

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7844

Petition of Charlotte Solar, LLC for a certificate )	
of public good, pursuant to 30 V.S.A. § 248, )	Hearings at
authorizing the installation and operation of a )	Montpelier, Vermont
2.2 MW solar electric generation facility located )	
at the north side of Hinesburg/Charlotte Road in )	June 19-20, 2012
Charlotte, Vermont )	

**PROPOSAL FOR DECISION**

Order entered:

HEARING OFFICER: Jake Marren, Esq.

APPEARANCES: Andrew Raubvogel, Esq.  
Rebecca E. Boucher, Esq.  
Dunkiel, Saunders, Elliot, Raubvogel and Hand PC  
for Charlotte Solar, LLC

Jeanne Elias, Esq.  
for Vermont Department of Public Service

Judith Dillon, Esq.  
Donald Einhorn, Esq.  
for Agency of Natural Resources

Diane Zamos, Esq.  
for Agency of Agricultural Food and Markets

Joseph S. McLean, Esq.  
Stizel, Page and Fletcher, PC  
for Town of Charlotte

William F. Ellis, Esq.  
McNeil, Leddy, and Sheahan  
for Raymond B. and Sherry Applegate; Bruce and Rose  
Bernier; Steven P. and Melissa Colvin; Peter Ker and Meg  
Walker; Elizabeth Basset; Diana L. McCargo; John A.  
Pane; and Peter D. Swift

## **I. INTRODUCTION**

This case involves a petition filed by Charlotte Solar, LLC ("the Petitioner") requesting a certificate of public good ("CPG") under 30 V.S.A. § 248 to install and operate a 2.2 MW solar electric generation facility located on the north side of Hinesburg/Charlotte Road in Charlotte, Vermont ("Project"). In this proposal for decision, I recommend that the Vermont Public Service Board ("Board") approve the petition with conditions.

## **II. PROCEDURAL HISTORY**

On January 26, 2012, the Petitioner filed a petition with the Board requesting a CPG under 30 V.S.A. § 248 to install and operate a 2.2 MW solar electric generating facility located on the north side of Hinesburg/Charlotte Road in Charlotte, Vermont. The petition included the prefiled testimony of Lars Cartwright and Jay Mytro ("Cartwright/Mytro"), Mark Kane, and Scott Mapes.

On February 23, 2012, the Vermont Agency of Agriculture, Food and Markets ("VAAFAM") filed a motion to intervene.

On March 13, 2012, I held a Prehearing Conference. Appearances were entered by Jeanne Elias, Esq., for the Department of Public Service ("Department"); by Judith Dillon, Esq., for the Agency of Natural Resources ("ANR"); by Diane Zamos, Esq., for the VAAFAM; by Joseph S. McLane, Esq., for the Town of Charlotte ("the Town"); by William Ellis, Esq., for Bruce and Rose Bernier, Steven P. and Melissa Colvin, Peter Ker and Meg Walker (collectively, "the Neighbors"); and by Andrew Raubvogel, Esq., and Rebecca Boucher, Esq., for the Petitioner.

At the Prehearing conference, the Town and the Neighbors moved to intervene in this Docket. I granted these motions, limited to issues of orderly development of the region and aesthetics. However, the Neighbors were given leave to amend their motion before March 30, 2012. These actions were memorialized in a Prehearing Conference Memorandum and Scheduling Order dated March 23, 2012. Additionally, VAAFAM's motion to intervene was granted.

Notice of a Public Hearing for the project was published in the *Charlotte Citizen* on March 21 and 22, 2012.

On March 30, 2012, the Neighbors moved to amend the scope of their intervention to include, in addition to the criteria originally requested, Section 248 (a)(2) (general public good), (b)(4) (economic benefit) and (b)(5) (public health, safety and noise).

On April 3, 2012, a site visit and Public Hearing were held. Approximately 75 members of the public attended the public hearing, of whom 18 spoke. The Board also received 24 letters and emails with additional public comment. These public comments are described later in this Proposal for Decision.

On April 9, 2012, Peter D. Swift, Diana L. McCargo, John A. Pane, Elizabeth Basset, and Raymond B. and Sherry Applegate through their attorney, William Ellis, Esq., filed a motion to intervene in this Docket and to be joined with the Neighbors.

In an Order dated April 16, 2012, I granted the Neighbors' March 30 motion in part, expanding the scope of their intervention to include issues of economic benefit, public health, safety and noise. I also granted the April 9 motion of Peter D. Swift, Diana L. McCargo, John A. Pane, Elizabeth Basset, and Raymond B. and Sherry Applegate in part, as described in the Order. Because these parties are represented by the same counsel as the Neighbors and have largely identical interests, these parties are included in all references to "the Neighbors" in this Order.

On May 10, 2012, the Department prefiled the direct testimony and resume of Jean Vissering.

On May 10, 2012, the Town of Charlotte prefiled the direct testimony of David Raphael.

On June 10, 2012, the Petitioner prefiled the rebuttal testimony of Lars Cartwright, Jay Mytro, and Mark Kane with associated exhibits, including revised plans for the Project ("Revised Site Plan"). The Petitioner also submitted a Stipulation entered into between the Petitioner and the Town. The specific provisions of the Stipulation are described in the Findings below.

On June 14, 2012, the Petitioner prefiled the supplemental testimony of Lars Cartwright. This filing included a system impact study.

On June 19, 2012, the Neighbors prefiled the sur-rebuttal testimony and exhibits of Michael C. Lawrence.

Technical Hearings were held on June 19 and 20, 2012, at which the prefiled testimony, exhibits and the Stipulation were admitted into the record.<sup>1</sup>

On June 19, 2012, the Department filed a determination that the Project is consistent with the *Vermont Electric Plan*, in accordance with 30 V.S.A. § 202(f).

On July 18, 2012, the parties filed briefs.

On August 1, 2012, the Neighbors and Petitioner filed reply briefs.

No other parties filed comments.

### **III. PUBLIC COMMENTS**

Numerous members of the public submitted comments on the proposed Project. On April 3, 2012, a Public Hearing was held. Approximately 75 members of the public attended. Eighteen members of the public spoke, all of whom opposed the Project. The comments focused on the aesthetic impacts the Project would have on the scenic quality of Charlotte and the economic impact the Project would have on surrounding properties and the town in relation to the economic benefit of the development of the Project. Many members of the public questioned why an industrial or commercial site was not proposed instead of an agricultural field.

Additionally, the Board received 24 letters and emails from the public regarding the Project. These comments reflected similar concerns as the public comments voiced at the Public Hearing.

### **IV. FINDINGS**

Based on the substantial evidence of record, I hereby report the following findings to the Board in accordance with 30 V.S.A. § 8©.

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1. At the Technical Hearings, the Town did not move the admission of Mr. Raphael's direct testimony and exhibits. The testimony was, however, admitted as Neighbors Cross Exhibit 2. No party objected to the admission of this evidence. At the start of the technical hearings the Petitioner filed written testimony from their panel of witnesses in response to questions issued by the Hearing Officer prior to the hearing, this testimony is referred to as the Petitioner's 2<sup>nd</sup> Supplemental Prefiled Testimony.

### **Background and Project Description**

1. The Petitioner is a Vermont limited liability company with principal offices at 15 Tyngsboro Road, North Chelmsford, Massachusetts. Petition at 1.
2. American Capital Energy, a New Jersey corporation, is the sole member of Charlotte Solar, LLC. Tr. 6/19/12 at 19-20 (Cartwright).
3. The Project has a nameplate capacity of 2.2 MW AC and has an expected net energy output (after DC to AC conversion) of approximately 2,850 MWh per year which is enough electricity for roughly 315 Vermont homes. Cartwright/Mytro pf. at 5.
4. The Project, including the access road, is proposed to be located on a 15 +/- acre portion of a 46.2 +/- acre parcel of land located on the north side of Hinesburg/Charlotte Road in Charlotte, Vermont (the "Project Site"). The solar array, excluding the access road, is 12.6 acres in area. The Project Site is owned by the Testamentary Trust of Clark W. Hinsdale, Jr. Cartwright/Mytro pf. at 5; exh. CSF LC/JM-12a.
5. The Project Site is zoned Rural Zone. Tr. 6/19/12 at 151 (Kane).
6. The Project will include: (a) approximately 8,250 photovoltaic panels<sup>2</sup> supported by a ground-mounted racking system consisting of approximately 375 individual racks, set in 26 rows; (b) four 0.5 MW inverters; (c) two 1000 kVA transformers; (d) underground electrical conduit connecting the array to the inverters; (e) an underground cable connecting the project to the 28G2 distribution circuit of Green Mountain Power Corporation ("GMP") at, or near, GMP pole # 129; and (f) one or two new service poles, approximately 35 feet tall, installed next to the existing pole #129. Cartwright/Mytro pf. at 9-11; Cartwright/Mytro 2<sup>nd</sup> sup. pf. at 1; exhs. CFS-MK-2, CSF LC/JM-12a.
7. The photovoltaic panels will tilt thirty degrees towards solar south and will reach a maximum height of approximately ten feet at the top of their tilted axis. The mounting system's support poles will be driven into the ground without concrete foundations. The lowest part of the panels will be approximately four feet off the ground to allow for snow pack and maintenance of the surrounding field. Cartwright/Mytro pf. at 9-10.

