

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7873

Programmatic Changes to the Standard-Offer Program)

Order entered: 5/30/2014

**ORDER RE: IMPLEMENTATION OF 2014 SCREENING FRAMEWORK AND
GUIDELINES**

I. INTRODUCTION

On March 1, 2013, the Public Service Board ("Board") issued an Order implementing significant changes to the Sustainably Priced Energy Enterprise Development ("SPEED") standard-offer program required by Public Act 170¹ (the "March 1 Order"). In the March 1 Order, the Board established a screening framework and guidelines for the implementation of 30 V.S.A. § 8005a(d)(2) (the "Screening Framework"). The Screening Framework is designed to provide potential developers with adequate information, at least annually, regarding transmission-constrained areas in which new standard-offer plants having particular characteristics may provide sufficient benefit to the operation and management of the electric grid. On February 20, 2014, the Board issued an Order modifying the Screening Framework to address potential sub-transmission and distribution-constrained areas, in addition to transmission-constrained areas.

As required by Section 8005a(d)(2) and as implemented through the 2014 Screening Framework, projects deemed to provide sufficient benefits shall not count toward the cumulative capacity amount of the standard-offer program. In today's Order, the Board concludes that there is sufficient information and analysis submitted by the Vermont System Planning Committee (the "VSPC") and Green Mountain Power Corporation ("GMP") to determine that there are currently

1. Public Act 170 (2012, Vt., Adj. Sess.). Act 170 has since been codified as 30 V.S.A. §§ 8005a and 8006a.

no constrained areas where such renewable generation projects would provide sufficient benefits to the operation and management of the grid – with the potential exception of the Rutland area. With regard to the Rutland area, because GMP did not file a final Reliability Plan, the Board has insufficient information to determine whether standard-offer projects could provide sufficient benefits to mitigate the Rutland area's reliability deficiency. Therefore, the Board directs GMP to provide a final Reliability Plan for the Rutland area, as required by the 2014 Screening Framework as soon as practical, but no later than April 1, 2015. The Board further directs GMP to file, within 30 days of this Order, a complete timeframe, with clear milestones, that indicates specifically when the final Reliability Plan for the Rutland area will be completed.

II. PROCEDURAL HISTORY

On February 14, 2014, the VSPC submitted its 2014 Annual Report ("2014 Annual Report") as required by Paragraph 89 of the Memorandum of Understanding ("MOU") in Docket 7081.² The 2014 Annual Report describes the activities of the VSPC during 2013 and the status of work on all reliability deficiencies identified in the 2012 Vermont Long-Range Transmission Plan (the "2012 LRTP") prepared by the Vermont Electric Power Company, Inc. ("VELCO"). The VSPC 2014 Annual Report also addresses the 2014 Screening Framework.

No comments were filed on VSPC's 2014 Annual Report.

On April 2, 2014, GMP filed a Reliability Plan for the St. Albans area (the "St. Albans Reliability Plan").

On April 2, 2014, GMP filed a Rutland Area Deficiency Study and Reliability Plan Update (the "Rutland Reliability Plan Update"), including a Project-Specific Action Plan for the Rutland/Cold River Area (the "Rutland Action Plan").

2. Docket 7801, Order of 6/20/07. The MOU provided for the creation of the VSPC to facilitate least-cost integrated resource planning for Vermont's transmission system. Modifications to the MOU have been approved in Orders of 1/30/12, 8/1/12, and 11/13.

On May 1, 2014, the Department of Public Service ("Department") filed comments on the GMP Reliability Plan submissions ("Department Comments").³

No other comments were filed on the GMP Reliability Plan submissions.

III. PROGRAM IMPLEMENTATION

A. Evaluation of Identified Constraints

(1) Participants' Constraint Analysis, Reliability Plans and Comments

The VSPC 2014 Annual Report summarizes the VSPC's activities during 2013 and the status of work on all reliability deficiencies identified in the 2012 LRTP. The VSPC filed its 2014 Annual Report for the purpose of fulfilling Paragraph 1 of the 2014 Screening Framework which requires the VSPC to make recommendations to the Board no later than January 1 of each year, or more frequently if constraints are identified or analysis is completed mid-year.

