

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7413

Petition of Neighborhood Energy, 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 Coventry, Vermont)

Order entered: 6/5/2008

I. INTRODUCTION

This case involves a petition filed on February 8, 2008, by Neighborhood Energy, LLC ("Neighborhood Energy") 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 a farm owned by Maxwell's Neighborhood Farm, LLC in Coventry, Vermont (the "Project"). Neighborhood Energy submitted prefiled testimony and proposed findings pursuant to the requirements of 30 V.S.A. Section 248(j).

On February 19, 2008, the Clerk of the Vermont Public Service Board ("Board") sent a letter to Neighborhood Energy requesting more information about the Project. Neighborhood Energy responded by letter dated March 19, 2008.

Notice of the filing was sent on April 4, 2008, 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 May 6, 2008. A similar notice of the filing was published in the *Newport Daily Express* on April 8, 2008, and April 15, 2008.

On May 6, 2008, David Barlow, a neighboring landowner, filed comments regarding double utility poles along Airport Road near his property. The redundant poles are, according to Mr. Barlow, the result of the telephone utility's failure to migrate its facilities to the new poles and remove the poles. Mr. Barlow argues that the second set of poles constitute an "eyesore" and should be removed.

We agree that double poles are hardly aesthetically pleasing and should have been removed by the telephone utility, in this case Verizon Vermont. We have ordered, in Docket No. 7270, that the new owner of the telephone facilities, Fairpoint Communications, Inc., must remove all such redundant poles statewide.¹ However, in this case, the redundant telephone poles are not part of the proposed Project which will involve only the electric distribution facilities. The electric distribution facilities are located on the newer poles owned by VEC and not on the redundant poles where the telephone facilities are located. Therefore, Mr. Barlow's comments do not raise a significant issue, pursuant to 30 V.S.A. § 248, with respect to the Project.

On May 7, 2008, the Vermont Department of Public Service ("Department") submitted a determination pursuant to 30 V.S.A. § 202(f) that the Project is consistent with the State's Twenty-Year Electric Plan. The Department also stated that it has no objection to issuance of a CPG for the Project without further investigation or 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. Maxwell's Neighborhood Farm, LLC (the "farm") is a Vermont limited liability company, comprised of members of the Maxwell family, which owns and operates a large dairy farm in Coventry, Vermont. Maxwell pf. at 1.

2. Neighborhood Energy is a Vermont limited liability company, comprised of members of the Maxwell family, which proposes to construct and operate a farm-based electrical generation facility on the family farm. *Id.*

1. *Joint Petition of Verizon New England Inc., d/b/a Verizon Vermont, certain affiliates thereof, and FairPoint Communications, Inc. for approval of an asset transfer, acquisition of control by merger and associated transactions*, Docket No. 7270, Order of 12/21/07, at 137-146.

3. The Project will consist of the construction of an enclosed concrete manure digester (82' x 74' x 16'), a shed to house the generator (85' x 48' x 16'), and a reception pit to hold manure and other agricultural waste for substrate. Most of the digester will be buried, with two and one-half feet of the structure above ground. The buildings would be constructed entirely on the farm property and will be similar in appearance to other nearby large farm buildings. *Id.* at 2.

4. The digester will process various types of methane-producing substrates, primarily manure produced on the farm. A variety of other agricultural-based substrates will be used, depending on need and availability. The other substrates will come from the farm operation as well as sources outside the farm, and will most likely include manure from other farms (including manure from farm animals besides cows), waste grain, food waste, waste dairy products (such as whey), waste crops, or crops grown specifically for use in the digester. *Id.* at 3.

5. The substrate will be pumped from the reception pit to the digester to be mixed and heated. The decomposition of the substrate will release methane gas. The methane will be collected and used to fuel a reciprocating engine, which will, in turn, run a generator set and produce electricity. *Id.*

6. The digested substrate will be pumped from the effluent pit at the end of the digester to a mechanical separator. The liquids and solids, with their pathogens and odor characteristics reduced by the digestion process, will be separated. The solids will be used in other farm and commercial functions, primarily as bedding for the farm's cows. The liquid waste will be spread on the fields as fertilizer. *Id.*

7. The proposed generator has an output capacity of 225 kW. Depending on the quality of the biogas, the unit will produce up to 225 kW of electricity. Neighborhood Energy will sell all of the electricity at wholesale rates to Vermont Electric Cooperative, Inc. ("VEC"). Renewable energy attributes associated with the Project will be sold to Central Vermont Public Service Corporation ("CVPS") as part of CVPS's voluntary renewable pricing Cow Power program. *Id.* at 4-5.