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2. The number of panels assumes the use of 280 watt panels. The final design may differ slightly depending on the size of the panels installed.

8. The inverters and associated switchgear will be located inside two secured, prefabricated enclosures which will be 11 feet by 34 feet. Each enclosure will be approximately ten feet tall. The inverter enclosures will be located within the western edge of the array, screening the inverter enclosures from view. The inverter enclosures will be painted black. Cartwright/Mytro pf. at 9-10; Cartwright/Mytro pf. reb. at 8; exh. CSF-LC/JM-12a.

9. The two transformers will be located adjacent to the inverter structures. The transformers will be protected by a catch basin with capacity to hold 150% of the oil contained in the transformer. Cartwright/Mytro pf. at 9-10; exh. CSF-LC/JM-12a at note 6.

10. The project will be surrounded by an agricultural-style fence that is six feet tall and composed of black, fixed knot wire mesh, supported by black steel tubing. This fence design was chosen to keep wildlife out of the array and to minimize visual impact. Cartwright/Mytro pf. reb. at 9 and 18; exh. CSF-LC/JM-12b.

11. Project construction is expected to take approximately 16 weeks and include three phases. The first phase will involve site preparation to provide access to the inverter location, placement of underground cable and fence construction. The second phase will involve installing the solar array support structures. The final phase will involve installing panels, wiring to the inverter enclosure, and the data acquisition system. Cartwright/Mytro pf. at 11.

12. The Project will be continually monitored via the internet to confirm proper operation and performance. Energy metering will be accomplished by remote telemetry. Cartwright/Mytro pf. at 12.

13. The Project has been certified as a Sustainably Priced Energy Enterprise Development ("SPEED") resource pursuant to 30 V.S.A. §§ 8001-8005a. The Petitioner has executed a Vermont SPEED Standard Offer Power Purchase Agreement with the Vermont SPEED Facilitator, which provides for the sale of the Project's output and other attributes, including Renewable Energy Credits ("RECs"), at a fixed price of \$0.24 per kWh for a period of twenty-five years. Cartwright/Mytro pf. at 4; exh. LC/JM-9.

**Orderly Development of the Region**

[30 V.S.A. § 248(b)(1)]

14. 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 the affected municipality. This finding is supported by findings 15 through 24, below.

15. The Project is consistent with the Chittenden County Regional Plan ("Regional Plan"). The Project will advance the stated policy of the Regional Plan that a larger share of the region's energy needs should be supplied by a combination of responsible new generation in the region. Kane pf. at 8; exh. CSF-MK-3c at 10.14.

16. The Project is located within the Rural Planning Area of the Regional Plan. The Regional Plan indicates that the Rural Planning Area "should include a mixture of land uses at densities and scales that are appropriate to Vermont's traditional rural landscape." Exh. CS-MK-2 at 28.

17. The Project is located in the Rural District of the Charlotte Town Plan ("Town Plan"). Kane pf. at 7.

18. The Town Plan "encourages the use of alternate and renewable energy sources." Charlotte Town Plan (2008) at 114.<sup>3</sup>

19. The Town Plan defines Areas of High Public Value as "[l]and with any of the following attributes: active agricultural use; . . . [and] critical wildlife habitat (as identified in the Town Plan or as field delineated)." Charlotte Town Plan (2008) at 117.

20. The Project Site contains active agricultural fields and a clay-plain forest that is identified in the Town Plan as Critical Wildlife Habitat. Thus, the Project Site contains Areas of High Public Value. Mapes pf. at 11; Charlotte Town Plan (2008) at Map 06; exh. CSF-MK-2 at 1.

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3. At the Technical Hearings, the Neighbors requested that the Board take administrative notice of the entire Town Plan. No party objected and this request was granted. Tr. 6/20/12 at 4. Though some portions of the Town Plan were entered into evidence as exhibits, I will cite directly to the Plan in this section where necessary.

21. The Project Site has also been considered for residential development. Tr. 6/20/12 at 130-131 (Vissering); exh. CSF-LC/JM-6b.

22. The Project is consistent with the Town Plan and will advance the goals of the Town Plan to encourage the use of alternate and renewable energy sources. Charlotte Town Plan (2008) at 114.

23. On June 1, 2012, the Town entered into a stipulation with the Petitioner pursuant to which the Town agreed not to oppose the Project in exchange for several significant revisions to the Project, including, but not limited to shifting the array to the north and west, reconfiguring the layout of the array and inverters, adding more landscaping, and changing the design in the Project fence. These revisions are reflected in the Revised Site Plan filed on June 1, 2012. Exhs. CSF-LC/JM-12a-b and 13.

24. The Project, as revised by the Petitioner and subject to conditions recommended in this Proposal for Decision, mitigates impacts to Areas of High Public Value as required by the Town Plan. Exh. CSF-LC/JM-13; findings 77 and 78, below.

#### Discussion

Section 248(b)(1) provides that, before the Board may issue a CPG for an in-state facility, the Board shall find that the facility:

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 the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality.

The Petitioner contends that the Project will not unduly interfere with the orderly development of the region because it is consistent with the Town Plan and the Regional Plan. The Petitioner argues that the Project parcel has not been targeted for conservation or designated as highly scenic in the Town Plan and that the Project can be integrated into the rural fabric of Charlotte in compliance with the Regional Plan.

The Neighbors contend that the Project would unduly interfere with orderly development of the region because it is inconsistent with the Town Plan, the town zoning regulations and the comments of the Charlotte Planning Commission. Specifically, the Neighbors contend that the Project parcel is an "Area of High Public Value," as defined by the Town Plan, and that the Town



Plan requires that these areas be "avoided and protected from negative impacts of development where possible." The Neighbors contend that the Petitioner has not demonstrated that development impacts to these areas are unavoidable because the Petitioner did not consider other properties in Charlotte or other locations within the proposed Project Site.<sup>4</sup>

The Town, through separate letters from the Charlotte Planning Commission and the Charlotte Select Board, submitted comments expressing concerns about the Project as originally proposed.<sup>5</sup> The Planning Commission's letter states that the Project is not a permitted use in the Rural District and that the Project would be better located in the Commercial/Light Industrial District. In the alternative, the Planning Commission requests that the Project be shifted north, to within 100 feet of the northern property line of the Project Site. The Select Board "generally supports the project" but also asks that the Project be shifted to within 100 feet of the northern property line of the Project Site. On June 1, 2012, the Charlotte Select Board approved a stipulation with the Petitioner in which it agreed not to oppose the Project in exchange for several significant revisions to the Project, including but not limited to shifting the array to the north and west, reconfiguring the layout of the array and inverters, adding more landscaping, and changing the design of the Project fence.

Turning to the Regional Plan, Chapter 10–Energy states that "[a] larger share of the Region's energy needs should be supplied by a combination of responsible new generation."<sup>6</sup> The Project, which will produce enough electricity for roughly 315 Vermont homes annually without the generation of greenhouse gasses, supports this goal.<sup>7</sup> Accordingly, I find that the Project is consistent with the Chittenden County Regional Plan.

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4. Additionally, the Neighbors argue that a solar farm is not a permitted use in the Rural Zone under the applicable zoning regulations. I do not address this argument because the statute does not require the petition to demonstrate strict compliance with the Town Zoning Regulations. Instead, the statute requires that the Board give "due consideration" to "the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality." 30 V.S.A. § 248(b)(1); *see also City of South Burlington v. Vermont Electric Power Co.*, 133 Vt. 438, 447 (1975) (holding that municipal enactments are advisory, not controlling, under Section 248).