GMP filed the St. Albans Reliability Plan, the Rutland Reliability Plan Update, and the Rutland Action Plan for the purpose of fulfilling the annual utility filing requirements contained in Paragraph 3 of the 2014 Screening Framework. Paragraph 3 requires utilities to perform preliminary screening, using a screening tool, for an identified constraint to determine whether the constraint has a reasonable likelihood of being cost-effectively addressed by a non-transmission alternative ("NTA"), including but not limited to SPEED standard-offer plants. If a constraint screens in to a full NTA analysis, the affected utility must develop a least-cost plan (a "Reliability Plan") to resolve the constraint. The Reliability Plan must include consideration of the use of new SPEED standard-offer plants.

Based on the analysis, reports, and comments provided by the VSPC, GMP, and the Department, the following discussion provides a summary of the updated evaluation of identified constraints consistent with the requirements of the 2014 Screening Framework.

3. Letter from Jeanne Elias, Esq., and Walter Poor, Department of Public Service, to Susan Hudson, Clerk of the Board, dated May 1, 2014.

Central Vermont and Southeastern Vermont Areas

ISO-New England, Inc. ("ISO-NE") has conducted an updated analysis that shows that load reductions have effectively postponed the need for upgrades during the ten-year study horizon for the Central Vermont and Southeastern Vermont areas.⁴

Hartford/Ascutney Area

The Hartford/Ascutney area was screened out using the NTA tool on the basis of identification of two viable sub-transmission solutions with estimated costs below \$2.5 million.⁵

Connecticut River Area

The Connecticut River area transmission and sub-transmission deficiencies screened out using the NTA screening tool. However, according to the VSPC, the Connecticut River area is now being re-evaluated by ISO-NE, and if the need is reconfirmed in the current ISO-NE study, a new NTA screening may be required.⁶

Colchester, Northern Area, IBM Area, and Vernon Road

Transmission and sub-transmission issues screened out using the NTA screening tool for Colchester, the Northern area, the IBM area, and Vernon Road.⁷

Susie Wilson Road Area

A geographically targeted energy efficiency program was developed and implemented to address the distribution issues in the Susie Wilson Road area with the goal of deferring substation investments.⁸ According to the VSPC, updated GMP load forecasts show that the date of need for the Susie Wilson Road substation project, under all reasonable scenarios, is now

4. VSPC 2014 Annual Report at 6.

5. VELCO, on behalf of the affected utilities, filed an update to its reliability plan in Docket 7873 on April 1, 2013, stating that under the provision of Attachment II.3.c of the Screening Framework, because the Hartford/Ascutney deficiency can be resolved by a wires solutions below the \$2.5 million screening threshold established in Docket 7081, the Hartford/Ascutney area does not require filing of a reliability plan at this time. *See* VSPC 2014 Annual Report. at 6.

6. VSPC 2014 Annual Report at 9.

7. *Id.* at 5.

8. Geographically targeted energy efficiency efforts are energy efficiency services that are targeted at customers served by circuits and substations that are facing capacity constraints, with the objective to avoid or defer costly system upgrades.

well beyond the ten-year study horizon.⁹ The Board approved discontinuation of geographically targeted energy efficiency for the area by Order of January 8, 2014, in EEU-2010-06.

St. Albans Area

In 2013, GMP conducted studies, with the help of the VSPC, to refine the load forecast for the St. Albans area and better understand the magnitude and timing of the reliability deficiency. These additional studies indicate that, even with aggressive assumptions for load growth, the earliest date that additional reliability-related resources would be required is 2021. Even then, GMP's analysis indicates that it is questionable whether the deficiency will require any significant new reliability-related resources. Based on this updated analysis, GMP concludes that no additional resources are warranted at this time to address reliability in the St. Albans area. However, GMP proposes to collect empirical data over the next two summer peak seasons to verify the refined analysis and adjust input assumptions as necessary.¹⁰

The Department states that it appears that the St. Albans reliability constraint has been deferred. The Department supports GMP's recommendation not to solicit additional resources at this time, and agrees that GMP should monitor the area closely.¹¹

Rutland Area

While GMP filed a Rutland Reliability Plan Update and a Rutland Action Plan, it did not file a final Reliability Plan to address the grid deficiencies in the area. GMP states that a Reliability Plan could not be finalized due to uncertainties and dynamic changes in the Rutland area requiring additional analysis.¹² GMP further states that it will complete a final Reliability Plan no later than April 1, 2015.¹³

The GMP system in the Rutland area includes the 46 kV transmission system, the 12.5 kV distribution system, and the concentration of customer loads in the Rutland and Cold River areas that are fed primarily by VELCO's North Rutland and Cold River 115/46 kV transformers, extending eastward to Cavendish. The GMP system also includes the 46 kV