8. The Project will require a distribution line upgrade with four components. Approximately 8,800 feet of existing single-phase line along Airport Road will be upgraded to three-phase line. This will require replacing the brackets on existing poles with wood crossarms,

but will not require replacing the poles themselves. Approximately 1,500 feet of existing single-phase line along Maxwell Road will also be upgraded to three-phase line. This will involve replacing the existing 40' poles with 45' poles. Approximately 450 feet of three-phase line will be installed underground on the farm property and a single wood pole will be installed at the start of the underground line. An electronic recloser will be installed near the intersection of Coventry and Pleasant Streets in Newport, Vermont. *Id.* at 2; Abendroth pf. at 1-2.

Discussion: Imported Substrates

In order to ensure that the imported substrates used in the digester are exclusively "agricultural based" and renewable resources, as represented in the petition, we have included a condition in the CPG requiring that all substrates used in the digester are limited to any material in raw or processed form that originates from a farming operation as defined in 10 V.S.A. § 6001 (22)(A)-(D), and that is consumed at a harvest rate at or below its natural regeneration rate.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

9. The 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 10 and 11, below.

10. The Town of Coventry Planning Commission has endorsed the Project as being consistent with the Town Plan. Maxwell pf. at 4; Pet. exh. B.

11. The Northeastern Vermont Development Association has endorsed the Project as being consistent with the Regional Plan and with the objective of reducing the use of fossil fuel. Maxwell pf. at 4; Pet. exh. C.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

12. The 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 findings 13 and 14, below.

13. Electricity generated by the Project will be sold at wholesale to VEC to serve regional needs and the renewable energy attributes associated with that generation will be sold to CVPS as part of CVPS's voluntary renewable pricing program. Maxwell pf. at 5.

14. The State of Vermont, as a matter of public policy, encourages development of renewable energy resources. *Id.*

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

15. The proposed project will not adversely affect system stability and reliability. Neighborhood Energy has completed a system impact study which indicated that, with the improvements set forth in the study, the proposed project would not have any undue adverse impacts on system stability or reliability. Maxwell pf. at 5-6; Pet. exh. D at 15.

Discussion: System Stability and Reliability

The system impact study completed for the Project indicates that there will be no adverse impact to system stability and reliability, provided that the recommendations contained in the system impact study are followed. Therefore, we have included a condition in the CPG requiring Neighborhood Energy to implement all of the upgrades and improvements recommended in the system impact study.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

16. The Project offers many economic benefits to the state and its residents. The Project will enhance the state's energy diversity and would offset the use of fossil fuels. It will be a

"local" energy source, thus keeping revenue in-state. It will enhance the farm's profitability, which would benefit not just the farmer, but all of the ancillary services associated with farming. The Project may also increase the likelihood that farms will refrain from taking land out of production, hence preserving the image of Vermont that is promoted to tourists. The Project will also provide indirect economic benefits, including reduced odor from manure, reduction of release of greenhouse gases, improved nutrient management. Maxwell pf. at 6.

Discussion: Economic Benefit

The Board is concerned that distribution upgrades required by the Project may result in costs that should be borne by Neighborhood Energy and not by VEC and its ratepayers and, therefore, we have included a condition in the CPG that requires Neighborhood Energy pay the entire cost of the distribution system upgrade.

