

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7325

Petition of Boucher Biopower, LLC for a )  
certificate of public good pursuant to 30 V.S.A. )  
§ 248(j) for a farm-based methane-fueled electrical )  
generating facility in Highgate Center, Vermont )

Order entered: 9/10/2007

**I. INTRODUCTION**

This case involves a petition filed on June 21, 2007, by Boucher Biopower, LLC (the "Boucher Farm" or "Applicant") requesting a certificate of public good ("CPG") under 30 V.S.A. § 248(j) for approval of a methane-fueled electrical generating facility located on the Boucher family farm in Highgate Center, Vermont (the "Project"). Boucher Farm submitted prefiled testimony, a proposed CPG, and proposed findings pursuant to the requirements of Section 248(j).

Notice of the filing was sent on July 18, 2007, to all entities specified in 30 V.S.A. § 248(a)(4)(c) and all other interested parties. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before August 17, 2007. A similar notice of the filing was published in the *Saint Albans Messenger* on July 20 and July 27, 2007.

On July 11, 2007, Boucher Farm filed a copy of a letter from the Vermont Agency of Natural Resources ("ANR"), Air Pollution Control Division, indicating that an Air Pollution Control Permit is not required for the Project.

On August 15, 2007, ANR filed comments stating that the project does not, subject to the inclusion of a condition related to soil erosion in the order, appear to raise any significant concerns under § 248(j). On August 21, 2007, the Vermont Department of Public

Service ("Department"), filed comments stating that the petition met the criteria for review under Section 248(j), and that the petition did not raise any significant issues with respect to the substantive criteria of Section 248 provided the recommendations of the system impact study are followed and the Project is constructed and operated in accordance with the applicable codes and standards listed in Board Rule 5.510. The Department recommended that the Board approve the petition without hearing.

The Board has determined that the proposed construction will be of limited size and scope and that the petition has effectively addressed the issues raised with respect to the substantive criteria of 30 V.S.A. § 248. Consequently, we find that the procedures authorized by Section 248(j) are sufficient to satisfy the public interest, and no hearings are required.

## **II. FINDINGS**

1. The Boucher family owns and operates a farm with approximately 250 cows in Highgate Center, Vermont. Boucher pf. at 1-4.

2. Boucher Farm proposes to construct and operate an electrical generating facility which will use the methane gas derived by processing the farm's cow manure and other crops in enclosed anaerobic digester tanks located on the farm. The generator will produce approximately 630 kilowatts of electricity. The net electrical output of the generator will be sold to Vermont Electric Cooperative, Inc. ("VEC"). *Id.*

3. The Project will consist of two concrete fermentation tanks or digesters, a generator building, and a reception pit. The total space required for the Project is 15,224 square feet. Boucher pf. at 2; Chesterfield pf. at 2-3; exh. SC-3.

4. The Project will be located in a field adjacent to existing farm buildings. The design and appearance of the generator building will be compatible with the adjacent farm buildings. Boucher pf. at 2.

5. The digester tanks will be able to process crops and waste food products in addition to cow manure. The only byproduct from the process will be a nutrient-rich liquid that will be stored in the existing manure pit for eventual use as fertilizer on the farm. The liquid byproduct will have approximately 90% less odor than the manure currently used as fertilizer. *Id.* at 4-5.

6. The Boucher farm is located on Gore Road in Highgate Center and served via a three-phase 12.47/7.2 kV distribution circuit that originates at VEC's Sheldon substation. Abendroth pf. at 2.

7. The Project is approximately nine miles from the Sheldon Substation. The Project will be connected to the distribution line on Gore Road directly in front of the Project. *Id.*

8. In order to connect the Project to VEC's distribution system, approximately 600 feet of three-phase overhead line must be constructed. In addition, approximately 100 feet of underground distribution line must be constructed between the end of the new overhead line and a pad-mounted transformer. This construction will occur entirely on the farm property. *Id.* at 2.

9. In addition, VEC will: (1) move a set of line fuses further south on Gore Road; (2) replace an existing capacitor bank on Cassidy Road; and (3) reprogram the existing recloser and voltage regulators at the Sheldon Substation to recognize reverse current flow. *Id.* pf. at 2-3.

### **Orderly Development of the Region**

[30 V.S.A. § 248(b)(1)]

10. The proposed Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 11 and 12, below.

11. The Town of Highgate has provided a letter endorsement stating that the Project will not adversely affect the orderly development of the town and that the Project is consistent with the objectives in the Town Plan. Boucher pf. at 5-6; exh. DB-4.

12. The Northwest Regional Planning Commission has also endorsed the Project as consistent with the orderly development of the region. Boucher pf. at 6; exh. DB-5.

**Need for Present and Future Demand for Service**

[30 V.S.A. § 248(b)(2)]

13. The proposed Project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load management measures. This finding is supported by finding 14 below.

14. The output of the proposed generator would be used to meet VEC's need for renewable energy resources pursuant to 30 V.S.A. § 8004, and will be sold to VEC at wholesale rates. Boucher pf. at 6.