9. VSPC 2014 Annual Report at 15.

10. St. Albans Reliability Plan at 1.

11. Department Comments at 2.

12. Letter from Kim Jones, GMP, to Susan Hudson, Clerk of the Board, dated April 2, 2014.

13. Rutland Action Plan at 35.

transmission and distribution systems feeding somewhat sparser loads to the south and west of Rutland that are fed by VELCO's Blissville 115/46 kV transformer and extend down to Dorset. Finally, the GMP system includes the Vermont Marble Power Division ("VMPD") system. The GMP system is characterized by summer peaking at about 96 MW (not including the VMPD portion of the system).¹⁴

According to GMP, the Rutland area's peak summer load, including VMPD, has been declining steadily to a growth rate of effectively zero. GMP states that the continued influx of efficiency measures and other resources appears likely to keep any load growth in check for at least the next several years. However, GMP notes that the area currently has significant exposure to reliability deficiencies for various single contingencies due to many past years of load growth without system improvements and dependence on an aging combustion turbine. GMP states that among the most difficult contingencies is the loss of any one of the three VELCO 115/46 kV transformers that supply the North Rutland, Cold River, and Blissville areas. Following such a loss, at least one of the remaining two transformers may overload at higher load levels, accompanied by local 46 kV line overloads and/or system undervoltages.¹⁵

GMP observes that several emerging developments have begun to fundamentally alter the nature of the Rutland area's reliability problems. First, according to GMP, the "Solar Capital Initiative" will result in a growing solar generation resource to offset the area's reliability gap. However, GMP states that this solar-related generation offset will level off in a few years as the area's post-sundown peak load begins to exceed the customary late afternoon peak load. Therefore, GMP contends that adding more solar generation will not solve the area's post-sundown peak load problems. GMP also contends that additional SPEED standard-offer solar plants cannot be part of the reliability solution as solar power does not have the necessary operating characteristics to meet the remaining Rutland reliability gap.¹⁶

The VSPC's 2014 Annual Report also concludes that the remaining Rutland reliability gap cannot be closed by means of solar generation because it occurs post-sundown. The VSPC states that it appears that "above the cap" standard-offer resources cannot effectively address

14. VSPC 2014 Annual Report at 7.

15. Rutland Reliability Plan Update at 2.

16. *Id.* at 3.

whatever Rutland-area reliability deficiency remains after the initial 10 MW of capacity from the Solar Capital Initiative is installed because standard-offer resources tend to be mostly solar.¹⁷

According to GMP, a second emerging development affecting the Rutland area's reliability deficiency is the potential development of a bio-gasification plant by Renewable Energy Resources, Inc. GMP believes that such a facility could have the required capacity to address the Rutland area resource gap. GMP states that a dedicated analytical study of the bio-gasification proposal, including a cost/benefit analysis, is pending. GMP suggests that it also may evaluate other dispatchable resources, such as a bio-gasification plant from a different developer, a direct-burn biomass plant, demand response, and conventional generation.¹⁸

GMP has not determined whether a transmission alternative will be selected over a non-transmission alternative, such as a bio-gasification plant. According to GMP, the cost effectiveness of the transmission options – which all feature a single new interconnection from VELCO's 115 kV network to the Rutland area's 46 kV network – depends largely on the availability of a 115 kV bay that currently exists at VELCO's West Rutland substation. GMP states that if a transmission alternative is chosen, the open bay would preferably serve as the location of a new 115/46 kV transformer and associated 46 kV line terminations. At the present time, a proposed West Rutland wind generation project has an ISO-NE entitlement to the bay, but the project has been inactive and may be cancelled. GMP states that the cancellation of the wind generation project would allow for a considerable reduction in the cost to build a transmission solution.¹⁹

GMP's latest analysis of the Rutland area reliability deficiency indicates that the remaining area resource gap – now defined by the post-sundown peak loads – may be as small as 2-3 MW. GMP also proposes to discuss with interested developers proposals for renewable generation that meet the operating characteristics of the Rutland area's remaining reliability deficiency.²⁰

17. VSPC 2014 Annual Report at 8.

18. Rutland Reliability Plan Update at 3.

19. *Id.* at 4.

20. *Id.* at 4.