5. Exhs. CS-MK-6a-b.

6. Exh. CSF-MK-3c at 10.14; Kane pf. at 8.

7. Cartwright/Mytro pf. at 5.

I also conclude that the Project is consistent with the Town Plan. Section 5.1.1 of the Town Plan outlines the general policies and strategies for development within the Town. These policies include supporting the right of landowners to make reasonable use of their property and the protection of Areas of High Public Value, which under the Town Plan are "important components of the quality of life and the environment in Charlotte."<sup>8</sup> The Town Plan further states that "Areas of High Public Value will be avoided and protected from negative impacts of development where possible" (emphasis added). Finally, Under Section 5.1.2, the Town Plan discusses specific strategies for considering development proposals in the Rural District:

1. During development review, Areas of High Public Value will be identified and prioritized based on the qualities and relative values of each resource. This analysis will be site specific, but will also consider resources in a broader context as appropriate.
2. The Open Space and Conservation Action Plan (currently under development) will be consulted with regard to identifying parcels or portions of parcels for conservation/protection.

In view of these articulated strategies, I am not persuaded by the Neighbors' arguments that the Town Plan prohibits the Project because it will impact Areas of High Public Value and that the Project fails to adequately protect these areas. Under Section 5.1.2 of the Town Plan, Areas of High Public Value are to be prioritized on a site specific basis, based on the relative values of each resource. There would be no need to prioritize Areas of High Public Value if the Town Plan was intended to prohibit all impacts of development to these areas. Instead, the Town Plan requires that development impacts be avoided where possible, and that such impacts be mitigated where they cannot be avoided. The Town Plan provides that "development may not be allowed" only where "impacts are not able to be sufficiently minimized and/or mitigated."<sup>9</sup>

I note that the Town has implemented a conservation program which has protected significant portions of Charlotte from development.<sup>10</sup> Similarly, the Town Plan contains a list

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8. Charlotte Town Plan (2008) at 96.

9. *Id.*

10. Tr. 6/20/12 at 10 (Basset); Charlotte Town Plan (2008) at Map 18.

and map of scenic vistas to be conserved.<sup>11</sup> In this case, the open field to be used for the Project is not identified on any map or portion of the Town Plan as requiring special conservation or protection – this stands in marked contrast to other areas of Charlotte that have been so designated.<sup>12</sup> Therefore, I find that the Town Plan does not prohibit development of the Project Site, but instead requires that the Petitioners design the Project to avoid Areas of High Public Value where possible or otherwise minimize impacts to those resources.

The Neighbors assert that the Petitioner cannot show that impacts to Areas of High Public Value are unavoidable because the Petitioner did not adequately consider alternatives, including alternative locations on the Project Site such as the clay-plain forest, and also other potential properties in Charlotte, such as properties outside the Rural Zone.<sup>13</sup> I do not agree with the Neighbors that the Town Plan requires that the Petitioner investigate other properties. Rather, I find such an interpretation of the Town Plan is unreasonable, as it would effectively prohibit development of all agricultural fields in Charlotte unless no other sites were available. While the Town Plan does seek to limit the development of Areas of High Public Value and to mitigate the impacts thereto, it does not categorically exclude them from development.<sup>14</sup>

I also do not agree with the Neighbors' argument that the Petitioner failed to adequately investigate options to locate the Project on the northern portion of the Project Site and therefore, failed to avoid Areas of High Public Value.<sup>15</sup> In the Petitioner's direct testimony, the Project developers stated that they chose to locate the Project in the open field and outside the clay-plain forest to avoid the destruction of an area specifically identified by the Charlotte Conservation

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11. *Id.* at Map 13.

12. Cartwright-Mytro pf. at 16.

13. Brief of the Neighbors, 7/18/12, at 6.

14. The Town has taken extensive steps to conserve over 20% of the land in Charlotte. Tr. 6/20/12 at 10 (Basset). If the intent of the Town Plan was to conserve all Areas of High Public Value, then these areas would have been marked for special protection.

15. The Neighbors raise this argument as part of their analysis under the aesthetics criterion, however I address this argument here since it concerns the consideration of alternatives and the Petitioner's ability to avoid impacts to agricultural fields. Neighbors' Reply Brief at 9.

Commission as critical wildlife habitat.<sup>16</sup> The Petitioner's prioritization of these areas is reasonable because removal of the forest would not substantially reduce the Project's visibility or aesthetic impacts.<sup>17</sup>

Based on the foregoing, I conclude that the Town Plan requires that the Petitioner conduct a site specific investigation of the proposed Project Site and design the Project in a manner that avoids Areas of High Public Value if feasible. In this case, it is not feasible to design the Project to entirely avoid impacts to Areas of High Public Value because the entire Project Site consists of open agricultural fields or forest habitat, both of which are identified in the Town Plan as Areas of High Public Value.<sup>18</sup> Therefore, I find that in this case it is not possible to avoid all impacts to Areas of High Public Value on the Project Site.

Because impacts to Areas of High Public Value are unavoidable in this case, the Town Plan requires that the Petitioner sufficiently minimize and mitigate those impacts; otherwise, development may not be allowed.<sup>19</sup> The Petitioner has revised the Project in consultation with the Town to minimize project impacts, and the Town has agreed to these revisions.<sup>20</sup> These revisions include shifting the Project towards the north and west to minimize visual impacts, changing the layout of the array and inverter structures, enhancing the vegetative screening employed to soften views, and changing the design of the Project fence to be less visually intrusive. Based on these revisions, I do not agree with the Neighbor's argument that the Petitioner has "ignored" the Town's comments.<sup>21</sup> Additionally, as discussed later in this Proposal for Decision under Criterion (b)(5), I recommend an additional condition limiting the size and scale of the Project to prevent undue adverse impacts on open space and agricultural

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16. Cartwright-Mytro pf. at 16.

17. It is also reasonable for developers of solar projects to avoid cutting down trees simply for the sake of saving trees regardless of their designation as habitat.

18. Charlotte Town Plan (2008) at 117 (defining of Areas of High Public Value) and Map 06 (delineating critical wildlife habitat).

19. Charlotte Town Plan (2008) at 96.

20. Exh. CSF-LC/JM-13.

21. Neighbors' Reply Brief at 11.

land, which are the Areas of High Public Value implicated here. Accordingly, I conclude that the Project, as revised and subject to the additional conditions recommended in this Proposal For Decision: (1) adequately mitigates impacts to Areas of High Public Value; (2) is in conformance with the Town Plan; and (3) does not unduly interfere with the orderly development of the region, with due consideration having been given the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality.

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

[30 V.S.A. § 248(b)(2)]

25. The Petitioner has executed a SPEED standard-offer contract with the Vermont SPEED Facilitator, which provides for the sale of the Project's output and other attributes, including RECs, at a fixed price for a period of twenty-five years. Cartwright/Mytro pf. at 4.

26. No part of the facility is financed directly or indirectly through investments, other than power contracts, backed by Vermont electricity ratepayers. Cartwright/Mytro pf. at 18; exhs. CSF-LC/JM-9, and CSF-LC/JM-15 at 4.

**Discussion**

Pursuant to 30 V.S.A. § 8005(b)(8):

a demonstration of compliance with subdivision 248(b)(2) of this title, relating to establishing need for the facility, shall not be required if the facility is a SPEED resource and if no part of the facility is financed directly or indirectly through investments, other than power contracts, backed by Vermont electricity ratepayers.

Accordingly, the Petitioner is not required to demonstrate compliance with this criterion.

**System Stability and Reliability**

[30 V.S.A. § 248(b)(3)]

27. The Project will not have an adverse impact on system stability or reliability. This finding is supported by findings 28 through 30, below.

28. On January 3, 2012, the Petitioner filed an Application for Interconnection pursuant to PSB Rule 5.500 with GMP. GMP conducted a System Impact Study and concluded that the interconnection of "the Project will not have an adverse effect on GMP's power system, stability,

quality, or reliability" so long as the Petitioner takes the following actions: (1) complete a coordination study on the GMP distribution system; (2) implement a six minute delay; (3) have a State Electrical Inspector inspect the Project system to ensure compliance with the National Electric Code; (4) complete testing of the Project as required by IEEE<sup>22</sup> 1547, Section 5 with a GMP technician present; (5) make it possible for the substation Load Tap Changer ("LTC") and the Mid Line regulators to be reverse flow capable; (6) remove Fast Trips from any reclosers present on the circuit. Exh. CSF-LC/JM-14 at 29-30.

