced by Monument Farms.

Based on the foregoing information, Monument Farms qualifies as a Class I renewable energy source pursuant to Conn. Gen. Stat. §16-1(a)(26) as of this date. The Authority assigns each renewable generation source a unique Connecticut Renewable Portfolio Standard (RPS) registration number. Monument Farms' Connecticut RPS registration number is CT111009.

### III. FINDINGS OF FACT

1. The Monument Farms facility utilizes methane gas produced from farm animals to generate electricity
2. Monument Farms is located in Weybridge, VT.
3. Monument Farms is currently owned by MFTG.
4. Monument Farms began commercial operation on September 13, 2011.
5. Monument Farms has a rated capacity of 155 kilowatts.

### IV. CONCLUSION AND ORDER

#### A. CONCLUSION

Based on the evidence submitted, the Authority finds that Monument Farms qualifies as a Class I renewable energy source pursuant to Conn. Gen. Stat. § 16-1(a)(26) beginning September 13, 2011. Monument Farms' Connecticut RPS registration number is CT111009.

The Authority's determination in this docket is based on the information submitted by MFTG. The Authority may reverse its ruling or revoke the Applicant's registration if any material information provided by the Applicant proves to be false or

misleading. The Authority reminds MFTG that it is obligated to notify the Authority within 10 days of any changes to any of the information it has provided to the Authority.

#### B. ORDER

For the following Order, submit one original of the required documentation to the Executive Secretary, 10 Franklin Square, New Britain, CT 06051, and file an electronic version through the Authority's website at [www.ct.gov/dpuc](http://www.ct.gov/dpuc). Submissions filed in compliance with PURA Orders must be identified by all three of the following: Docket Number, Title and Order Number.

1. MFTG shall file, by the date indicated in the table below, the Quarterly Generation Report from the GIS system that shows the number of RECs created by Monument Farms on the Creation Date (as defined in Section 2.1(b) of the GIS Operating rules, as amended from time to time, for said quarter. Due to the timing of this Decision, the first report is due on March 15, 2012.

<b>Class I Activity Calendar Quarter</b>	<b>GIS REC Creation Date</b>	<b>Report Due Date</b>
1(Jan 01-Mar 31)	July 15	August 15
2(Apr 01-Jun 30)	Oct 15	November 15
3(Jul 01-Sep 30)	Jan 15	February 15
4(Oct 01-Dec 31)	April 15	May 15

The Authority is an affirmative action/equal opportunity employer and service provider. In conformance with the Americans with Disabilities Act (ADA), the Authority makes every effort to provide equally effective services for persons with disabilities. Individuals with disabilities who need this information in an alternative format to allow them to benefit and/or participate in the agency's programs and services, should call 860-424-3035 or e-mail the ADA Coordinator at [DEP.aoffice@ct.gov](mailto:DEP.aoffice@ct.gov). Persons who are hearing impaired should call the State of Connecticut relay number 711. Requests for accommodations must be made at least two weeks prior to the meeting date (Emphasis added).

**DOCKET NO. 11-10-09 APPLICATION OF MONUMENT FARMS THREE GEN, LLC FOR QUALIFICATION OF MONUMENT FARMS AS A CLASS I RENEWABLE ENERGY SOURCE**

This Decision is adopted by the following Directors:

Anna M. Ficeto  
Anna M. Ficeto

Kevin M. DelGobbo  
Kevin M. DelGobbo

John W. Betkoski, III  
John W. Betkoski, III

CERTIFICATE OF SERVICE

The foregoing is a true and correct copy of the Decision issued by the Public Utilities Regulatory Authority, State of Connecticut, and was forwarded by Certified Mail to all parties of record in this proceeding on the date indicated.

Kimberley J. Santopietro  
Kimberley J. Santopietro  
Executive Secretary  
Department of Energy and Environmental Protection  
Public Utilities Regulatory Authority

2/24/12  
Date

d Jan 24, 25



Monument Farms Three Gen, LLC  
2107 James Road  
Weybridge, VT 05753  
Tel: 802-545-2119

New Hampshire – Application to Public Utilities Commission

Items: 24 and 25

The facilities output is not verified by ISO-New England.

