

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 17-2813-PET

Petition of Green Mountain Power for a Certificate of Public Good pursuant to 30 V.S.A. § 248(j), authorizing the installation and operation of a battery storage system on the GMPSolar Panton Project site located in Panton, Vermont, to be known as the “GMP Panton Battery Storage Project”	
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Order entered:

8/31/2017

ORDER RE: SECTION 248 SIGNIFICANT ISSUES

This proceeding concerns a petition filed by Green Mountain Power Corporation (“GMP”) with the Vermont Public Utility Commission (“Commission”)¹ requesting a Certificate of Public Good (“CPG”) pursuant to 30 V.S.A. § 248(j), authorizing the installation and operation of a battery storage system on the GMPSolar Panton Project site in Panton, Vermont, to be known as the “GMP Panton Battery Storage Project” (the “Project”).

Under Section 248(j)(2), “if the Board finds that the petition raises a significant issue with respect to the substantive criteria of this section, the Board shall hear evidence on any such issue.” In today’s Order, the Commission finds that GMP’s petition raises several significant issues under various criteria of 30 V.S.A. § 248. Accordingly, pursuant to 30 V.S.A. § 248(j)(2), we assign a hearing officer to hold a technical hearing to investigate those significant issues.

I. BACKGROUND

The proposed battery storage system is a 1MW/4MWH Tesla Powerpack 2.0 battery system, which would be located entirely within the fence line of the existing GMPSolar Panton Project site. The total footprint of the battery storage system would be approximately 4,000 square feet and would consist of a 26-foot by 37-foot concrete pad on which the battery packs, inverters, and switchgear would be mounted, as well as a control cabinet, pad-mounted

¹ Pursuant to Section 9 of Act 53 of the 2017 legislative session, the Vermont Public Service Board’s name was changed to the Vermont Public Utility Commission, effective July 1, 2017. For clarity, all references to the Vermont Public Service Board (or “Board”) in this order have been changed to refer to the Vermont Public Utility Commission (or “Commission”).

transformer, and vault-mounted recloser. The Project would be enclosed by an approximately 8-foot-high fence that would be covered with noise-dampening mats. The Tesla batteries have a total capacity of 1 MW/4 MWH, which means, at full charge, the battery system is capable of exporting onto the distribution system 1MW of electricity for 4 hours. The system would include three inverter blocks, each block consisting of an inverter and up to ten Tesla Powerpack Units, which are batteries made up of multiple, small-format, cylindrical lithium ion cells. The battery component would connect via an underground line to the terminating cabinet installed for the GMPSolar Panton Project. The total capital costs of the Project would be approximately \$3,391,644.

GMP argues that the Project is needed to help integrate the growing number of renewable generation projects into the grid by allowing for the storage of power at times of high generation and the use of that power during times of lower generation. Also according to GMP, the addition of battery storage to the GMPSolar Panton Project would provide an additional source of dispatchable energy to complement the existing solar, hydro, and diesel generation on the circuit and could further contribute to micro-grid opportunities in the area.

II. PROCEDURAL HISTORY

On July 8, 2016, the Commission approved and issued a CPG for the GMPSolar Panton Project, a 4.90 MW solar electric generation facility off Panton Road in Panton, Vermont.²

On April 10, 2017, GMP filed a petition with the Commission pursuant to 30 V.S.A. § 248(j) seeking authority to construct and operate the GMP Panton Battery Storage Project on the site of the existing GMPSolar Panton Project.

On April 21, 2017, the petition was deemed complete and notice sent by the Commission to each entity entitled to such notice under the Commission's Rules.

On June 7, 2017, the Vermont Department of Public Service ("Department") filed comments on the petition.³

On June 9, 2017, the Vermont Agency of Natural Resources ("ANR") filed comments on the petition.⁴

² See, *Petition of GMPSolar - Panton, LLC, for a certificate of public good, pursuant to 30 V.S.A. § 248*, Docket No. 8637, order of 3/25/16.

³ Letter from Sheila Grace, Esq., to Judith C. Whitney, Clerk of the Commission, filed on 6/7/17.

⁴ Letter from Donald J. Einhorn, Esq., to Judith C. Whitney, Clerk of the Commission, filed on 6/9/17.

On June 16, 2017, GMP filed replies to the Department and ANR.⁵

On June 23, 2017, ANR filed a response to GMP.⁶

On July 14, 2017, a status conference was held in this proceeding at which representatives from the Department, ANR, and GMP appeared. At the status conference, GMP stated that it had no objections to having an evidentiary hearing on all of the issues raised by ANR and the Department.

III. COMMENTS

Department Comments

The Department argues that the petition raises significant issues with respect to Sections 248(b)(2)(need) and (b)(4)(economic benefit). The Department also commented that the petition potentially raises significant issues with respect to Sections 248(b)(3)(system stability and reliability) and (b)(7)(compliance with the electric energy plan).

