

October __, 2016

Judith C. Whitney, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620

Re: Vermont System Planning Committee reliability plan and energy
efficiency geotargeting recommendations

Dear Ms. Whitney:

The Vermont System Planning Committee (VSPC) respectfully submits its recommendations for geographic targeting (GT) of energy efficiency as required by the Public Service Board¹, and areas in need of reliability plans in accordance with the Docket 7873 & 7874 Attachment II, Screening Framework and Guidelines for Implementation of 30 V.S.A. § 8005a(d)(2). These recommendations were developed by the Geotargeting Subcommittee (GTS) of the VSPC and were adopted by the VSPC at its quarterly meeting on October 19, 2016. The consolidated recommendations including both energy efficiency geographic targeting and the identification of areas requiring new reliability plans is consistent with the process improvements that were approved by the Board on January 24, 2014 (EEU-2013-11).

SUMMARY

We make three recommendations in this letter:

1. No newly identified area “screens in” using the applicable screening tools for the potential to be resolved with non-wires alternatives, meaning no new areas need development of a reliability plan.
2. With regard to the status of current geographically targeted energy efficiency, no area is currently targeted, thus, no recommendation is needed regarding continuation or discontinuation of a current project.
3. Based upon Green Mountain Power’s (GMP’s) Hinesburg area reliability plan, filed September 30, 2016, the Hinesburg reliability issue cannot be resolved with new geographically targeted energy efficiency nor the solicitation of standard offer resources outside the annual cap.

Each of these recommendations is supported below.

¹ Pursuant to EEU-2010-06 Public Service Board Order of 2/16/2012, p. 6.

RECOMMENDATION 1—NO NEW RELIABILITY PLANS ARE REQUIRED

Recommendation summary: In the VSPC's 2016 annual review of identified reliability issues, no utility identified any new reliability deficiencies that screened in for the potential to be resolved with a non-wires solution. Therefore, no new reliability plans are recommended.

Rationale for the recommendation

Paragraph 1 of the Docket 7873 & 7874 Attachment II, Screening Framework and Guidelines for Implementation of 30 V.S.A. § 8005a(d)(2) states that:

The Vermont System Planning Committee ("VSPC") processes, reporting mechanisms, public engagement, and subcommittees shall be utilized for the purpose of making recommendations to the Public Service Board ("Board") regarding constraints within the electric grid, and the potential for non-transmission alternatives ("NTAs"), including new Sustainably Priced Energy Enterprise Development ("SPEED") standard-offer plants, to mitigate those constraints, pursuant to 30 V.S.A. § 8005a(d)(2).... The VSPC shall make its recommendations to the Board no later than January 1 of each year², or more frequently if constraints are identified or analysis is completed mid-year.

This filing, and the process by which it was developed, are designed to fulfill the requirement of the quoted paragraph.

The screening framework provides that transmission and distribution (T&D) constraints shall be screened for their potential to be resolved by non-transmission alternatives using the NTA screening tool adopted by the VSPC pursuant to the Docket 7081 Memorandum of Understanding. Distribution constraints are screened for NTA potential using the screening tool established in Docket 6290. The host utility may use either screening tool to screen sub-transmission constraints. A constraint that "screens in" using the appropriate tool requires a reliability plan be filed by the utility by April 1 following the January 1 due date of the VSPC recommendation (or more frequently if constraints are identified or analyzed mid-year).

The Geotargeting Subcommittee (GTS) of the VSPC obtained reports from all utilities to identify any areas that screened in. Green Mountain Power, Vermont Electric Cooperative (VEC) and VELCO described upcoming infrastructure projects. No new load growth-related project was identified by any utility.

² Subsequent to the order quoted here, the VSPC made various process improvements to harmonize the energy efficiency geographic targeting process with its Docket 7873/7874 Screening Framework obligations. The process improvements resulted in an earlier (October 30) filing date for this letter, which fulfills the quoted "no later than January 1 of each year" requirement.

RECOMMENDATION 2—NO AREA IS CURRENTLY GEOGRAPHICALLY TARGETED

Recommendation summary: With regard to the status of geographically targeted energy efficiency, no area is currently the focus of geotargeting efforts, thus, no recommendation is needed regarding continuation or discontinuation of a current project.