Instead our output is verified by:

Vermont Electric Power Producers  
1965 Depot Street  
P.O. Box 1938  
Manchester Ctr, VT 05255  
Telephone no. 802-362-0748

VEPP, Inc is a designated NEPOOL-GIS third party meter provider (#14654)



Monument Farms Three Gen, LLC  
2107 James Road  
Weybridge, VT 05753  
Tel: 802-545-2119

New Hampshire – Application to Public Utilities Commission

Item: 26

I attest to the accuracy of contents of this application.

Jonathan J. Rooney      2/4/14

PARTNER

\*\*\*\*\*

State of Vermont  
County of Addison, SS

Jon Rooney personally appeared before me this 4th day of February, in the year 2014: in Weybridge, Vermont.

[Signature] Notary Public

John C. Robert Caputo my commission expires 2/10/15  
Vermont



Monument Farms Three Gen, LLC  
2107 James Road  
Weybridge, VT 05753  
Tel: 802-545-2119

New Hampshire – Application to Public Utilities Commission

Item: 27 Additional Information

Monument Farms Three Gen is not a “customer-sited source. None of the retail use of electricity displaces the electricity generated that goes out onto the grid.

Additionally

The generation facility is billed for electricity used by the plant to generate electricity by the utility, Green Mountain Power. The electricity that goes onto the grid is monitored by approved meters and the electricity used by the plant is monitored by approved meters.

The electricity energy output that is reported to the NEPOOL-GIS administrator can exclude “station service” (parasitic load).

As stated in item 24 and 25 – our output is verified and uploaded by Vermont Electric Power Producers (VEPP) in Manchester Center, Vermont.

# Monument Farms Three Gen, LLC

## 4. DESIGN AND ENGINEERING

### Project Description

This renewable energy system application deals with the treatment of dairy cattle wastes from Monument Farms Dairy. Monument Farms Dairy is located at 2107 James Road, Weybridge, VT 05753. The problems that large-scale farming operations are now facing include: government regulations pertaining to manure disposal, contaminant leaching to underground aquifers, contaminant run-off to surface waters/receiving bodies, methane generation by livestock and its release to the atmosphere, and odor complaints. The environmental problems of large-scale agricultural operations are receiving increased regulatory attention - this attention will continue to increase as the trend toward larger operations continues due to market pressures and technological advances. To address these issues, Monument Farms Three Gen, LLC has retained GHD, Inc., from Chilton, WI, to install GHD's proprietary on-farm anaerobic digester system. GHD will be the engineering firm for this project and will oversee the installation of the digester system. A list of active digester projects designed and installed by GHD is included in section H.1. The system will be operated by Monument Farms Three Gen, LLC. Day to day maintenance will also be handled by Monument Farms Three Gen, LLC. Excavation, concrete installation, major equipment purchases, and equipment building installation will be competitively bid.

Monument Farms Three Gen, LLC and Monument Farms Dairy have been in contact with the required local, state, and federal government entities to deal with all permit and licensing issues. The digester is being installed on an active farm operation and will be a benefit to the farm and surrounding neighbors due to odor reduction, manure disposal, and electricity production. A power purchase agreement is in the process of being obtained with the local utility company.

GHD, Inc. has provided the following process and system performance descriptions.

Unprocessed cow manure, a renewable resource, from Monument Farms Dairy will be collected in a receiving pit. The manure from the dairy barn and parlor holding area, along with the milking parlor wastewater, will be collected repeatedly throughout the day in the receiving pit and pumped directly into the anaerobic digester (AD) vessel. The unprocessed manure input to the AD system is therefore uniform and has had little time for aerobic degradation. The minimization of aerobic degradation of the raw manure results in more biogas production within the AD system and less manure smell in the barn.

During the first stage of the AD concrete vessel, the raw manure from the dairy will be mixed and heated to a temperature of 100<sup>0</sup> F. Reclaimed waste heat from the electrical co-generation system will be utilized to raise the temperature of the manure to the optimum growth temperature of the methanogenic bacteria. The first stage of the AD system is designed to facilitate the growth of acid forming bacteria. These acid forming bacteria break down the complex organic waste material, found in the raw manure input stream, into simpler volatile fatty acids and acetic acid. Waste materials from the first stage of the AD vessel will gravity flow into the second stage of the AD vessel.