29. Vermont Electric Power Company, Inc. ("VELCO") will need to study whether the Project will require a Direct Trip Transfer signal. Exh. CSF-LC/JM-14 at 29.

30. The Petitioner will pay for any electrical system modifications required to interconnect the Project. Cartwright/Mytro pf at 19.

### Discussion

The Petitioner represents that VELCO must study whether the Project will require a Direct Trip Transfer signal to assure system stability and reliability. The Petitioner further represents that it has committed to paying all interconnection costs. To address the need for this study, the Department recommends that the Board impose the following condition:

Charlotte Solar, LLC is to pay for all costs necessary for VELCO to complete a study regarding whether a Direct Transfer Trip signal is required to accommodate the Project and will pay all costs necessary to implement the recommendations of this additional study. Charlotte Solar, LLC will also be required to submit the results of the study to the Board and the parties for comment and review prior to commencing construction of the Project.

I agree that the Department's proposed condition is necessary to ensure system stability and reliability and I recommend that the Board adopt this condition. Additionally, the Petitioner has not submitted a facilities study. I recommend that the Board require the Petitioner to file a facilities study with the Board prior to commencing construction. I further recommend that the remaining parties thereafter be given one week from the date of filing to submit comments on the study.

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22. IEEE refers to: Institute of Electrical and Electronics Engineers Standard for Interconnecting Distributed Resources with Eclectic Power Systems.

**Economic Benefit to the State**

[30 V.S.A. § 248(b)(4)]

31. The Project will result in an economic benefit to the state and its residents. This finding is supported by findings 32 through 36, below.

32. The development of the Project is anticipated to cost approximately \$9 million, with annual operating costs of approximately \$60,000 to \$80,000. The Project will generate local and state property taxes in the tens of thousands of dollars per year. Cartwright-Mytro pf. at 19.

33. The most costly components of the Project, including the solar panels, racking system, and inverters will be manufactured outside of Vermont. Tr. 6/19/12 at 46-47 (Mytro).

34. The construction of the Project will result in economic benefits to the state through expenditures on some materials located in Vermont, such as gravel, and the temporary employment of at least a few dozen in-state workers. Cartwright-Mytro pf. reb. at 11; tr. 6/19/12 at 47 (Mytro).

35. The revenues generated by the Project will be subject to Vermont income tax. Cartwright-Mytro pf. reb. at 11-12.

36. The operation of the Project will result in an economic benefit to the state through the periodic employment of several in-state employees to maintain and monitor the Project, including snow removal and mowing around the array. Cartwright-Mytro pf. reb. at 11.

**Discussion**

Pursuant to 30 V.S.A § 248(b)(4), the Project must "result in an economic benefit to the state and its residents." The statute does not require an exact accounting of how much economic benefit the project will create, but only a determination that there will be some economic benefit.<sup>23</sup> In cases involving standard-offer projects with capacities of 2.2 MW or less, the Board has conditionally waived this criterion.<sup>24</sup> The conditional waiver does not, however, foreclose parties from presenting evidence that the waiver should not apply.<sup>25</sup>

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23. *In Re: Joint Petition of Green Mountain Power Corporation, et. al*, Docket 7628, Order of 5/31/11 at 35-36 (citing *In re Amended Petition of UPC Vermont Wind, LLC*, 2009 VT 19 at ¶¶ 5-11).

24. *Section 8007(b) Order*, Docket 7533, 8/31/10 at 8.

25. *Id.* at 6.

The Petitioner contends that the Neighbors have presented insufficient evidence to warrant a review under this criterion. In the alternative, the Petitioner contends that there is sufficient evidence in the record to support a favorable finding under this criterion.

The Neighbors contend that the economic benefits of the Project are insignificant and are offset by: (1) the above-market rates paid for the electricity generated by the Project; (2) diminution of neighboring property values; and (3) the potential loss of tourism dollars. The Neighbors further argue that the proffered economic benefits of the Project are not unique to the Project and could be obtained by any other proposed development in the standard-offer program. Finally, the Neighbors contend that the economic benefit from the Project will flow substantially to out-of-state corporations and suppliers.

As a preliminary matter, I am not persuaded by the Neighbors' argument that the Project will not result in an economic benefit to the state because the benefits proffered are not unique and could be obtained through the approval of other projects. There is no statutory requirement for the Board to find that a proposed project offers unique benefits or more benefits than other projects.<sup>26</sup> An economic benefit, unique or not, is still an economic benefit; therefore, the question of uniqueness is irrelevant. Similarly, the economic benefit obtained by out-of-state entities is irrelevant; the issue under 30 V.S.A. § 248 is whether sufficient evidence has been adduced for the Board to find that the Project will result in an economic benefit to Vermont.

The Neighbors also cite the standard-offer program's above-market rates to be paid to the Project owners as a cost to the state that should be deemed to offset any economic benefit of the Project. I do not agree with the Neighbors that the above-market prices offset the economic benefits associated with the Project. In creating the standard-offer program, the Legislature determined that it is the goal of Vermont to "[support] development of renewable energy . . . , and the jobs and economic benefits associated with such development."<sup>27</sup> The Legislature further directed the Board to issue standard-offer contracts at above-market rates for renewable energy

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26. The Board is required to determine whether the Project will "result in *an* economic benefit to the state and its residents." 30 V.S.A. § 248(b)(4) (emphasis added).

27. 30 V.S.A. § 8001(2).



projects to advance these policy goals.<sup>28</sup> Read together, these statutory provisions indicate that the Legislature authorized above-market rates for standard-offer projects to induce activity that would deliver the economic benefits associated with renewable energy development — economic benefits that otherwise would not accrue to Vermont. Thus, it follows that it would not be reasonable to characterize these above-market prices as an economic off-set when the purpose of the standard-offer program is to secure the economic benefits attendant to the construction of renewable generation facilities such as the Project at issue in this Docket.

With respect to property values, I do not find sufficient evidence in the record to support a conclusion that the construction of the Project would result in a net decrease in property values on a town, county, or region-wide basis. The Neighbors have presented evidence, primarily through the testimony of Mr. Colvin, that approval of the Project will have a "huge negative effect" on his property value.<sup>29</sup> However, this evidence does not address the effect of the Project on property values on a town or region-wide scale; instead the evidence pertains only to the interests of the private property owners similarly situated to Mr. Colvin — a matter that is not at issue in this Section 248 proceeding.<sup>30</sup> The Neighbors have not shown that these effects will be so widespread and significant such that they offset the economic benefits of the Project or otherwise call into question whether approval of the Project will promote the public good.

Similarly, I find insufficient evidence to conclude that the Project will have a negative impact on tourism in the region. While the Neighbors have shown that Hinesburg Road is frequently traveled by tourists during much of the year, they have failed to produce persuasive evidence showing that this travel, or any economic activity that comes with it, will be significantly decreased by the Project. Accordingly, I do not find that the economic benefits of the Project are offset by a loss of tourism activity.

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28. 30 V.S.A. § 8005a. The Project under review received a contract with prices set pursuant to the Vermont Energy Act of 2009, Public Act No. 45 (2009 Vt., Bien. Sess.). The Legislature has subsequently amended the methodology for setting prices for standard-offer projects in Public Act 170 (2012 Vt., Adj. Sess.).

29. Colvin pf. at 7.

30. *Vermont Electric Power Company, Inc. v. Bandel*, 135 Vt. 141, 145 (1977) ("This Court considers it settled law that proceedings under 30 V.S.A. § 248 relate only to the issue of public good, not the interests of private landowners who are or may be involved.").

In conclusion, I find that the Neighbors have not presented sufficient evidence to show that the Board's conditional waiver of the economic benefit criterion should not apply in this case. Additionally, I find that the Petitioner has presented sufficient evidence to support a positive finding under the economic benefit criterion.

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

[30 V.S.A. § 248(b)(5)]

37. The Project 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 38 through 85 below, which address the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

**Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

38. The Project will not have any undue adverse impacts on public health or safety. This finding is supported by findings 39 through 41, below.