RECOMMENDATION 3—NO NEW GEOTARGETING OR STANDARD OFFER RECOMMENDED IN CONNECTION WITH HINESBURG RELIABILITY PLAN

Recommendation summary: Based upon GMP's Hinesburg area reliability plan, filed September 30, 2016, the Hinesburg reliability issue cannot be resolved with new geographically targeted energy efficiency nor the solicitation of standard offer resources outside the annual cap.

Rationale for the recommendation

In 2014, GMP identified its Hinesburg area as the subject of analysis to determine its potential to be addressed with a non-wires alternative. Initially, system protection issues posed by the distance between the Hinesburg load center and its substation at Charlotte made non-wires solutions appear inadequate, but GMP was able to identify strategies to address the system protection challenges. In the VSPC's October 30, 2014, annual geotargeting filing with the Board, we reported that GMP continued to study remaining unresolved issues including the potential for future area load growth, voltage constraints, high solar penetration, and motor starting limitations.

In its annual filing of October 23, 2015, the VSPC stated that GMP was continuing to analyze the Hinesburg area. The company had engaged RES Americas to analyze a non-traditional solution for the Hinesburg area that would include battery storage to address voltage issues, coupled with a hybrid reactive compensation system to address both voltage and flicker concerns associated with solar generation and motor starts. On January 22, 2016, the Board approved the VSPC recommendation that GMP take additional time to complete its analysis of storage alternatives under study, and file a reliability plan for the Hinesburg area by April 1, 2016.

On March 17, 2016, GMP, with the support of the VSPC, filed a request to extend the deadline for the Hinesburg reliability plan to October 1, 2016, to provide time to complete economic analysis of alternatives, including the newly identified potential for collaboration with VEC on construction of a joint substation. With no party expressing an objection, the Board approved the further extension.

On September 30, 2016, GMP filed its Hinesburg reliability plan with the Board. The plan was discussed with the VSPC's Geographic Targeting Subcommittee on September 21, and with the full VSPC on October 19. The plan concludes that:

Analysis also found that distributed generation would not address post-sundown peaks and could actually exacerbate system voltage fluctuations. The energy efficiency study performed by VEIC [Vermont Energy Investment Corporation] showed very limited potential for load reduction with geographic targeting. These potential load reductions were not substantial enough to ward off additional upgrade requirements. (GMP Hinesburg Reliability Plan, 10/1/2016, p. 13.)

The plan concludes that “a GMP/VEC jointly owned substation provides the lowest cost “T&D only” option for both utilities and would effectively address all of the Hinesburg reliability and system protection deficiencies thereby removing any requirement for distance relaying.” The plan goes on to outline the installation of a battery energy storage system (BESS), in conjunction with an initially smaller substation, to provide:

a more flexible solution... [which] has the potential to provide the lowest cost solution under some outcomes (e.g., limited load growth in the Hinesburg area, robust market revenues from battery operation). This is because a BESS has the potential to defer certain GMP upgrades, including delaying construction of two GMP circuit positions at the substation and delaying construction of the distribution line infrastructure needed to interconnect the substation to the GMP Hinesburg distribution system. Whether a BESS with the two circuit substation would result in higher or lower net costs, when compared to a fully constructed four circuit GMP/VEC jointly-owned substation, varies greatly depending on the input assumptions. (GMP Hinesburg Reliability Plan, 10/1/2016, p. 13.)

On the basis of the Hinesburg plan, the VSPC does not recommend any new geographic targeting of energy efficiency nor the solicitation of standard offer resources outside the annual cap.

No other area is currently the subject of an active reliability plan. Reliability plans were previously filed for St. Albans and Rutland, but subsequent analysis showed that the needs in these two areas now arise beyond the 10-year horizon. GMP continues to monitor these areas.

CONCLUSION

The VSPC respectfully submits the foregoing recommendations and welcomes questions from the Board.

Sincerely,

Deena L. Frankel
VSPC Secretary

cc: VSPC Distribution List