The second stage of the AD vessel will be the largest stage, due to the slower growth rate of the methanogenic bacteria. The methanogenic bacteria convert the volatile fatty acids and acetic acids produced in the first stage of the AD vessel into a biogas, which consists primarily of methane and CO<sub>2</sub>. Reclaimed waste heat from the electrical co-generation system will also be utilized in the second stage vessel to maintain a 100° F fluid temperature, to offset thermal conduction losses through the vessel structure.

After the second stage of the AD system, with a designed 20-day hydraulic retention time, the treated wastes will gravity flow into an effluent collection pit, from which the wastes will be further processed.

The methane biogas will be collected from the first two stages of the AD vessel and will be utilized for fuel in the combined heat and power (CHP) genset. These gensets are commercially available, natural gas-fueled reciprocating engines modified to burn biogas. No purchased fuel will be utilized in the AD system gensets to produce electricity. Electricity will be sold to the local utility. No biogas or power storage is provided in this system and the system will continuously produce power and waste heat.

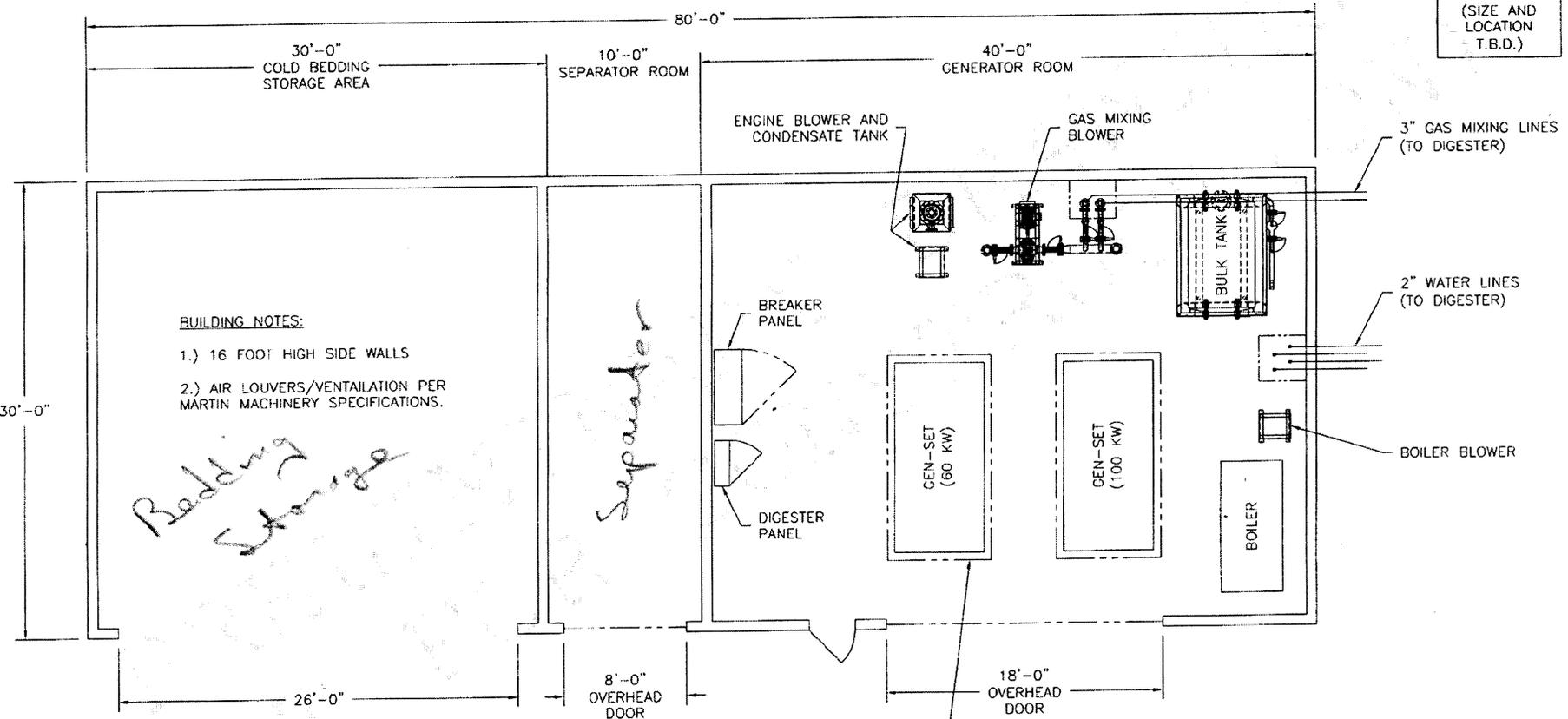
Waste heat from the electrical generator will be retained and stored at as high an effluent temperature from the electrical generator as possible. The waste heat, in the form of hot water, will be collected from both the engine jacket liquid cooling system and from the engine exhaust (air) system. Approximately 30 to 60% of this waste heat will be utilized in the AD system. The remaining waste heat can be utilized by the dairy as a replacement for hot water production (reducing the need for natural gas or propane purchases) and for in-floor heating of the dairy and holding areas, as required.