39. The Project's inverters and switchgear will be located in two Underwriters Laboratories-listed enclosures. All electrical lines connecting the array and associated equipment will be underground. These lines will transmit electricity at a voltage that will not pose undue risks related to electromagnetic fields. Cartwright/Mytro pf. at 23-24;

40. The entire solar facility will be enclosed by a perimeter fence with appropriate signs warning of electrical danger. Cartwright/Mytro pf. at 23.

41. The Project's array will employ an anti-reflective coating that will prevent undue glare from impacting passing cars. Cartwright/Mytro pf. at 24.

**Discussion**

The Neighbors assert that the Project poses an undue risk to public health and safety *via* impacts of glare from the panels, electromagnetic fields, and electrocution of people interacting with the Project. The Petitioner has proposed the installation of appropriate equipment designed to mitigate these dangers similar to the equipment approved for other 2.2 MW solar projects in

Vermont.<sup>31</sup> Additionally the Project will be inspected by a State Electrical Inspector for compliance with the National Electric Code pursuant to the recommendations contained in GMP's SIS. The Neighbors have failed to show that these steps are inadequate to protect public health and safety. Accordingly, I conclude that the Project will not have an undue impact on public health and safety.

### **Outstanding Resource Waters**

[10 V.S.A. § 1424(a)(d)]

42. There are no outstanding resource waters in the Project area. Mapes pf. at 3-4.

### **Air Pollution**

[10 V.S.A. § 6086(a)(1)]

43. The Project will not result in undue air pollution. This finding is supported by findings 44 through 47, below.

44. Dust generated from construction of the Project will be minimal and controlled through the application of water as needed. Mapes pf. at 4.

45. The Project will not generate air pollutants during operation. Mapes pf. at 5.

46. The Project's inverters, based on manufacturer specifications, will generate noise of approximately 69.8 A-weighted decibels ("dbA") at three meters. At the closest residence, which is 850 feet from the combined source, this sound level will be 28.7 dBA. Kane supp. pf. (6/19/12) at 3.

47. The Petitioner has proposed that construction be limited to between 7:00 A.M. and 6:00 P.M., Monday through Saturday. Exh. CSF-LC/JM-15 at 2.

### **Discussion**

In previous cases concerning projects in proximity to residences, the Board has imposed more stringent limits on construction schedules than those proposed by the Petitioner.<sup>32</sup>

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31. *Petition of Cross Pollination, Inc.*, Docket 7645, Order of 7/8/11 at 9.

32. *Joint Petition of Vermont Electric Power Company, Inc. et al.*, Docket 7763, Order of 8/17/12 at 85.

Therefore, I recommend that the Board require that construction of the Project be limited to between 8:00 A.M. and 5:00 P.M., Monday through Saturday, with no construction allowed on holidays.

**Water Pollution**

[10 V.S.A. § 6086(a)(1)]

48. The Project will not result in unreasonable water pollution. This finding is supported by findings 49 through 63, below.

**Headwaters**

[10 V.S.A. § 6086(a)(1)(A)]

49. The Project parcel is located within a headwaters area as defined by 10 V.S.A. § 6086(a)(1)(A). The Project will meet all health and environmental conservation department regulations regarding the reduction of the quality of ground or surface waters flowing through lands defined as headwater. Mapes pf. at 5-6.

50. The Petitioner has obtained a construction-phase stormwater discharge permit, and will implement a site-specific erosion prevention and sediment control ("EPSC") plan during construction. Conditions of the stormwater discharge permit and the EPSC plan will ensure that ground- and surface-water quality are not unduly affected by the Project's construction activities. Mapes pf. at 6; exh. CSF-SMM-5.

**Waste Disposal**

[10 V.S.A. § 6086(a)(1)(B)]

51. The Project will meet applicable health and Department of Environmental Conservation regulations regarding the disposal of wastes. This finding is supported by findings 52 through 54, below.

52. The Project operations will not generate any waste. The Project construction will not require any brush or tree clearing. Any waste generated during construction will be recycled or disposed of in accordance with all applicable solid waste management laws and regulations. Mapes pf. at 6-7.

53. The Project does not involve disposal of wastes or injections of any material into ground water or wells. Mapes pf. at 6.

54. The Project will create less than one acre of impervious surface. Therefore, the Project will not require an operational-phase stormwater permit. Mapes pf. at 7.

**Floodways**

[10 V.S.A. § 6086(a)(1)(D)]

55. The Project is not located in a floodway or floodway fringe. Mapes pf. at 8.

**Streams**

[10 V.S.A. § 6086(a)(1)(E)]

56. There are no streams on the Project Site. Off of the Project Site, downslope drainageways contribute to Bingham Brook, which flows to Mud Hollow Brook. The Project is 900 to 1,000 feet from the drainageways and 2,000 feet from Bingham Brook. There are no impacts expected to occur to off-site watercourses as a result of the Project. Mapes pf. at 8-9.

57. Silt fencing will be installed downhill of areas of earth disturbance. Mapes pf. at 10.

**Shorelines**

[10 V.S.A. § 6086(a)(1)(F)]

58. The Project parcel is not on a shoreline of a lake, pond, reservoir or river, as defined in 10 V.S.A. § 6001(17). Mapes pf. at 9.

**Wetlands**

[10 V.S.A. § 6086(a)(1)(G)]

59. The Project will have no impact on Class I, II, or III wetlands. Mapes pf. at 9; exhs. CSF-SMM-6a-b.

**Water Conservation, Sufficiency of Water, and Burden on Existing Water Supply**  
[10 V.S.A. §§ 6086(a)(1)(C), and (a)(2)&(3)]

60. The Project's operations will not require the use of water, except for possible cleaning of the solar panels. The Project's construction will not require the use of water, unless required for dust control. If water is required, it will be trucked to the Project Site. Mapes pf. at 9-10; exh. CSF-SMM-6c.

**Soil Erosion**  
[10 V.S.A. § 6086(a)(4)]

61. The Project will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. This finding is supported by findings 62 and 63, below.

62. The Project will include the implementation of a comprehensive EPSC plan which will include, at a minimum, silt fencing being installed and maintained downhill of areas of earth disturbance, and stabilizing all earth disturbances with temporary Best Management Practices and permanent stabilization with native grass seed upon completion of construction activities. Mapes pf. at 10.

63. The access to the Project parcel will be through an existing driveway on Hinesburg Road. This access will be improved with a stabilized stone construction entrance which will prevent the tracking of sediment off of the Project Site. The Petitioner will routinely sweep up any sediment tracked onto Hinesburg Road. Mapes pf. at 10-11; exh. CSF-LC/JM-12a.

**Transportation Systems**  
[10 V.S.A. § 6086(a)(5)]

64. The Project will not cause unreasonable congestion or unsafe conditions with respect to transportation. This finding is supported by findings 65 and 66, below.

65. The Project is expected to produce an estimated 1,600 total vehicle trips to the Project Site and delivery of 20+/- tractor trailer loads of equipment, over three months. This additional traffic will not have an appreciable effect on daily traffic volume on Hinesburg Road, which has approximately 2,300 vehicle trips per day based upon Vermont Agency of Transportation data. Cartwright/Mytro pf. at 21.

66. The solar panels, mounting system, conduits, and inverters are all of appropriate size, shape, and weight to be transported to the Project Site on Hinesburg Road and other state or local roads using standard road delivery methods. No oversize or overweight loads requiring special permits for transportation are expected to be needed. Cartwright/Mytro pf. at 21-22.

**Educational and Municipal Services**

[10 V.S.A. §§ 6086(a)(6) and (7)]

67. The Project will not create an unreasonable burden on the Town to provide municipal or educational services. Cartwright/Mytro pf. at 22.

68. The Project will not require any unique police, fire, water, sewage or rescue services and will be installed to conform with all applicable electrical and fire codes. Cartwright/Mytro pf. at 22.

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

[10 V.S.A. § 6086(a)(8)]

69. The Project, subject to the conditions recommended below, will not have an undue adverse effect on the scenic or natural beauty, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 70 through 82, below.

70. The Project will be located in what is presently a hay field. The Project Site is part of a landscape consisting of residences, agricultural fields, and forests. Exh. CSF-MK-2 at 1, 4.

71. The Project Site is bordered by residences to the south and east, a forested area to the north and fields to the west. Hinesburg Road runs along a large portion of the southern boundary of the Project Site. Exh. CSF-LC/JM-12a.

72. The Project will be visible for approximately 10 seconds to motorists traveling on Hinesburg Road. Kane pf. reb. at 28.