**System Stability and Reliability**

[30 V.S.A. § 248(b)(3)]

15. The proposed Project will not adversely affect system stability and reliability. This finding is supported by findings 16 and 17, below.

16. Boucher Farm has been working with VEC to ensure that the Project does not have any adverse impact on the VEC system. VEC has completed a System Impact Study which states that the Project will not adversely impact system stability and reliability provided VEC implements the upgrades to its system recommended in the study. Boucher pf. at 7; exh. DB-6.

17. VEC will also finalize the technical requirements and operating protocols for the parties' Generation Interconnection Agreement. Boucher Farm will file these materials as a compliance filing in this docket after they have been developed and reviewed by the Department. Boucher pf. at 7.

**Economic Benefit to the State**

[30 V.S.A. § 248(b)(4)]

18. The Project will provide an economic benefit to the state and its residents. This finding is supported by findings 19 and 20, below.

19. The Project offers a local source of renewable power which adds diversity to the state's energy mix and displaces fossil fuels. The Project also enhances the economic viability of the

Bouchers' farm by reducing costs and generating additional income, thus increasing the likelihood that it will continue to be a healthy working farm. Boucher pf. at 7-8.

20. Various additional benefits, while not monetized, will provide indirect economic benefits. Among these, the manure spread on the farm will have less odor as compared to current conditions. Additionally, the digester process would reduce the phosphorous levels released into the ground and surface waters which would eventually flow into Lake Champlain. Finally, the Project will also remove methane, a significant greenhouse gas, from the atmosphere, by trapping it and burning it as fuel for the generator. *Id.*

**Aesthetics, Historic Sites, Air and Water Purity,  
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

21. The modifications as proposed will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and public health and safety. This finding is supported by findings 22 through 44 below, which are the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

**Outstanding Resource Waters**

[10 V.S.A. § 1424(a)(d)]

22. The Project is not located on or near any Outstanding Resource Waters. Boucher pf. at 14; Abendroth pf. at 7.

**Water and Air Pollution**

[10 V.S.A. § 6086(a)(1)]

23. The Project will not result in undue water or air pollution. This finding is supported by findings 24 and 25, below.

24. The Vermont Agency of Natural Resources determined that an Air Pollution Control Permit is not required for the Project. Letter from Richard A. Valentinetti, Director, Air Pollution Control Division, July 3, 2007.

25. The Project will result in a reduction of odor from manure produced on the farm. Boucher pf. at 9.

**Headwaters**

[10 V.S.A. § 6086(a)(1)(A)]

26. The Project will not have an undue adverse impact on any headwaters, as there are no headwaters in the vicinity of the project. Boucher pf. at 9.

**Waste Disposal**

[10 V.S.A. § 6086(a)(1)(B)]

27. The Project will improve the disposal of cow manure waste over current practice, by producing a liquid by-product that can be used on the farm as fertilizer. Boucher pf. at 10.

28. Any wastes produced during construction of the Project will be disposed of in an approved landfill. Abendroth pf. at 4.

**Water Conservation**

[10 V.S.A. § 6086(a)(1)(C)]

29. The Project will not require a new water supply to operate. The Project will use water from the existing farm water supply only for the occasional rinsing of equipment associated with the Project. Boucher pf. at 10.

**Floodways, Streams, and Shorelines**

[10 V.S.A. §§ 6086(a)(1)(D)(E) &(F)]

30. The Project is not located within a floodplain or adjacent to the banks of a stream or on a shoreline. Abendroth pf. at 4; Boucher pf. at 10-11; exh. DB-7.

**Wetlands**

[10 V.S.A. § 6086(a)(1)(G)]

31. The Project will not adversely affect any wetlands. The Project will be constructed on farm property that has already been developed, and there are no mapped wetlands in the vicinity of the Project. Boucher pf. at 11.

### **Sufficiency of Water and Burden on Existing Water Supply**

[10 V.S.A. §§ 6086(a)(2)&(3)]

32. The Project will not require a substantial amount of water. The Project will use water from the existing farm water supply for the occasional rinsing of equipment associated with the Project. Boucher pf. at 10-11.

### **Soil Erosion**

[10 V.S.A. § 6086(a)(4)]

33. The Project will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water. This finding is supported by findings 34 and 35, below.

34. Soil disturbance from the Project will result from the construction of the digester tanks and generator building. Soil removed from the Project site will be used elsewhere on the farm. Boucher pf. at 12.

35. Construction related to VEC's distribution system upgrades will not cause unreasonable soil erosion or reduce the capacity of the land to hold water. Abendroth pf. at 5.

### **Discussion**

On August 15, 2007, ANR filed comments stating that the project does not appear to raise, with one exception, any significant concerns under § 248(j). ANR argues that the petition does not adequately address the question of soil erosion pursuant to 10 V.S.A. § 6068(a)(4). ANR notes that the amount of soil disturbance for the Project is below the threshold necessary for coverage under state or federal stormwater permits. Therefore, ANR recommends that Boucher Farm be required to operate the site in compliance with ANR's "Low Risk Handbook for Erosion Prevention and Sediment Control." We conclude that such a requirement is reasonable and have added this condition to the CPG.

