VERMONT
LAND USE REVIEW BOARD
Application #:
RPC03-0001
Exhibit #: 062
Date Received: 10/21/2026

Central Vermont Regional Planning Commission

October 21st, 2026

Kerrick Johnson, Commissioner
c/o Anne Margolis, Assistant Director of the Regulated Utility Planning Division
Vermont Public Service Department
112 State Street
Montpelier, VT 05620-2601

Re: Submission of the Central Vermont Regional Plan for Determination of Energy Compliance

Dear Commissioner Johnson,

On behalf of the Central Vermont Regional Planning Commission (CVRPC), I am pleased to submit the Central Vermont Regional Plan, adopted October 20th, 2026 for a Determination of Energy Compliance pursuant to Act 174 of 2016 (updated 2022).

The CVRPC has worked collaboratively with the Department of Public Service to develop the regional plan as an enhanced energy plan that is consistent with the regional planning standards outlined in Act 174 and updated with the 2022 Comprehensive Energy Plan. The CVRPC used the previous enhanced energy plan, granted an affirmative determination of energy compliance in 2018, as the starting point, which was developed by a committee of commissioners, business leaders, energy planners, state agencies, and community members with recommendations to the Board of Commissioners. Since this previous determination, CVRPC staff has worked with all 23 towns on energy planning to some degree of which 7 have received an affirmative determinations of energy compliance and 7 more have drafts in various stages of adoption over the coming year; 19 towns worked with CVRPC to receive investment grade energy audits on municipal buildings and facilities via the Municipal Energy Resilience Grant Program of which 7 received Implementation funds although several more have also implemented identified measures (including 3 solar arrays and 1 storage project in addition to building envelope and fuel switching measures). Years of feedback from municipalities and communities and collaborative work have shaped the current approach in the plan. This is perhaps most evident in the custom high efficiency cord wood target and discussion of cord wood and heat pumps together, emphasis on ground source heat pumps and waste heat recovery (including TENs), and emphasis on grid planning and infrastructure resilience.

Staff have worked with the Department of Public Service, utilities, and other stakeholders throughout the 2022 CEP update to improve underlying data and integrated resulting LEAP targets and other considerations into the plan, have reviewed and provided feedback for VELCO LTRP and DU IRPs, served on subcommittees and technical advisory committees for a variety of statewide planning efforts including the Climate Action Plan, RES updates, Transportation Cap & Invest, etc. and remain

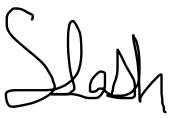
committed to helping connect the planning ongoing at different scales (especially bringing municipal and community voices to statewide efforts).

An earlier version of this work was integrated into the 2024 regional plan amendment approved by the CVRPC Board of Commissioners. Critical conversations including custom wood heat target, distribution of incremental renewable target across technology type, etc. were discussed with regional plan committee through 2024 and 2025 as well as with municipalities and communities members at annual Energy Fairs, in the course of providing technical assistance on municipal town plan updates (both enhanced energy plans and standard energy elements), etc. The culmination of this work and the draft plan was provided to the Department of Public Service for review and comment in July of 2026. While feedback received by CVRPC at that time was advisory, the draft plan was amended to ensure all requirements were not only sufficiently met but also other recommendations were included (see below: preliminary PSD feedback in black and how it was addressed in *green italics).* The CVRPC held two public hearings on the Regional Plan on September 14th and October 20th of 2026, and the plan was duly adopted by commission vote upon the conclusion of the second hearing on October 20th, 2026. While CVRPC did not receive any comments specific to energy at these hearings, public feedback was integrated into the plan (as already described above, and for comments received and changes made since the preapplication see accompany document).