73. The proposed vegetative mitigation, including shade trees (maple or other salt-tolerant species) along Hinesburg Road and a hedgerow along the solar array perimeter will effectively limit the visual impact of the Project for travelers on Hinesburg Road. Kane pf. reb. at 28-29; exh. CSF-MK-6a-b.

74. There will be limited, distant views of the Project from Mt. Philo Road and several residences located on Mt. Philo Road. These views will be partially obstructed by the western hedgerow and the Project will occupy a small portion of the overall landscape. Kane pf. reb. at 22-23; Vissering pf. at 6.

75. The Project will be visible from the Allmon Property at Mt. Philo State Park. Though the Project will be noticeable due to its dark color, the Project will occupy a relatively small part of the overall views and will not significantly detract from the overall landscape. Vissering pf. at 8; Kane pf. reb. at 29; exh. CSF-MK-9c.

76. The Project will be visible from several residences on Hinesburg Road and the Sheehan Green Development. The Petitioner has included screening along the affected property lines and eastern hedgerow to reduce the visual impact of the Project for these residences. Vissering pf. at 8-9; Kane pf. reb. at 17-18; exh. CSF-MK-6a-b.

77. The Project array will occupy 12.6 acres of an approximately 36-acre agricultural field. Reducing the "fence to fence" footprint of the array to occupy less than one-third of the open meadow (under 12 acres) is necessary to ensure that the scale of the development is appropriate to the rural setting of the Project. Tr. 6/20/12 at 94-95 (Vissering); Vissering pf. at 12.

78. Shifting the Project further north into a portion of the clay-plain forest would destroy an area of ecological significance to the state and would not appreciably reduce the visual impact of the Project. Cartwright-Mytro pf. at 16.

79. The Project does not violate clear written community standards that are designed to protect the aesthetics or scenic beauty of the area. The Project is consistent with the objectives and goals of the Charlotte Town Plan and the Chittenden County Regional Plan to encourage renewable energy projects, protect scenic qualities, and preserve agricultural land uses. Vissering pf. at 10; Kane pf. at 7; exh. CSF-MK-2 at 13-15.

80. The Petitioner has taken the following steps to minimize and mitigate potential aesthetic impacts: shifting the array to the north and west to provide increased setbacks from residences; painting the inverter structures black to reduce their visual prominence; shifting the inverter structures into the array to reduce their visibility; using Maple or other salt tolerant shade trees to screen Hinesburg Road; adding perimeter hedgerows to screen the Project; using "solid-



lock" fencing; the use of underground Project-related power lines and cables within the property; and using dark stone for the access driveway. Exh. LC/JM-13.

81. The Project will not have an undue adverse impact on historic or archaeological resources. The Project is not visible from the nearest identified historic sites, the Beam Farm and the East Charlotte Village District. The Vermont Division for Historic Preservation concluded that the Project will have no adverse effect on historic resources. Exhs. CSF-MK-2 at 21 and CSF-SMM-8.

82. There are no known rare or irreplaceable areas at the Project Site. Mapes pf. at 12.

### Discussion

When making findings under this criterion, the Board applies the so-called "Quechee Test," to determine whether a project's impacts will be unduly adverse.<sup>33</sup> Under this analysis, the first step to determine if the impact of the project will be adverse. A project would have an adverse impact on the aesthetics of the area if its design were deemed to be out of context or not in harmony with the area in which the project is to be located. If it is found that the project's impact would be adverse, it is then necessary to determine whether such an adverse impact would be "undue." Impacts are considered unduly adverse if the project violates a clear written community standard intended to preserve the aesthetics or scenic beauty of the area, if the project fails to take generally available mitigating steps to improve the harmony of the project with its surroundings, or if the project would offend the sensibilities of the average person. Additionally, the Board's assessment of whether a particular project will have an "undue" adverse impact based on these three standards is informed by the overall societal benefits of the project.<sup>34</sup>

The Petitioner contends that the Project, as revised, will not have an undue adverse impact on aesthetics and the scenic or natural beauty of the area. The Petitioner argues that while the Project's visual impacts will be adverse, the impacts will not be unduly adverse because: (1) the Project does not violate a clear, written community standard; (2) the Project is not shocking or offensive; and (3) the Petitioner has taken generally available mitigating steps which a

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33. *In re UPC Vermont Wind, LLC*, 144 VT 2009 ¶24, 185 Vt. 296.

34. *Petition of UPC Vermont Wind, LLC*, Docket 7156, Order of 8/8/07 at 65.

reasonable person would take to improve the harmony of the Project with its surroundings. Finally, the Petitioner has offered to reduce the footprint of the Project by 10%, with the reduced area being removed from the southern edge of the array, to further mitigate the aesthetic impacts of the Project.<sup>35</sup>

The Department's expert states that the Project will have an adverse impact on the aesthetics and the natural and scenic beauty of the area. The Department argues that the Project does not violate a clear, written community standard and that the Project would not offend the sensibilities of the average person. The Department recommends that the Board find that the Project, as proposed, will have an undue adverse impact on aesthetics and on the scenic and natural beauty of the area because the Project fails to take generally available mitigating steps. However, the Department maintains that the Project's impacts would not be unduly adverse if the Board were to impose a condition limiting the Project's area to less than one-third of the meadow. The Department contends that shrinking the footprint of the solar array, so long as it doesn't reduce the economic viability of the Project, is a mitigating step that the Petitioner has failed to take. By requiring this additional mitigation step, the impact of the Project will not be unduly adverse.

The Neighbors argue that the Project will have an undue adverse impact on scenic and natural beauty. The Neighbors contend that the Project violates clear, written community standards, fails to take generally available mitigating steps, and is shocking or offensive to the average person.

Though the Town did not present evidence at the Technical Hearings, the Town did hire an expert to conduct a visual analysis using the Quechee Test.<sup>36</sup> The Town's expert concluded that the Project, as originally proposed: (1) would have an adverse impact; (2) would not be offensive to the average person; (3) would not likely violate a clear, written community standard, and (4) that the Petitioner had failed to take reasonable mitigating steps, or at least failed to explain why certain mitigating steps were unavailable.

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35. The Petitioner has not offered to reduce the Project in any way that reduces the megawatt capacity of the Project or impairs its economic viability.

36. This report was admitted as Neighbors Cross Exhibit 2.

Based upon the evidence presented, I find that the Project will have an adverse impact on the scenic and natural beauty of the immediate area. The Project will locate 12.6 acres of solar panels in an open meadow. The panels will form a unified mass that will be out of context with their surroundings and visible to several adjoining residences and travelers on Hinesburg Road. To a lesser extent, the Project will also be visible to residences on Mt. Philo Road.

Turning to whether the Project's impact is unduly adverse, the first step is to determine whether the Project violates a clear, written community standard. I conclude that the applicable Regional and Town Plans contain no clear, written community standards with which the Project would be inconsistent. For a provision to constitute a clear, written community standard, it must "be intended to preserve the aesthetics or scenic beauty of the area where the proposed project is located and must apply to specific resources in the proposed project area."<sup>37</sup> In this case, the Project Site is not specifically identified in the Town Plan or the Regional Plan for conservation. The Neighbors point to the "overarching goal" of the Town Plan and the language regarding Areas of High Public Value as clear, written community standards. As discussed under the orderly development criterion, this language is general in nature and seeks to promote good stewardship of scenic resources without identifying specific actionable standards applicable to the Project Site.<sup>38</sup> Therefore, I conclude that the Project does not violate a clear, written community standard.

To demonstrate that the Project will not have undue adverse impacts, the Petitioner must take generally available steps to mitigate the impact of the Project and improve the harmony of the project with its surroundings. In discussing what constitutes "generally available steps," the Vermont Supreme Court has stated that "a generally available mitigating step is one that is reasonably feasible and does not frustrate the project's purpose."<sup>39</sup>

The Petitioner undertook many mitigating steps in direct response to comments from the parties throughout the course of this case, resulting in a revised landscape mitigation plan and the

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37. *Petition of Cross Pollination, Inc.*, Docket 7645, Order of 7/8/11 at 21.

38. Vissering pf. at 10; exh. CSF-MK-2 at 15.

39. *In re Stokes Communications Corp.*, 164 Vt. 30, 39 (1995).