About 10% of the AD biosolids, rich in methanogenic bacteria, will be recycled from the end of the second stage and reused at the beginning of the second stage of the AD vessel as "seed" stock for the methanogenic bacteria process. The remaining 90% of the biosolids will be pumped from the effluent pit at the end of the AD vessel to a manure solids separator. The mechanical manure separator will separate the influent digested waste stream into solid and liquid fractions. The solids will be dewatered to approximately a 30 - 35% solid material. The separated solids, having the same odor and pathogen reduction characteristics as the liquid stream, will be utilized by the dairy for bedding replacement (an expense reduction). Utilization of the separated solids for bedding typically comprises about 60% of the generated separated solids from a typical dairy. The residual 40% of non-utilized separated solids will be sold (system-generated income) to other dairies for bedding purposes or sold to after-markets, such as nurseries and composters, for soil amendment material.

The liquid from the manure separator, now with the majority of the large solids removed, will gravity flow into the dairy's storage lagoon. A large advantage of the effluent from the AD treatment process is that the viscosity of the effluent is such, as opposed to the raw manure influent, that the liquid effluent can be pumped through an irrigation nozzle for field spreading. This would replace the current practice of hauling the effluent via semi-trailer for land spreading. This current practice is not only expensive, but it is very weather

TRANSFORMER  
CONCRETE  
PAD  
  
(SIZE AND  
LOCATION  
T.B.D.)

RADIATOR AND  
CHILLER  
CONCRETE PAD  
  
(SIZE AND  
LOCATION  
T.B.D.)



**BUILDING NOTES:**  
1.) 16 FOOT HIGH SIDE WALLS  
2.) AIR LOUVERS/VENTILATION PER  
MARTIN MACHINERY SPECIFICATIONS.

*Bedding Storage*

*Separator*

*Gen Set Bldg*

GEN-SET CONCRETE PAD AND  
MOUNTING SPECIFICATIONS  
FROM MARTIN MACHINERY

PROPRIETARY PROPERTY OF GHD, INC.

<p>TOLERANCE UNLESS NOTED 0.00 ± 0.05 0.000 ± 0.005</p>		<p><b>GHD ANAEROBIC DIGESTERS</b> CHILTON, VA</p>	
<p>REMARKS THIS DRAWING AND THE INFORMATION CONTAINED WITHIN ARE PROPERTY OF GHD, INC. AND ARE TO BE USED ONLY FOR THE PURPOSE WHICH THEY ARE LOANED OR USED. THIS DRAWING IS NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM GHD, INC.</p>			
<p>DRAWN <b>KLS</b></p>	<p>DATE <b>07/28/10</b></p>	<p>DRAWING NO. "C" SIZE</p>	
<p>SCALE <b>NONE</b></p>	<p>CHK'D</p>	<p><b>N/A</b></p>	
<p>NO. REC'D</p>	<p>WORK ORDER</p>	<p>SHEET <b>1 OF 1</b></p>	