The adopted 2026 Central Vermont Regional Plan includes all the elements required by 24 VSA Section 4302 and 24 VSA Section 4348(a) and meets all of the Act 174 standards. The energy element includes the most recent energy data and LEAP model projections provided by the Department, as well as new energy resource maps, and discussions of equity considerations throughout the element in accordance with the most recent Act 174 standards. Relevant components were also included in the Utilities & Facilities and Transportation elements, while Appendix A provides more in depth discussion of methodology including data sources, as well as supplemental material. The policies and actions are consistent with 2026 Central Vermont Regional Plan policies pertaining to land use, transportation, and natural resources.

The CVRPC is committed to assisting its 23 member municipalities in their land use planning efforts including the development of a sustainable, affordable, and resilient energy future. If you have any questions or requests for additional information, I hope you will contact me at 802-262-1053 or lash@cvregion.com. We appreciate the Department guidance answering questions, collaboration on several state wide initiatives including both the Enhanced Energy Planning Standards & Tools Update and otherwise, and its thoughtful review of the draft Plan. We look forward to a continued partnership as the region moves into implementing the Plan's actions.

Sincerely,



Sam Lash, Climate & Energy Planner
Central Vermont Regional Planning Commission

Public Service Department Feedback (& how it was addressed in final draft)

General Comments/Questions

- Pg 74 notes "constitute Central Vermont's Enhanced Energy Plan meeting the standards outlined in Act 174 and the 2022 Comprehensive Energy Plan (see Supplement Section: Standards) in addition to meeting the statutory requirements for the regional plan energy element (24 V.S.A. § 4348a(a)(3))." – I would qualify this since the plan has not yet been granted an affirmative determination confirming it meets the standards – ex. "striving to meet the standard outlined in…"
    - *Page 97 changed it to "developed to meet the standards outlined in Act 174…."*

Standard 4

- 4: Looks good
- 4a: Looks good
- 4b: Generally looks good - See targets for "use of renewable energy for heating" or "conversion to alternative heating fuels" in the Supplement – a sentence or two in the main energy chapter noting how meeting targets around Wx, CCHPs, HPWH, and AWH will increase use of renewable fuels in the thermal sector over the target years would be helpful to emphasize this transition
    - *Added on page 107: Priority targets include weatherization, heat pumps, heat pump hot-water heaters and advanced cord wood heat will increase use of renewable fuels in the thermal sector while reducing the amount of energy used to achieve space and water heating over the target years. Further co-benefits include increasing access to air conditioning, reducing wasteheat, and if well implemented reducing energy costs for both individual consumers as well as communities and the state.*
- 4c: Looks good, similar comment as in thermal sector about adding a sentence or two about transition to renewable fuels overall in the target years to main energy chapter
    - *Added page 116: The Transportation Chapter (pages 175-184) include the Transportation Sector Targets, of which light-duty vehicle EV registrations is the priority target to transition to renewable fuels over the target years.*
    - Heading "Transportation & Land Use; Community Scale Decarbonization" on pg 92 seems unrelated to the text on Wx right blow it – is this out of place?
        - *No, the text is noting that while weatherization and fuel-switching are core components of our approach to meet energy goals, transportation and land use are also critically important. (now page 116).*
- 4d: Generally looks good – note standards checklist only includes references to EE targets, but see renewable gen targets on pg 114-115
    - Note that thermal efficiency and electric efficiency are currently considered separately in the standards / state programs. Some of the text in the energy chapter and Appendix seem to conflate them. A discussion, even brief, of the role of electric efficiency separate from thermal and transportation would be warranted.
    - *Moved the following from the supplement into main chapter and elaborated (page 120-121- also see Appendix A pages 32-34)*

Electric Efficiency Targets

Electricity efficiencies were embedded into the 20-year load forecast used in the updated LEAP model and, thus are not an output of their own (and why the Public Service Department removed the Electric Sector tab of the Analysis & Targets Tool with the 2022 update). The Public Service Department provided regional estimates of electric energy savings associated with the implementation of efficiency programs based on the 2022 Energy