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

[30 V.S.A. § 248(b)(5)]

17. The Project 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 18 through 50 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)]

18. The Project is not located on or near any outstanding resource waters. The limited construction work will not have an impact on water quality or water supplies, wildlife, fish habitat or flood storage. There are no known rare or irreplaceable natural areas, or endangered species at the Project site. There are no known or potential archeological sites. The Project will not have an effect on the existing or potential use of streams for recreation, research, or educational purposes. Maxwell pf. at 8; Abendroth pf. at 4.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

19. The Project would not result in undue water or air pollution. This finding is supported by findings 20-24, below.

20. Surface and groundwater contamination would be reduced as a result of spreading the waste liquid as fertilizer, as compared to spreading raw manure. Maxwell pf. at 7.

21. The Project would reduce the release of methane gas by trapping it and burning it as fuel for the generator. *Id.*

22. There will be emissions from burning the methane in the engine which drives the generator and from the flares which will be installed to flare excess methane from the digester. The Vermont Agency of Natural Resources has reviewed the emissions data, stack and flare specifications, and has determined that, provided certain conditions are met, an air pollution control permit is not required. *Id.*; Pet. exh. E at 1-2.

23. The only noise associated with the Project will be from the motor and generator turbine. Noise impacts will be minimized by locating the generator inside an enclosed structure. There are no close neighbors. Maxwell pf. at 8.

24. The upgrades to the distribution line related to the Project will occur within existing rights of way and will not cause an adverse impact to air and water purity. Abendroth pf. at 2.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

25. The Project will not have an undue adverse impact on any headwaters, as the Project is not located in a headwaters region. Maxwell pf. at 8; Abendroth pf. at 3.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

26. The Project will improve the treatment of cow manure waste. The digester is a sealed container which would not release untreated waste. The solid by-product from the digester will

be used primarily as bedding for cows, and the liquid by-product would be spread as fertilizer. Any wastes produced during construction associated with the distribution project will be disposed of in an approved landfill. Maxwell pf. at 2, 8; Abendroth pf. at 3.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

27. The Project will not involve the use of water either during or after construction. Maxwell pf. at 9; Abendroth pf. at 3.

Floodways, Streams, and Shorelines

[10 V.S.A. §§ 6086(a)(1)(D)(E) &(F)]

28. The Project is not located within a floodway, on a shoreline, or adjacent to the banks of a stream. Maxwell pf. at 9; Abendroth pf. at 3.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

29. The Project is not located on or near any wetlands. Maxwell pf. at 9; Abendroth pf. at 3.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

30. The Project will not require the use of additional water. Maxwell pf. at 9; Abendroth pf. at 3.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

31. The Project will not have a significant impact on soil erosion. Maxwell pf. at 9.

32. The sitework required for the Project will be located within the farmstead, in a flat area. Any earth disturbance will be limited to the farmstead complex. The existing topography will not be altered. *Id.*

33. All soil disturbance associated with the distribution project will be limited to the placement of new poles and the installation of 450 feet of underground distribution line on farm property. Abendroth pf. at 3-4.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

34. The Project will not have an impact on any means of transportation with the exception of highways. The Project will not cause unreasonable congestion or unsafe conditions on highways. This finding is supported by findings 35-38, below.

35. The farm currently receives, on average, four truck deliveries per week, about one of which is a sawdust delivery. Maxwell pf. at 10; Maxwell supp. pf at 1.

36. If the Project uses only off-farm substrate, and continues to import sawdust for bedding, then the farm would require approximately seven truckloads of substrate per week in addition to the usual four other truckload deliveries per week, for a total of eleven deliveries per week. *Id.*

37. Substitution of dried processed substrate for imported sawdust as bedding may result in fewer deliveries of sawdust. *Id.*

38. The distribution project will have a minor and temporary impact on transportation along Airport Road and Maxwell Road during construction. Abendroth pf. at 4.

Discussion: Transportation Systems

To the extent importation of substrate for use in the digester results in increased truck deliveries to the farm, the Project raises concerns regarding traffic and highway safety. Therefore, we have included a condition in the CPG limiting truck deliveries of substrate to seven per week, as represented in the petition.

Educational Services

[10 V.S.A. § 6086(a)(6)]

39. The Project will have no impact on educational services. Maxwell pf. at 10; Abendroth pf. at 4.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

40. The Project will not require any municipal or governmental services. Maxwell pf. at 10; Abendroth pf. at 4.

**Aesthetics, Historic Sites
and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

41. The Project would 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 42 through 44, below.

42. The Project's aesthetic impact will be minimal since all of the improvements would be located within the existing farmstead, and are designed to be consistent with existing structures. Maxwell pf. at 10.