GMP concludes that, given changes and emerging uncertainties in the Rutland area, the reliability deficiency "requires a careful reassessment."²¹ To that end, GMP proposes to complete a final Reliability Plan, including an analysis of sufficient benefits, by no later than April 1, 2015, because the Company states that it is "imperative that the solution selection is based on as accurate information as possible to assure that the least cost solution is selected so as to not negatively impact the Vermont ratepayers."²²

In its comments, the Department states that it recognizes the consideration and analysis that GMP has dedicated to the Rutland area's reliability concern. The Department also recognizes that the VSPC process has enabled participants to become aware of the shifting variables that must be considered to ensure reliability solutions reflect least cost to ratepayers. However, the Department notes that even the preferred transmission alternative, which is a precursor to a Reliability Plan, remains an unknown at this time due to the uncertainty of the availability of the 115 kV bay at the West Rutland substation.²³

The Department observes that, while it appreciates the uncertainty that GMP is facing, it appears likely that the 2-3 MW reliability gap in the Rutland area will remain and that inaction may result in the loss of an opportunity to defer or avoid an expensive transmission infrastructure investment. Therefore, the Department recommends that GMP file a more complete timeline, with clear milestones, indicating specifically when the solution alternatives studies will be completed. The Department further recommends that GMP consider the use of non-solar standard-offer resources as a potential solution to the reliability gap, although the Department acknowledges that use of these resources may need additional development time. Finally, the Department notes that the Energy Efficiency Calculator developed as part of the St. Albans Reliability Plan may be a promising method for assessing the cost and availability of energy efficiency as a potential resource to defer infrastructure upgrades in the Rutland area.²⁴

21. *Id.* at 4.

22. Rutland Reliability Plan Update at 4.

23. Department Comments at 2.

24. *Id.*

(2) Discussion and Conclusion

The 2014 Screening Framework is designed to provide potential developers with adequate information, at least annually, regarding transmission, sub-transmission and distribution-constrained areas in which standard-offer generation resources may provide sufficient benefit to the operation and management of the electric grid to warrant being treated outside the SPEED standard-offer program cap.

The information submitted by the VSPC and GMP leads the Board to make the following conclusions regarding the potential for standard-offer plants to mitigate transmission, sub-transmission, and distribution constraints pursuant to the 2014 Screening Framework:

All Areas Except the Rutland Area

Load reductions have effectively postponed the need for reliability upgrades in the Central Vermont and Southeastern Vermont areas beyond the ten-year study horizon, based on updated ISO-NE studies. The Hartford/Ascutney area constraint screened out from full NTA analysis due to the identification of solutions that would cost less than \$2.5 million. The Connecticut River, Colchester, St. Albans/East Fairfax, Northern, and Vernon Road areas screened out from full NTA analysis.

Regarding the St. Albans area, GMP and the Department agree that no additional resources are warranted at this time to address reliability constraints in the area and that there is no present need for mitigation by standard-offer projects pursuant to Section 8005a(d)(2).

Based on this information, we conclude that solicitation of standard-offer projects to address the identified constraints in these areas is not appropriate at this time. However, we expect the VSPC and affected utilities to continue to monitor these constraints and submit Reliability Plans consistent with the requirements of the 2014 Screening Framework if constraints develop that screen in for NTA analysis.

The Rutland Area

For the Rutland area, the Board is unable to make a determination at this time regarding whether solicitation of standard-offer projects would be able to provide sufficient benefit to mitigate the area's sub-transmission deficiency constraint.

Paragraph 3 of the 2014 Screening Framework provides that if a constraint screens in to full NTA analysis, then the affected utility shall develop a Reliability Plan that identifies resources or combinations of resources likely to cost-effectively resolve the constraint, including consideration of new SPEED standard-offer plants. The Rutland area deficiency screened into full NTA analysis in the 2012 LRTP. However, GMP has not yet completed a final Reliability Plan, contending that there are significant uncertainties including the future transmission configuration of the area, transmission upgrade costs, and the impact of GMP's Solar Capital Initiative.²⁵

Paragraph 4 of the 2014 Screening Framework provides that the Board shall make a determination as to a reliability gap, if any, to be filled with new SPEED plants, no later than June 1 of each year, once a Reliability Plan is filed and stakeholders are afforded the opportunity to comment. However, GMP's failure to file a Reliability Plan for the Rutland area effectively prevents the Board from making an informed decision as to the ability of SPEED standard-offer projects to provide sufficient benefit to the grid. In order for the Board to answer the question of whether proposed standard-offer projects would provide sufficient benefit to the operation and management of the electric grid in the Rutland area, it is imperative that a reliability analysis be complete and that GMP file a final Reliability Plan as soon as practicable.