Efficiency Market Potential Study for 2025-2050 (these targets are cumulative).Table A below shows possible electric energy efficiency savings (MWh); tables D&E in the Supplement include measures that can be used to achieve those savings including efficient appliances, hot water, HVAC equipment, HVAC shell, lighting, miscellaneous loads, motors, and whole buildings in the residential sector, as well as compressed air, plug loads, heating and cooling, ventilation and circulation, lighting, refrigeration, water heat and motors in non-residential sectors. Tables B&C in the supplement show the co-benefits of these efficiency measures on reducing peak demand pressure (seasonal impacts). Electricity use is expected to increase dramatically by 2050 so demand-side management and upgrades, such as those measures listed in Tables D&E in the supplement, are critical to maintaining our energy conservation policies, meeting our energy use and renewable fuels transition targets, as well as minimizing potential impacts and costs of beneficial electrification to the grid and communities alike.

Table A. Program Achievable Electric Energy Efficiency Savings (MWh)		**2025**	**2030**	**2035**	**2040**	**2050**
Residential	Incremental Annual	2,459	2,583	2,801	2,707	3,010
Residential	Cumulative Annual	4,861	16,566	27,893	35,147	51,456
Non-Residential	Incremental Annual	4,361	3,961	3,966	3,909	4,546
Non-Residential	Cumulative Annual	8,740	28,611	43,894	42,904	39,581
Total	Incremental Annual	6,820	6,544	6,767	6,616	7,556
Total	Cumulative Annual	13,601	45,177	71,787	78,052	91,037

Standard 5 – Looks good

Standard 6 – Looks Good.

Note- Good discussion of waste heat recovery opportunities at the bottom of page 129. This section might be made even more informative if there is a discussion of Thermal energy networks (TENs). Moving (or duplicating) the TENs figure on page 93 down to page 129 could be a helpful visual.

- *TENs will be expanded upon in the next 2027 update already being drafted- this will include mapping of thermal resources and intentional growth areas, conversations around infill, wastewater expansions, brownfield and economic development, etc. Also hope to collaborate with ongoing work to model savings from TENs at a Vermont-scale (and working with one, maybe two towns, as a start to model).*

Standard 7 – Looks good

Standard 8 – Looks good

Standard 9

9B - please include explanation of how the rooftop solar potential in MW was derived, and please post or send to the Department the Generation Scenarios Planning Tool sheet used

Added additional detail in Appendix A (pages 54-56)

Calculating Rooftop Solar Energy Potential Rooftop solar potential data is sourced from the Vermont Center for Geographic Information (VCGI) dataset named Town Rooftop Solar Potential – Act 174 2022. As explained in the release notes, these estimates use a geographic information system (GIS) model of building footprints to

determine the total surface area of rooftops suitable for solar photovoltaic panels (accounting for amount of solar radiation, slope, aspect, shading of nearby objects, and minimum size of rooftop viable for solar panels). Using published data for solar radiation, the VCGI data also estimates an annual solar energy production potential for each suitable rooftop, summarized by municipality, applying a capacity factor of 14.5% as published by the U.S. Environmental Protection Agency.

Act 174 Statewide Energy Planning Data Updated: Known and Possible Constraints, Renewable Energy Potential | Vermont Center for Geographic Information.