43. There are no historic sites or rare and irreplaceable natural areas in the vicinity of the Project. *Id.*

44. The aesthetic impacts of the distribution project will be minor. The only modifications will be the addition of crossarms and two phase wires to 8,800 feet of an existing distribution line on Airport Road and the change of 1,500 feet of distribution line from a single-phase line to a three-phase line on Maxwell Road. Abendroth pf. at 4.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

45. The Project will not destroy or significantly imperil necessary wildlife habitat or any endangered species. This finding is supported by findings 46 and 47, below.

46. The improvements related to the Project would be within the existing farmstead. There is no necessary wildlife habitat or evidence of any endangered species within the farmstead complex. Maxwell pf. at 11.

47. The distribution project will not have an impact on necessary wildlife habitat. There are no known endangered species at the distribution project site. Abendroth pf. at 4.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

48. The Project would not unnecessarily or unreasonably endanger the public or quasi-public investment or government or public facilities. This finding is supported by findings 49 and 50, below.

49. The only public investments near the Project are Airport Road and Maxwell Road, which will not be adversely affected by the Project. Maxwell pf. at 11.

50. The only public investments near the distribution project are Airport Road and Maxwell Road in Coventry and Coventry Street and Pleasant Street in Newport. Any effects of the distribution project would be limited to the construction period. All public roads and streets would remain accessible throughout construction. Abendroth pf. at 4.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

51. The Farm does not distribute or transmit electricity for use by the public and is, therefore, not required to have an approved integrated resource plan. Maxwell pf. at 11; *see*, Docket No. 7082, Order of 4/26/06 at 54.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

52. The Project is consistent with the goals of Vermont's Twenty-Year Electric Plan. Maxwell pf. at 11.

53. Vermont's Twenty-Year Electric Plan calls for the provision of electric service that is "carefully balanced" between the following goals: "efficient, adequate, reliable, secure, sustainable, affordable, safe and environmentally sound, while encouraging the state's economic

vitality and maintaining consistency with other state policies." The Project fulfills these goals.
Id.

54. The Department filed a determination, in a letter filed May 7, 2008, that the proposed project is consistent with the Vermont Twenty-Year Electric Plan, in accordance with 30 V.S.A. § 202(f). *See* Department letter filed May 7, 2008.

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

55. The Project is not located near any outstanding resource waters. Maxwell pf. at 11; Abendroth pf. at 4.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

56. With the development of an appropriate interconnection agreement, the Project would be economically served by existing transmission facilities without any adverse impacts on Vermont utilities or customers. Maxwell pf. at 12.

III. CONCLUSION

Based upon all of the above evidence, we conclude that the proposed construction of the methane-fueled generation facility 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, subject to the four conditions discussed above and included below.

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, 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, subject to the following conditions:

1. The Project shall be constructed in accordance with the evidence and plans submitted in this proceeding. Any material deviation from these plans or specifications must be approved by the Board.
2. Neighborhood Energy shall implement all of the recommendations included in its system impact study, including upgrades to the distribution line, at its own expense.
3. Neighborhood Energy shall comply with all of the conditions contained in the Agency of Natural Resources, Air Pollution Control Division, January 18, 2008, letter regarding an air permit requirement.
4. Substrates used in the digester are limited to any material in raw or processed form that originates from a farming operation as defined in 10 V.S.A. § 6001 (22)(A)-(D), and that is consumed at a harvest rate at or below its natural regeneration rate.
5. Neighborhood Energy shall import no more than seven truckloads per week of manure or other substrate from sources outside the farm premises for use in the digester without prior approval from the Board.

Dated at Montpelier, Vermont this 5th day of June, 2008.

s/ James Volz)

) PUBLIC SERVICE

s/ David C. Coen)

) BOARD

s/ John D. Burke)

) OF VERMONT

OFFICE OF THE CLERK

FILED: June 5, 2008

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.