Revised Site Plan.<sup>40</sup> These revised plans outline the following mitigating steps to be taken by the Petitioner: shifting the Project to the north and west, pulling the inverter structures into the array to reduce visibility, changing the design of the Project fence, and significantly altering the proposed vegetative screening. Nonetheless, the parties dispute whether the Petitioner has taken all available mitigating steps; specifically, whether the Petitioner should reduce the "size" of the Project.

While the Petitioner argues that the Project requires no further mitigation, the Petitioner volunteered after the technical hearing to reduce the footprint of the Project by 10%, a step that would not affect the economic viability of the Project.<sup>41</sup> Therefore, it appears that such a reduction in footprint is reasonably feasible and thus generally available. Additionally, the Department's expert agrees that such a reduction would sufficiently mitigate the Project's impacts.<sup>42</sup> Accordingly, I recommend that the Board impose the following term as a condition of approving the Project:

Charlotte Solar shall reduce the footprint of the solar array (12.6 acres) as depicted in the Revised Site Plan (Exhibit CSF-LC/JM-12a-b) by 10%. The reduction shall be at the southern portion of the project, such that the amount of open meadow in front of the Project will increase. Charlotte Solar shall submit a Second Revised Site Plan to the Board and the parties for review and comment prior to commencing construction of the Project.<sup>43</sup>

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40. Exhs. CSF-MK-6a-b and CSF-MK-12a-b.

41. *Reply Brief of Charlotte Solar, LLC*, 8/1/12 at 12 ("Charlotte Solar is able and willing, however, to meet the Department's request to reduce the footprint by 10% – without reducing the MW capacity and therefore the economic viability of the Project.").

42. Vissering pf. at 12; tr. 6/20/12 at 87 (Vissering).

43. The Neighbors oppose the approval of the Project, even with such a condition. However, the Neighbors argue that if a reduction is required, the reduction should be 21%, because that is the reduction necessary to reduce the footprint of the entire Project, including the access road, to under one-third of the meadow. While Ms. Vissering's prefiled testimony is unclear on this point, her subsequent testimony clarified that she was only concerned with the footprint of the solar array, or the "fence to fence" portion of the Project, not the entire access road. Tr. 6/20/12 at 94 (Vissering). Accordingly, the size reduction required is intended to achieve a "fence to fence" footprint that occupies less than one-third of the 36-acre meadow, or under 12 acres. Vissering pf. at 12.

I also recommend that the parties be given two weeks, from the date the plan is filed with the Board, to file any comments on the Second Revised Site Plan.<sup>44</sup>

The final step in determining whether impacts are undue is to ask whether the Project would offend the sensibilities of the average person. While the Project will be visible to the adjoining residences, the Project's location has been revised to include larger set backs.<sup>45</sup> Additionally, the Project footprint will be reduced, under the condition recommended above, to a development ratio more appropriately scaled to the Project's rural setting. The public views of the Project from Hinesburg Road will be of a limited duration and mitigated by the proposed vegetative screening.<sup>46</sup> The public views from Mt. Philo Road and Mt. Philo State Park will be from a great distance and the Project will occupy a minimal portion of the view.<sup>47</sup> Accordingly, I conclude that the Project will not offend the sensibilities of the average person.

Based upon the applicable law and the facts presented in this case, I conclude that the Project, subject to the conditions recommended in this Proposal For Decision, will not result in an undue adverse impact to the aesthetic and scenic beauty of the area for the following reasons: (1) the Project does not violate any clearly written community standard; (2) the Project will not be shocking or offensive to the average person because of the limited public views and because the Project footprint will be limited to less than one-third of the meadow, thus ensuring that its scale is appropriate for its rural setting; and (3) the Petitioner, subject to conditions required in this Order, has taken reasonably available mitigation steps to reduce the Project's aesthetic impacts, including reducing the footprint of the Project and implementing the mitigation steps outlined in the Stipulation.<sup>48</sup>

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44. While the Briefs of the Department and the Petitioner state that the proposed footprint of the array is 12.5 acres, the site plan submitted states that the array will occupy 12.6 acres. Exh. CSF-LC/JM 12a.

45. The setbacks were increased from 412 feet to 477 feet to the Colvin property line and 50 feet to 185 feet from the Sheehan Green Subdivision. Cartwright/Mytro pf. at 7; exh. CSF-LC/JM 12a.

46. Kane pf. reb. at 21; exhs. CSF-MK-2 at 8-9, 6a.

47. Kane pf. reb. at 22-23, 29.

48. Vissering pf. at 10-12; Kane pf. 5-6; exh. CSF-LC/JM-13.

Under the Stipulation entered into between the Petitioner and the Town, the Petitioner has agreed to undertake numerous mitigating steps in developing the Project. In Paragraph 1 of the Stipulation the Petitioner agreed to construct the Project in accordance with the "Revised Site Plan," which was submitted in this proceeding as Exhibit CSF-LC/JM-12a. The Petitioner should incorporate the site parameters agreed to with the Town under Paragraph 1 in developing a Second Revised Site Plan as required by the condition recommended above. I recommend the Board require that Petitioner to implement all other mitigation steps outlined in the Stipulation. Further, I recommend the Petitioners be required to notify the Board and parties in this case within 30 days after construction is finished so that the Board may undertake a post-construction site visit to review these measures. Finally, I recommend that the Board include a condition in the CPG providing that the Board may require the Petitioner to implement additional mitigation measures if the Board finds the mitigation measures as installed to be inadequate.

**Necessary Wildlife Habitat and Endangered Species**

[10 V.S.A. § 6086(a)(8)(A)]

83. There are no known threatened or endangered species or areas of necessary wildlife habitat within the Project area. Mapes pf. at 13.

**Development Affecting Public Investments**

[10 V.S.A. § 6086(a)(9)(K)]

84. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of the public's use or enjoyment of or access to such facilities, services, or lands. This finding is supported by finding 85, below.

85. The only public investment close to the Project is Hinesburg Road. The Project Site is located entirely outside any highway right of way and will be set back approximately 664 feet from the Hinesburg Road right-of-way. The Project will not create any adverse burdens on this public road. Cartwright/Mytro pf. reb. at 4.

**Least-Cost Integrated Resource Plan**

[30 V.S.A. § 248(b)(6)]

86. The Project will be a merchant generation facility, therefore the Petitioner is not required to prepare a least-cost integrated resource plan.

**Compliance with Electric Energy Plan**

[30 V.S.A. § 248(b)(7)]

87. The Project complies with the *Vermont Twenty-Year Electric Plan*. Cartwright/Mytro pf. at 24-25. This finding is also based on finding 84, below:

88. On June 19, 2012, the Department filed a letter stating that the Project is consistent with the *Vermont Twenty-Year Electric Plan*, pursuant to 30 V.S.A. § 202(f). Letter of June 19, 2012, from William B. Jordan on behalf of the Vermont Department of Public Service.

**Outstanding Resource Waters**

[30 V.S.A. § 248(b)(8)]

89. There are no outstanding resource waters in the Project area. Mapes pf. 3-4.

**Waste-to-Energy Facility**

[30 V.S.A. § 248(b)(9)]

90. The Project does not involve a waste-to-energy facility.

**Existing or Planned Transmission Facilities**

[30 V.S.A. § 248(b)(10)]

91. The Project can be served economically by existing transmission facilities without undue adverse impacts on Vermont utilities and customers. This finding is supported by findings 28 through 30, above, and 92 through 93, below.

92. The Project will connect directly to the GMP distribution system at the 28G2 Circuit (7.2/12.47 kV) on Hinesburg Road. Exh. CSF-LC/JM-14 at 1.

93. The Petitioner will pay for any electrical system modifications required to interconnect the Project. Cartwright pf. sup. at 2.

### **Decommissioning Fund**

94. At the time the Project ceases to operate, the Petitioner will decommission the Project. Decommissioning will include the removal of the solar panels, support structures, electrical lines, inverters, transformers, concrete pads, and fencing, and the reclamation of the Project Site to restore its agricultural potential, which includes plowing the Project Site to a depth of 8 inches, preparing the Project Site for re-seeding or planting, and adding soil amendments as prescribed pursuant to the Agency of Agriculture's Acceptable Agricultural Practices. Exh. CSF-LC/JM-8a.

95. The Estimated Cost of Decommissioning the Project is \$174,000, including \$5,000 for the restoration of agricultural soils. The Estimated Cost of Decommissioning shall be adjusted annually to account for inflation, based upon the current Consumer Price Index ("CPI") as maintained by the Bureau of Labor Statistics (the Revised Estimated Cost of Decommissioning). Petitioner shall file an annual report with the Board and the Department of Public Service on the status of the Decommissioning Fund after each annual adjustment. Exhs. LC/JM-8a-b.