### **Transportation Systems**

[10 V.S.A. § 6086(a)(5)]

36. The Project will not have an unduly adverse impact on any means of transportation. The Project will be located on an existing farm off a public road, and will not impede traffic in any way. The Project will utilize crops and manure produced on the farm. No new transportation patterns or volumes will result from the Project. Boucher pf. at 3-4, 12.

37. Construction related to VEC's distribution system upgrades will have a minor and temporary impact on traffic along Gore Road and Cassidy Road. Abendroth pf. at 5.

**Educational Services**

[10 V.S.A. § 6086(a)(6)]

38. The Project will have no impact on the ability of any municipality to provide educational services. Boucher pf. at 16; Abendroth pf. at 5.

**Municipal Services**

[10 V.S.A. § 6086(a)(7)]

39. The Project will not require any municipal or governmental services. Boucher pf. at 12; Abendroth pf. at 5.

**Aesthetics, Historic Sites**

**and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

40. The Project will not have an undue adverse impact on the scenic or natural beauty of the area, aesthetics, historic sites, or rare and irreplaceable natural areas. This finding is supported by findings 41 and 42, below.

41. Because the Project will be constructed on farm property that has already been developed, the Project will have little or no visual or aesthetic impact. The generator building will be designed to fit with existing farm buildings. Boucher pf. at 13; Chesterfield pf. at 5-6.

42. There are no historic sites or rare and irreplaceable natural areas in the vicinity of the Project. Boucher pf. at 13; Abendroth pf. at 6; exh. DB-8.

**Necessary Wildlife Habitat and Endangered Species**

[10 V.S.A. § 6086(a)(8)(A)]

43. The Project will not have any impact on wildlife habitat or on any threatened or endangered species. Boucher pf. at 13-14; Abendroth pf. at 6.

**Development Affecting Public Investments**

[10 V.S.A. § 6086(a)(9)(K)]

44. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investment or government or public facilities. The only public investment near the Project is the road from which the farm is accessed. These roads will remain passable during construction of the Project. Boucher pf. at 14; Abendroth pf. at 6.

**Least-Cost Integrated Resource Plan**

[30 V.S.A. § 248(b)(6)]

45. Boucher Farm does not distribute or transmit electricity for use by the public. Therefore, it is not obligated to prepare and submit for approval an integrated resource plan. *See*, Docket No. 7082, Order of 4/26/06 at 54.

**Compliance with Electric Energy Plan**

[30 V.S.A. § 248(b)(7)]

46. The Project is consistent with the Vermont Twenty-Year Electric Plan. The Department of Public Service's 2004 Vermont Electric Plan cites to farm methane projects as potentially beneficial energy technologies. Boucher pf. at 15.

47. The Department filed a determination, in a letter filed August 21, 2007, that the Project is consistent with the Vermont Twenty-Year Electric Plan, in accordance with 30 V.S.A. § 202(f). *See* Department letter dated August 21, 2007.

**Outstanding Resource Waters**

[30 V.S.A. § 248(b)(8)]

48. The Project is not located near any outstanding resource waters. Boucher pf. at 14; Abendroth pf. at 7.

**Waste to Energy Facilities**

[30 V.S.A. § 248(b)(9)]

49. Based on the Board's review of the petition, the proposed project does not involve construction of waste to energy facilities. Accordingly, this criterion is inapplicable.

**Existing or Planned Transmission Facilities**

[30 V.S.A. § 248(b)(10)]

50. Subject to the upgrades to VEC's system required in the system impact study, the Project can be economically served by an existing transmission facility, and therefore will not have any adverse impacts on Vermont utilities or customers. Boucher pf. at 15; exh. DB-6.

**III. CONCLUSION**

Based upon all of the above evidence, we conclude that the proposed construction would be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the proposed project would promote the general good of the state.

**IV. ORDER**

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that the proposed Project, in accordance with the evidence and plans presented in this proceeding, and as conditioned below, would promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good shall be issued in the matter:

1. Construction, operation, and maintenance of the project shall be in accordance with the plans and evidence submitted in this proceeding.
2. All recommendations of the system impact study shall be followed.

3. Boucher Farm shall not transport manure or other crops from other farms for use as fuel for the generation system, absent approval from the Board.

4. Prior to interconnection of the generator with the VEC system, Boucher Farm shall provide to the Board and the Department written documentation demonstrating that the applicable codes and standards listed in Board Rule 5.510 have been met.

5. Within five days of commissioning, Boucher Farm shall provide to the Board and the Department a copy of the formal documentation required by IEEE Standard 1547 § 5 (Interconnection Test Specifications and Requirements).

6. Boucher Farm shall construct and operate the Project in compliance with the Low Risk Site Handbook for Erosion Prevention and Sediment Control (VT DEC, 2006).

Dated at Montpelier, Vermont this 10<sup>th</sup> day of September, 2007.

<u>s/James Volz</u>	)	
	)	PUBLIC SERVICE
	)	
<u>s/David C. Coen</u>	)	BOARD
	)	
	)	OF VERMONT
<u>s/John D. Burke</u>	)	

OFFICE OF THE CLERK

FILED: September 10, 2007

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.*