Section 248(b)(2)(need)

The Department believes that coordinating load and generation through storage and demand management is important, but the Department also believes that storage projects should be considered in light of least-cost principles. Because the Project is a significant investment – over \$3.3 million – the Department thinks more information is needed to determine whether the project is justified on economic grounds. The Department argues that the petition so far does not demonstrate that the Project is the least-cost solution. Accordingly, the Department believes the Project raises a substantial issue under 30 V.S.A. § 248(b)(2).

Section 248(b)(4)(economic benefit)

The Department also argues that utility-scale batteries are a relatively new development, and they may have the potential to serve multiple functions on the grid. While some of these functions have clear, present, financial value streams in ISO-NE⁷ markets and methods of assigning costs for capacity, energy, transmission, and regulation, other near- and longer-term

⁵ Letter from Geoffrey H. Hand, Esq., to Judith C. Whitney, Clerk of the Commission, filed on 6/16/17.

⁶ Letter from Donald J. Einhorn, Esq., to Judith C. Whitney, Clerk of the Commission, filed on 6/23/17.

⁷ ISO New England Inc. is an independent, non-profit Regional Transmission Organization, serving Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

values are harder to monetize and assign. Accordingly, the Department argues that the petition does not provide sufficient information to determine whether the Project “will result in an economic benefit to the state and its residents” as required by 30 V.S.A. § 248(b)(4).

Section 248(b)(3)(system stability)

At the time the Department filed its comments, the Department objected that no System Impact Study (“SIS”) had yet been completed for the Project.

On June 7, 2017, GMP filed the SIS for the Project.

At the time of the July 14, 2017, status conference, the Department was still reviewing the SIS and asked to raise any issues associated with the SIS after it has completed its review of the document.

Section 248(b)(7)(compliance with the electric energy plan)

The Department raised concerns about whether the Project was designed and would be implemented and operated in a manner that would enhance the use of distributed generation to meet the Renewable Energy Standard, as is required by the 2016 Comprehensive Energy Plan, which incorporates the 20-year Electric Energy Plan.

The Department asked that each of the above listed criteria be subject to a substantive issue review that includes a status conference to set a schedule for discovery, prefiled direct testimony, prefiled rebuttal testimony, and an evidentiary hearing.

ANR Comments

ANR argues that the Project raises a significant issue under Section 248(b)(5)(greenhouse gas (“GHG”) impacts). ANR contends that the battery storage system will have embodied GHG emissions that result from the manufacture, transportation, installation, and decommissioning of the system and that the manner in which the battery storage system is operated may determine whether there is a reduction in GHG impacts. ANR proposes that the petition does not provide sufficient information to determine whether the Project “will result in an undue adverse impact to the natural environment, giving due consideration to GHG impacts,” as is required by 30 V.S.A. § 248(b)(5).

GMP Reply Comments

GMP stated that it did not object to evidentiary proceedings on the Section 248 criteria cited in the Department's comments.

However, GMP did object to ANR's comment that the Project raises a significant issue in relation to the 30 V.S.A. § 248(b)(5) GHG criterion. GMP states that "to show that a significant issue exists, ANR 'must go beyond general or speculative claims and provide specific information regarding a project's potential impacts.'"⁸ GMP further argues that ANR's comments do not go beyond general or speculative claims, do not provide specific information regarding the Project's potential impacts, and therefore do not raise a significant issue. Furthermore, GMP argues that it has already agreed to provide ANR with extensive information concerning embedded carbon and battery operations that are memorialized in condition 3 of GMP's proposed CPG. For these reasons, GMP asks the Commission to decline to hold evidentiary hearings on the GHG criterion.

ANR Response

In response to GMP's reply, ANR argues that "GMP's petition was not filed under Section 219a, but rather under Section 248(j)."⁹ According to ANR, under Section 248(j), GMP bears the burden of demonstrating that the Project does not raise a significant issue with respect to the substantive criteria, not ANR.

ANR also argues that: (1) there are GHG emissions from the manufacture of the battery ("embodied emissions"); (2) GHG emissions reduction is not a listed goal of the Project so may not factor into operational decisions; (3) GMP has not described how the Project would result in an overall reduction in GHG impacts; (4) because the battery system will be operated independently of the GMP Panton Solar facility, the battery system may be charged with electricity from the grid, with resultant GHG emissions; (5) different operating scenarios of the battery system can result in different GHG emissions, but the petition is not clear on how the

⁸ GMP Reply at 1, citing *Petition of SSE New Haven Solar II LLC*, Docket No. NMP-5978, order of 9/3/15. We recognize that GMP has raised a valid question regarding the criteria by which the Commission assesses whether a significant issue has been raised in a Section 248(j) case. We will review this issue in detail when an appropriate case for doing so is presented to us.