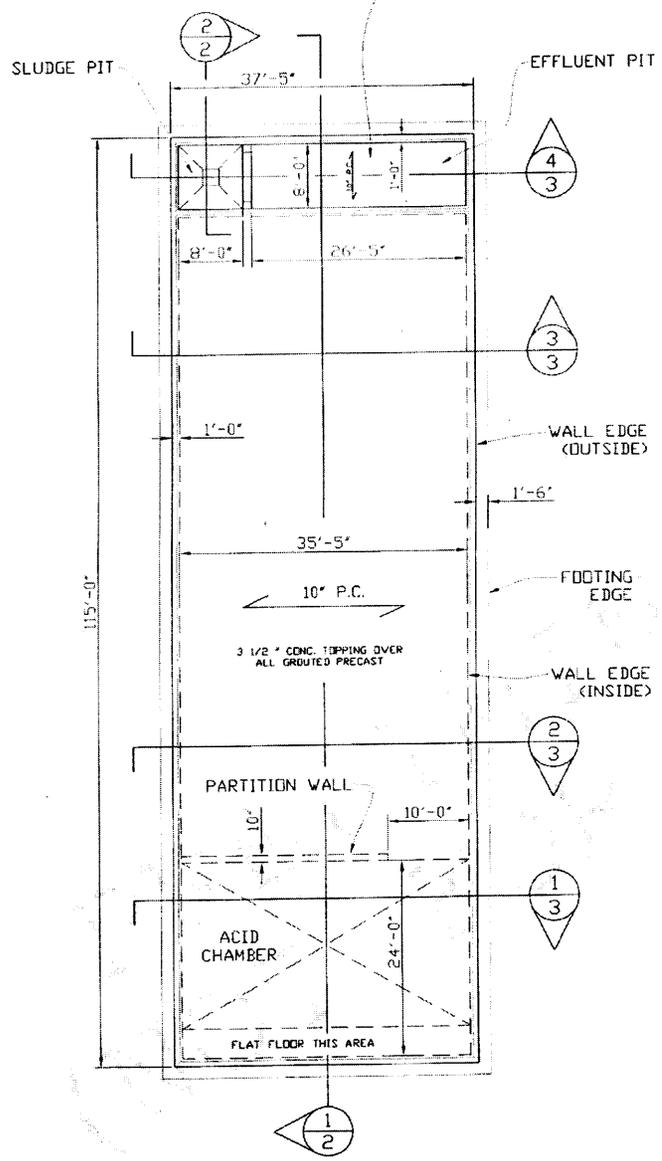
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27/27

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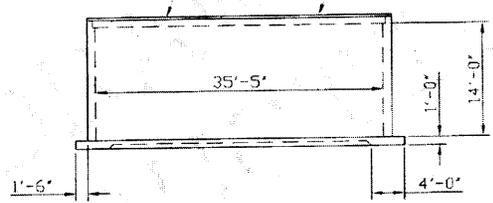
3 1/2" CONC. TOPPING OVER ALL GROUTED PRECAST



PLAN VIEW

10" GROUTED PRECAST PLANK ALIGNED E/W TO COVER BIOGAS CHAMBER.  
 10" GROUTED PRECAST PLANK ALIGNED N/S TO COVER THE EAST 25'-5" OF THE EFFLUENT PIT. NO PRECAST BY THE WIER WALL AND 10" LOOSE PRECAST OVER THE SLUDGE PIT. (NOTE: PRECAST DETAIL PLANS TO BE REVIEWED BY GHD)

3 1/2" CONC. TOPPING OVER ALL GROUTED PRECAST



ELEVATION LOOKING SOUTH

# CONCRETE DIGESTER

Tank = Tank  
 50,000 cubic feet  
 holds 375,000 gallons

PROPRIETARY PROPERTY OF GHD, INC.

Title		MONUMENT DAIRY	
Company	GHD, Inc.	Drawn By	KLS
Location	Chilton, WI	Scale	FIT
		Date	7/27/10
		Approved By	Page 1