96. The Petitioner proposes the creation of a decommissioning fund that includes the following provisions:

- a. The Decommissioning Fund will initially be funded with an irrevocable standby Letter of Credit ("LC"), escrow account, bond, or other appropriate financial security that: (i) is bankruptcy remote; (ii) includes an auto-extension provision (i.e., "evergreen clause"); and (iii) is issued solely for the benefit of the Board. No other entity, including Petitioner, shall have the ability to demand payment under the LC (or other appropriate financial security). Prior to commencement of construction, Petitioner will submit its initial Letter of Credit (or other appropriate financial security) to the Board and Department for review and for Board approval.
- b. Petitioner shall calculate the annual inflation adjustment, as noted above, to determine the Revised Estimated Cost of Decommissioning. If the Revised Estimated Cost of Decommissioning exceeds the then-current Estimated Cost of Decommissioning, Petitioner shall cause a new or amended LC (or other appropriate financial security) to be issued to reflect the Revised Estimated Cost of Decommissioning. In the event the CPI has a negative value at the time the annual adjustment is calculated, the value of the LC (or other appropriate financial security) shall not be reduced.
- c. At the end of the Project's useful life, and in the event Petitioner does not seek Board approval to repower the Project, Petitioner will decommission the Project as required under the Board's Order and CPG issued in this docket. Upon



completion of decommissioning, Petitioner shall seek a certification of completion from the Board. The certification will be provided to the issuing bank with instructions to terminate the LC (or another appropriate financial security).

d. The Board shall have the right to draw on the LC (or other appropriate financial security) to pay the costs of decommissioning in the event that Petitioner (or its successor) is unable or unwilling to commence decommissioning due to dissolution, bankruptcy, or otherwise. Prior to the Board drawing on the LC (or other appropriate financial security), Petitioner shall have a reasonable period of time to commence decommissioning, not to exceed ninety days following issuance of a Board order requiring decommissioning of the Project, which order is no longer subject to appeal.

Exh. SCF-LC/JM-8a.

#### Discussion

Board Rule 5.402(C)(2) requires non-utility petitioners to "include a plan for decommissioning the project at the end of its useful life. This requirement does not apply to proposed generation facilities with a capacity of one MW or less."

The Petitioner agrees to decommission the Project at the end of the Project's useful life. The Petitioner has submitted a detailed plan for decommissioning that estimates it will cost \$174,000 dollars to decommission the Project.

In previous Board approvals, the Board has approved plans for decommissioning that include: (1) a detailed plan for decommissioning the proposed project and an estimate of the decommissioning costs; and (2) a plan for the creation of a decommissioning fund. The Petitioner has provided a detailed plan for decommissioning the Project and a detailed estimate of the decommissioning costs. The Petitioner proposes that the decommissioning fund will initially be funded with an irrevocable standby Letter of Credit, escrow account, bond, or other appropriate financial security that: (i) is bankruptcy remote; (ii) includes an auto-extension provision (i.e., "evergreen clause"); and (iii) is issued solely for the benefit of the Board. In previous cases, the Board has determined that a Letter of Credit is the most appropriate financial security for the establishment of a decommissioning fund. Accordingly, I recommend the Board approve the Project decommissioning plan, with the condition that the Petitioner must use a Letter of Credit and shall submit its initial Letter of Credit to the Board for approval prior to commencing construction of the Project.

## V. DISCUSSION

The Petitioner has provided sufficient evidence to demonstrate that the Project complies with all applicable Section 248 criteria. Therefore, I recommend that the Board approve the Project and issue a CPG for construction of the Project with the conditions set forth in the proposed Order and CPG, below.

Because the parties to this proceeding have not waived their rights under 3 V.S.A. § 811 to file written comments or present oral argument with respect to this Proposal for Decision, I am circulating the Proposal for Decision to the parties for their review and comment.

## VI. CONCLUSION

Based upon the evidence in the record, I conclude that the Project, subject to the conditions set forth in the Proposed Order and CPG below:

- (a) 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, and the recommendations of the municipal legislative bodies;
- (b) is a SPEED resource and thus, is not required to comply with 30 V.S.A. § 248(b)(2);
- (c) will not adversely affect system stability and reliability;
- (d) will result in an economic benefit to the state and its residents;
- (e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and §§ 6086(a)(1) through (8) and (9)(K);
- (f) is in compliance with the electric energy plan under 30 V.S.A. § 202;
- (g) does not involve a facility affecting or located on any segment of the waters of the State that has been designated as outstanding resource waters by the Water Resources Board;
- (h) does not involve a waste-to-energy facility; and
- (i) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

I recommend that the Board approve the proposed project and issue a CPG for construction of the proposed Project with the conditions set forth in the proposed Order and CPG, below.

DATED at Montpelier, Vermont this \_\_\_\_\_ day of \_\_\_\_\_, 2012.

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Jake Marren, Esq.  
Hearing Officer

### VIII. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board ("Board") of the State of Vermont that:

1. The findings, conclusions, and recommendations of the Hearing Officer are adopted.
2. The installation and operation of a 2.2 MW solar electric generation facility by Charlotte Solar, LLC ("Charlotte Solar") in Charlotte, Vermont, (the "Project") will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good to that effect shall be issued.
3. Construction, operation, and maintenance of the proposed project shall be in accordance with the plans and evidence as submitted in this proceeding. Any material deviation from these plans must be approved by the Board. Failure to obtain advance approval from the Board for a material deviation from the approved plans may result in the assessment of a penalty pursuant to 30 V.S.A. §§ 30 and 247.
4. Prior to commencement of construction, Charlotte Solar shall file the Facilities Study prepared by Green Mountain Power Corporation ("GMP") with the Board and with the Department of Public Service ("Department") for review. Parties in this Docket shall have two weeks, from the date the plan is filed with the Board, to file any comments regarding the Facility Study.
5. Charlotte shall pay the entire cost of any distribution system upgrades necessary to interconnect the Project with GMP's distribution system.
6. Charlotte Solar shall pay for all costs necessary for Vermont Electric Power Company, Inc. ("VELCO") to complete a study regarding whether a Direct Transfer Trip signal is required to accommodate the Project and will pay all costs necessary to implement the recommendations of this additional study. Charlotte Solar shall file the results of the study with the Board and shall provide the parties with copies for comment and review prior to commencing construction of the Project.
7. All construction activities shall comply with the Construction General Permit issued by the Vermont Agency of Natural Resources ("ANR").

8. All construction activities shall comply with the site-specific Erosion Prevention and Sediment Control Plan developed for the Project.

9. Prior to the commencement of construction, Charlotte Solar shall submit its initial Letter of Credit to the Board and Department for review and for Board approval.

10. Prior to proceeding with construction, Charlotte Solar shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the Project shall be in accordance with such permits and approvals, and with all other applicable regulations, including those of ANR.

11. Charlotte Solar shall reduce the footprint of the solar array (12.6 acres) as depicted in the Revised Site Plan (Exhibit CSF-LC/JM-12a-b) by 10%. The reduction shall be at the southern portion of the project, such that the amount of open meadow in front of the Project will increase. Charlotte Solar shall file a Second Revised Site Plan with the Board for review and approval prior to commencing construction of the Project.

12. Within 30 days of completing construction of the Project, Charlotte Solar shall notify the parties and the Board to schedule a post construction site visit. The purpose of the site visit will be to review the effectiveness of the aesthetic mitigation measures, as installed. As a result of any such review, the Board may require Charlotte Solar to install additional mitigation measures.

13. The Petitioner shall implement all mitigating steps agreed to in the Stipulation with the Town of Charlotte. The Second Revised Site Plan submitted pursuant to condition 11, above, shall incorporate all site parameters agreed to under Paragraph 1 of the Stipulation, except that the southern boundary of the array shall be shifted northward to reflect the required 10% reduction in size.

Dated at Montpelier, Vermont, this \_\_\_\_\_ day of \_\_\_\_\_ 2012.

_____ )	
_____ )	PUBLIC SERVICE
_____ )	
_____ )	BOARD
_____ )	
_____ )	OF VERMONT
_____ )	

OFFICE OF THE CLERK

FILED:

ATTEST: \_\_\_\_\_  
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*