*In order to be internally consistent to the constants used by the Department of Public Service in the Generation Scenarios Tool (which takes map outputs in acres for potential resource areas), CVRPC calculated the sum of suitable rooftops in acres and then used the constants provided by DPS including 1.5 acres per MW, and a capacity factor of 14.5% (*8760 hours per year= 1270) calculate the rooftop solar potential in MW by Town and the regional total provided. This enabled the use of acres as the input available across all resource potential area types (solar, wind, and rooftop) from the VCGI Act 174 Statewide Energy Planning Data Update (see above). Note that CVRPC used 1/3 of available rooftop acres as the input to provide a conservative estimate as roof type and condition had not been yet integrated into these analyses at the state level. Regionally, approximately 12% of units are seasonal, 30% are built before 1940 (used in the Municipal Consumption Tool from PSD as a threshold to indicate likely using more thermal energy than average; here used as a conservative indicator of historic preservation, roof condition, or other potential challenges re rooftop solar); over 50% built before 1980 see Housing Element, and the 2025 Housing Needs Assessment found that 14% of Central Vermont Housing has significant issues in 2022 (see Housing Element page 241). In addition to this cursory and conservative look at housing stock and condition, there are also challenges and costs with interconnection for some properties/distribution areas to be considered and the lack of three-phase penetration throughout many of our communities (see Energy Element). This approach yielded results that came out to approximately 70% of the Electric Production (MWh) if summed from the roof top potential dataset directly (see table below) and thus a less conservative estimate than appears.*

Table A25 Housing Units Built Pre-1940 By Town

Municipality	Housing Units Built Pre-1940	Total Housing Units	% Units pre-1940
Barre City	2012	4,335	46%
Barre Town	634	3,630	17%
Berlin	168	1,274	13%
Cabot	232	718	32%
Calais	264	833	32%
Duxbury	624	716	87%
East Montpelier	214	1,250	17%
Fayston	81	1,050	8%
Marsfhfield	302	805	38%
Middlesex	106	785	14%
Montpelier	1487	3,921	38%
Moretown	119	656	18%
Northfield	959	2,418	40%
Orange	76	455	17%
Plainfield	278	612	45%
Roxbury	141	445	32%
Waitsfield	178	1,090	16%
Warren	214	2,481	9%
Washington	62	619	10%
Waterbury	686	2,656	26%
Williamstown	247	1,418	17%
Woodbury	213	700	30%
Worcester	111	488	23%

Regional Total	**9408**	**33,355**	**28%**

Source: Based on 2024 ACS 5- year Table DP04 also used in the Municipal Consumption Tool Current Heat Tabs

Table A26 Roof Top Solar Values by Town Comparison

Municipality	CVRPC Approach: Map Outputs as Generation Scenarios Tool Inputs		CVRPC Approach: Generation Scenarios Tool Outputs		Comparison
Municipality	SUM Roof to Acres	One Third Acres	Resource Available (MW)	Resource Available (MWh)	VCGI Totals (Electric Prod MWh)
Barre City	77	25.5425	17.0	32438.978	45298
Barre Town	101	33.81014	22.5	42938.88	60444
Berlin	70	23.32515	15.6	29622.937	41888
Cabot	22	7.268017	4.8	9230.3816	13147
Calais	15	5.161117	3.4	6554.6191	9023
Duxbury	12	4.103261	2.7	5211.1413	7124
East Montpelier	40	13.48164	9.0	17121.679	23982
Fayston	15	4.844164	3.2	6152.0883	8421
Marshfield	17	5.684898	3.8	7219.82	10082
Middlesex	20	6.725622	4.5	8541.5393	11775
Montpelier	73	24.41669	16.3	31009.199	42844
Moretown	15	5.163588	3.4	6557.7573	8870
Northfield	45	15.13049	10.1	19215.718	26457
Orange	12	3.849814	2.6	4889.2632	6884
Plainfield	14	4.650269	3.1	5905.8416	8203
Roxbury	8	2.747066	1.8	3488.7742	4785
Waitsfield	24	8.127613	5.4	10322.068	14056
Warren	28	9.332003	6.2	11851.643	16386
Washington	13	4.408353	2.9	5598.6086	7889
Waterbury	56	18.55306	12.4	23562.38	32323
Williamstown	38	12.8292	8.6	16293.081	22838
Woodbury	8	2.515035	1.7	3194.0941	4352
Worcester	7	2.43382	1.6	3090.9508	4251

9F – discussion in addition to that already under “Implications for Regional Siting Policy” – beyond general preferences and places to avoid – and inclusion of actions to foster generation interconnection on preferred sites would bring plan closer in line with standard