To that end, GMP proposes to perform additional analysis to finalize a Rutland Area Reliability Plan no later than April 1, 2015. GMP is currently undertaking a Rutland Area Solutions Study with emphasis on post-sundown summer peak loads to determine the preferred solution.

The Board recognizes that there are uncertainties and dynamic changes related to the Rutland area system deficiencies that require additional analysis in order to determine the best solution to meet system constraint needs. However, we agree with the Department that extended delay in finalizing a Rutland Area Reliability Plan may result in a loss of opportunity to defer or avoid expensive transmission upgrades. We also agree with the Department that it is premature for GMP to conclude that the remaining Rutland area reliability problems cannot be mitigated by standard-offer resources. While additional solar generation may not be effective in addressing

25. Rutland Reliability Plan Update at 2.

the post-sundown peak load operating characteristic of the Rutland area constraint, it appears that GMP has not given adequate consideration to the role of non-solar standard-offer generation resources to mitigate this problem. Therefore, we conclude that GMP has provided insufficient information and analysis for the Board to determine whether new SPEED standard-offer plants, including non-solar generation plants, could provide sufficient benefit as potential mitigation, in whole or in part, to the Rutland reliability problem. The Board also notes that GMP estimates that the Rutland area resource gap may be in the range of 2-3 MW – a gap sufficiently small to be potentially addressed by standard-offer projects with characteristics that meet the post-sundown peak load problem.

Therefore, we direct GMP to provide a final Reliability Plan for the Rutland area, consistent with the 2014 Screening Framework as soon as practical, but no later than April 1, 2015. As recommended by the Department, GMP's final Reliability Plan should demonstrate the consideration of the potential for non-solar standard-offer resources to meet the remaining Rutland deficiency, in whole or in part, and within a reasonable timeframe. The analysis also should consider the potential use of geographically targeted energy efficiency resources in addressing the Rutland constraint. Finally, we direct GMP to file, within 30 days of this Order, a complete timeframe, with clear milestones, that indicates specifically when the final Reliability Plan for the Rutland area will be completed.

B. Sufficient Benefit Test

Paragraph 4 of the 2014 Screening Framework states that the Board shall make its determination regarding the values to be included in the analysis of "sufficient benefit" no later than June 1 of each year. Paragraph 5 of the 2014 Screening Framework states that when the Board determines that standard-offer contracts will be issued to new SPEED plants pursuant to Section 8005a(d)(2), an objective, predetermined, transparent methodology shall be performed to determine whether a proposed plant provides "sufficient benefit" to the grid. We find it unnecessary for the Board to make a determination at this time regarding the values to be included in the analysis of sufficient benefit because: (1) no reliability gap will be addressed by standard-offer plants this year for non-Rutland areas; and (2) GMP has provided insufficient

information regarding whether solicitation of standard-offer projects can address the identified Rutland area constraint.

IV. ORDER

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

1. Green Mountain Power Corporation ("GMP") shall file with the Board, as soon as practical, but no later than April 1, 2015, a final Reliability Plan for the Rutland area, consistent with the Screening Framework and Guidelines for Implementation of 30 V.S.A. § 8005a(d)(2), as modified by the Board's Order of February 20, 2014, in Dockets 7873 & 7874 ("2014 Screening Framework").
2. GMP shall file with the Board, within 30 days of this Order, a complete timeframe, with clear milestones, that indicates specifically when the final Reliability Plan for the Rutland area will be completed. To inform the development of the final Reliability Plan, GMP shall perform and complete a comprehensive analysis of the potential for SPEED standard-offer plants, with emphasis on non-solar resources, to mitigate the constraint in the Rutland area, consistent with the 2014 Screening Framework. The GMP analysis also shall consider the role and cost effectiveness of acquiring additional geographically targeted energy efficiency resources to address the Rutland area reliability deficiency.
3. GMP shall collect empirical data over the next two summer peak load seasons in the St. Albans area to verify that its current analysis – indicating that no additional resources are needed to address electric grid constraints – is accurate. GMP shall adjust the input assumptions of its analysis as warranted based on the data collected.

SO ORDERED.

Dated at Montpelier, Vermont, this 30th day of May, 2014.

<u>s/James Volz</u>)	
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)	PUBLIC SERVICE
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<u>s/John D. Burke</u>)	BOARD
)	
)	OF VERMONT
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<u>s/Margaret Cheney</u>)	

OFFICE OF THE CLERK

FILED: May 30, 2014

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

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

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