VSPC
VERMONT SYSTEM PLANNING COMMITTEE

366 Pinnacle Ridge Road
Rutland, Vermont 05701

November 4, 2025

Holly Anderson, Clerk
Vermont Public Utility Commission
112 State Street
Montpelier, VT 05620

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

Dear Ms. Anderson:

The Vermont System Planning Committee (VSPC) respectfully submits its recommendations for geographic targeting (GT) of energy efficiency as requested by the Public Utility Commission (PUC)[1], and the need for 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 29, 2025. The consolidated recommendations including both energy efficiency geographic targeting and the identification of areas requiring new reliability plans are consistent with the process improvements that were approved by the Commission on January 24, 2014 (EEU-2013-11).

## SUMMARY

We make three recommendations in this letter:

1. Two newly identified areas "screen in" using the applicable screening tools for the potential to be resolved with non-transmission alternatives. A Reliability Plan is recommended for the Northwestern and Northern areas identified in the 2024 Vermont Long-Range Transmission 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. No new areas have been identified where geographically targeted energy efficiency has the potential, as defined by the applicable screening tool, to cost-effectively avoid or defer an infrastructure project, so no new geographical targeting of energy efficiency should be undertaken at this time.

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— NEW RELIABILITY PLAN RECOMMENDED FOR NORTHERN VERMONT

*Recommendation:* VELCO's 2024 Long-Range Transmission Plan identified two reliability deficiencies within the ten-year horizon that may be addressed through non-wires solutions. Green Mountain Power, in coordination with affected utilities, is assessing non-transmission alternatives for the Northwest and Northern Vermont areas. Preliminary analysis suggests existing flexible load management and demand response resources may be sufficient to mitigate the issues. In accordance with VSPC procedures, a Reliability Plan is recommended to document the analysis and confirm whether additional actions are needed.

### *Background*

The northern Vermont area of concern – bounded electrically by the Plattsburgh, Williston, Granite, and Littleton substations—faces significant thermal and voltage reliability risks as forecasted system loads increase toward 2033. Under the 2033 VT Roadmap load forecast outlined in the 2024 Vermont Long-Range Transmission Plan (LRTP), several key 34.5 kV lines and major transformers (Barre, Queen City, and Tafts Corner) are projected to overload due to loop flows in the subtransmission system which could cause unexpected and undesirable stress on equipment. These projected overloads are driven in part by the assumption of unmanaged EV charging load in the 2033 forecast, whereas prior forecasts incorporated 75% of active load control to mitigate peak demand impacts.

In the near term, the system could theoretically be stabilized by operator actions such as tripping certain 34.5 kV lines, but this exposes the grid to operational risk. Incorrect sequencing or unplanned outages could trigger voltage collapse and potential blackouts, especially during peak load conditions.

The transmission solution proposed is a new 115 kV transmission line between Essex and Williston, estimated at $120 million. The study identifies approximately 75 MW of load reduction needed by 2033, covering areas from St. Johnsbury to Burlington and Montpelier. Further analysis conducted by VELCO determined that the longest duration load reduction is only needed for two five-hour blocks following the first contingency event.

The northern area screens in for NTA analysis because:

- The deficiency is driven by load growth and N-1-1 voltage stability issues, which could be mitigated by demand-side or distributed energy solutions.
- The year of need (2032) allows for time to develop and scale NTAs.
- The reliability concern (voltage collapse) can potentially be delayed by reducing peak demand or enhancing reactive support.

The northwest Vermont area of concern – bordered by the Plattsburgh, West Rutland, Granite, and Littleton substations—shows a bulk system need emerging as early as 2029 under the VT Roadmap summer forecast of the 2024 LRTP. The West Rutland–Middlebury 115 kV line, the Middlebury transformer, and several subtransmission lines (34.5 kV and 46 kV) are projected to overload at that time.

The transmission solution involves upgrading the West Rutland – Middlebury 115 kV line (estimated cost $215 million) and possibly the Middlebury transformer. The non-transmission alternative would require

about 80 MW of load reduction by 2033, spanning a large area from Middlebury and Florence north through Burlington, St. Albans, and Highgate.

The northwest area screens in for NTA analysis because:

- The deficiency results from overloads tied to high summer demand, suggesting targeted load management, distributed generation, or efficiency measures could alleviate stress.
- The timing (2029–2033) allows for proactive NTA deployment.
- Like the northern area, the reliability issue is associated with an N-1-1 contingency, where load reductions or distributed resources could prevent criteria violations.

### *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 year[2], 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 non-wires alternative 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 Geographic Targeting Subcommittee (GTS) of the VSPC obtained reports from all utilities to identify any areas that screened in. No new load growth–related project was identified by any distribution 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 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 current geotargeting efforts, thus, no recommendation is needed regarding continuation or discontinuation of a current project.

## RECOMMENDATION 3—NO NEW AREAS WARRANT GEOGRAPHICALLY TARGETED ENERGY EFFICIENCY

*Recommendation summary:* No new areas have been identified where geographically targeted energy efficiency has the potential, as defined by the applicable screening tool, to cost-effectively avoid or defer an infrastructure project, so no new geographical targeting of energy efficiency should be undertaken at this time.

### *Rationale for the recommendation*

As noted in Recommendation 1, preliminary analysis indicates that existing flexible load management and demand response resources may be sufficient to address the identified reliability concerns. If existing programs are found to be insufficient, the affected utilities would evaluate the potential for geographically targeted energy efficiency to address any remaining reliability needs.

## PROCESS

The GTS is comprised of interested members of the VSPC and its meetings are open to the public. In 2025, the GTS met three times. At its July 9, 2025, meeting, members heard presentations from the distribution utilities and VELCO regarding the need for planned upgrades to distribution and transmission facilities not included in the 2024 LRTP. Following discussion at the subsequent September 11 meeting, the GTS concluded that the proposed upgrades could not be addressed through non-transmission alternatives or geographically targeted energy efficiency. Materials and minutes associated with the GTS can be found at https://www.vermontspc.com/subcommittees . The GTS submits draft recommendations annually to the VSPC at the October quarterly meeting. The VSPC adopted the 2024 GT recommendations on October 29, 2025.

## CONCLUSION

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

Sincerely,

Shana Louiselle

Shana Louiselle
VSPC Secretary

cc: VSPC Distribution List