See discussions page 126 (local constraints), pages 128-139 (preferred sites), Section on Local Siting and Regional Policy (pages 131-137) which includes a summary from across town plans of local constraints, considerations, preferences and policies and then discusses implications for regional policy, page 140 (targets&mapping), Appendix A pages 45-66 especially page 51 “Next Steps in Mapping: Preferred Sites and Local Identified Resources” and page 61 on Municipal Customization (of Incremental Renewable Energy Generation Targets). These detail that many municipal plans do not identify with the level of specificity desired, however ongoing collaborative work with municipalities on enhanced energy plans and town plans is helping ensure that stated general preferences are associated with map data which typically results in increased specificity and the ability to integrate local planning preferences into the regional maps. For example:

- *Ongoing work already cited "CVRPC is working with municipalities to best maximize the opportunity to define and map additional preferred sites to shape the form and benefits of implementation in our region. We anticipate that this additional specificity of these planning efforts to connect stakeholders and have lasting impacts on investment in and across our region and thus the reliability, resilience, affordability, and independence of our energy infrastructure" page 128 (actions to be updated in 2027 plans)*
- *Added "the interconnection of renewable generation projects on preferred sites, and the identification of vulnerable or ill-suited infrastructure" on page 122 to make clearer fostering generation interconnection on preferred sites*
- *page 128 CVRPC offers technical assistance and support to all 23 municipalities in their town planning and enhanced energy planning efforts. As municipalities and communities designate preferred sites to the parcel level in municipal plans they will be integrated into the regional plan (and will not be designated at the regional level until specific in municipal plans or by a municipal legislative body e.g. in the 248 process).*

Standard 10 – Looks good

- Note, some links to Federal Indices on pg 2 of Appendix B are broken, as is the link to the EJ Communities tool under state indices / tools
    - *FIXED (now page 3)*
- 2019 Energy Burden data on pg 3-4 should really be updated to 2023 data, or at least reference a discussion of shifts between the results of the two reports, even if there was a shift in methodology
    - *Appendix A pages 4&5*

Table A1 Energy Burden (2019 Efficiency Vermont Report[3])

Town	Median Household Income	Electricity Spending	Thermal Spending	Transportation Spending	Total Spending	Total Energy Burden	Energy Burden Group
Barre City	$35,225	$1,110	$1,965	$2,227	**$5,302**	**15.1%**	Highest
Cabot	$43,864	$1,096	$2,081	$2,725	**$5,902**	**13.5%**	High
Plainfield	$48,529	$987	$2,222	$2,657	**$5,865**	**12.1%**	High
Worcester	$49,167	$1,085	$1,882	$2,757	**$5,724**	**11.6%**	High
Williamstown	$57,792	$1,221	$2,317	$2,584	**$6,122**	**10.6%**	Moderate
Washington	$56,696	$1,213	$2,062	$2,693	**$5,968**	**10.5%**	Moderate
Roxbury	$56,667	$1,059	$1,987	$2,703	**$5,749**	**10.1%**	Moderate
Berlin	$59,792	$1,161	$2,120	$2,585	**$5,866**	**9.8%**	Moderate
Marshfield	$60,833	$1,081	$2,050	$2,680	**$5,812**	**9.6%**	Moderate
Orange	$62,829	$1,094	$2,089	$2,692	**$5,874**	**9.3%**	Moderate
Waterbury	$65,750	$1,131	$2,426	$2,557	**$6,114**	**9.3%**	Moderate
Warren	$66,250	$1,101	$2,343	$2,608	**$6,052**	**9.1%**	Moderate
Barre Town	$70,521	$1,204	$2,396	$2,669	**$6,268**	**8.9%**	Low
East Montpelier	$67,844	$1,209	$2,131	$2,678	**$6,018**	**8.9%**	Low
Calais	$64,766	$964	$1,974	$2,747	**$5,685**	**8.8%**	Low
Moretown	$69,375	$1,135	$2,223	$2,707	**$6,065**	**8.7%**	Low
Woodbury	$63,438	$949	$1,839	$2,755	**$5,543**	**8.7%**	Low
Northfield	$67,750	$1,105	$2,099	$2,585	**$5,789**	**8.5%**	Low
Montpelier	$60,793	$957	$1,804	$2,288	**$5,049**	**8.3%**	Low
Middlesex	$74,188	$1,130	$2,191	$2,749	**$6,071**	**8.2%**	Low
Duxbury	$75,000	$1,074	$2,276	$2,752	**$6,103**	**8.1%**	Low
Fayston	$79,940	$1,080	$2,646	$2,681	**$6,407**	**8%**	Low
Waitsfield	$78,264	$1,189	$2,317	$2,660	**$6,166**	**7%**	Low