⁹ ANR Response at 3.

system will actually be operated; and (6) the expected future addition of battery packs will add to the embodied emissions of the system.

IV. SIGNIFICANT ISSUES

Department Issues

Having reviewed the filings, we find that significant issues exist concerning Sections 248(b)(2)(need), (3)(system stability), (4)(economic benefit), and (7)(compliance with the electric energy plan).

For each criterion, the Department is concerned that the petition lacks sufficient information with which the Department can make an informed determination about the Project. The Department also noted in the status conference that this Project is the first of its kind in Vermont and is a costly project. Finally, the Department observed that battery technology is novel enough that it is not exactly clear how battery technology fits in with the Comprehensive Energy Plan and additional information would facilitate the understanding of that issue.

Given these reasons, we are persuaded that significant issues exist concerning these criteria, and a technical hearing will be held to develop an evidentiary record.

ANR Issues

ANR argues that there is insufficient information in the petition with which the Commission can make a finding under Section 248(b)(5) relating to GHG impacts. GMP disagrees and states that it has “already agreed to provide ANR with extensive information concerning embedded carbon and battery operations, as memorialized by condition 3 of GMP’s Proposed Certificate of Public Good, which is based on typical greenhouse gas reporting conditions included in other CPGs issued by the Board.”¹⁰ Despite this, GMP has withdrawn its objection to examining GHG emissions during a significant issue review.¹¹

After considering the parties’ positions, we find it appropriate to include a review of GHG emissions as part of the evidentiary hearing.

¹⁰ GMP Reply at 1.

¹¹ Status Conference Tr. at 9-10 (Hand).

V. SCHEDULE

During the July 14th status conference, the parties filed the joint schedule listed below and asked the Commission to adopt it. Given that all the parties are in agreement, we will adopt the schedule for the remainder of this proceeding. Additionally, because of the novelty of the battery storage system at issue, we believe that the public will be interested in this proceeding and have added a public hearing to the schedule.

Event	Deadline
Deadline to serve first round of discovery on GMP	August 9, 2017
Deadline for GMP to respond to first round of discovery	August 23, 2017
Deadline to file second round of discovery on GMP	September 6, 2017
Public hearing	To be determined ¹²
Deadline for interested participants to intervene	September 18, 2017
Deadline for GMP to respond to second round of discovery	September 20, 2017
Deadline for filing direct testimony by non-petitioners	October 17, 2017
Deadline for discovery on non-petitioners	October 24, 2017
Deadline for non-petitioners to respond to discovery	November 9, 2017
Deadline for GMP to file rebuttal testimony	November 22, 2017
Date of evidentiary hearing	December 4, 2017 at 9:30 A.M.
Deadline to file initial briefs	14 days after evidentiary hearing ¹³ transcript is made available
Deadline to file reply briefs	14 days after initial briefs are filed

VI. ORDER

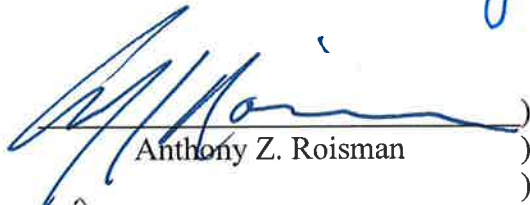
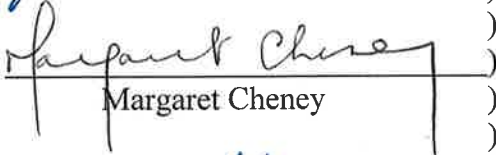

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Service Commission (“Commission”) of the State of Vermont that:

1. An evidentiary hearing will be scheduled in this proceeding to review the issues identified in this order.
2. Pursuant to 30 V.S.A. § 8, John Gerhard, Staff Attorney, is appointed as Hearing Officer to conduct further proceedings on the issues identified in this Order.

¹² The Clerk of the Commission will reach out to parties to schedule the public hearing.

¹³ Section 248 refers to the Commission holding “technical” hearings in proceedings under that section. This term has created confusion for some participants in Commission proceedings. To promote a better understanding for all participants, consistent with the Legislature’s intent under Act 174 (2015, Adj. Sess.), the Commission will refer to these hearings as “evidentiary” hearings, to make clear that the purpose of the hearings is to take evidence.

Dated at Montpelier, Vermont, this 31st day of August, 2017.

 Anthony Z. Roisman)	PUBLIC UTILITY
 Margaret Cheney)	COMMISSION
 Sarah Hofmann)	OF VERMONT

OFFICE OF THE CLERK

Filed: August 31, 2017

Attest: Judith C. Whitney
Clerk of the Commission

Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Commission (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: puc.clerk@vermont.gov)

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

PSB Case No. 17-2813-PET - SERVICE LIST

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