Comparisons between the 2019 and 2023 Total Energy Burden and shifts are included in the table below. Though difficult to compare the two reports and

[3] The 2023 Report did update this data, however the update also changed methodology, especially for the transportation sector, which relied on national datasets with coarse resolution for our communities. Furthermore, the thresholds for the categories were shifted in the 2023 report; shifting the baseline to mask the severity of downward trends didn't accurately reflect the pandemic era conditions of the updated report. Therefore, we prefer to use the 2019 Report which had a more bottom-up approach. The map viewers associated with the 2023 report update however, are useful community tools. https://www.efficiencyvermont.com/2023-vermont-energy-burden-report

track "progress" it appears Barre City, Cabot, Montpelier, and Waterbury all saw improvements, while Middlesex and Moretown stayed the same, and all other towns worsened. The 2023 Report included a state average burden of 11% and expenditure of $7,000; approximately 9 of 23 municipalities are more burdened than the statewide average.

Table A2 Efficiency VT Total Energy Burden By Town 2019 vs. 2023

Town	2019 Total Energy Burden	2023 Total Energy Burden	Update
Barre City	15.10%	12%	Improved
Barre Town	8.90%	9%	Worse
Berlin	9.80%	7.90%	Worse
Cabot	13.50%	11.70%	Improved
Calais	8.80%	9.50%	Worse
Duxbury	8.10%	10.10%	Worse
East Montpelier	8.90%	10.60%	Worse
Fayston	8.00%	8.30%	Worse
Marshfield	9.60%	11.90%	Worse
Middlesex	8.20%	8.20%	Same
Montpelier	8.30%	7.90%	Improved
Moretown	8.70%	8.70%	Same
Northfield	8.50%	10.30%	Worse
Orange	9.30%	12%	Worse
Plainfield	12.10%	14.30%	Worse
Roxbury	10.10%	10.30%	Worse
Waitsfield	7.90%	10.90%	Worse
Warren	9.10%	11.90%	Worse
Washington	10.50%	11.50%	Worse
Waterbury	9.30%	7.50%	Improved
Williamstown	10.60%	10.70%	Worse
Woodbury	8.70%	11.50%	Worse
Worcester	11.60%	11.50%	Worse

- Env. Benefits analysis begins on pg 300 (checklist says 310)-
    - *now Appendix D (page 409) and Equitable Planning Section is now page 28*

Standard 11

Maps appendix includes substations and hydro plants, but not other types of generation as map in body of plan; may be worth also including in map appendix (potentially with both higher resolution and level of detail) *That was a placeholder! Map has been replaced in body of plan- the template for paper copies of the plan is quite small and details are difficult to see (many communities prefer paper copies though)- we have requested VCGI consider integrating our maps into the Act 174 Planning Atlas Tab and are working on getting an arcmap viewer up with much higher resolution. Municipal maps will be made available on the CVRPC website and include insets around intentional growth areas and other requested areas these are typically plotted at a large scale for in person discussion with planning commissions when working on their plans.*

Standard 12

As already noted by CVRPC comments in standards document, some maps still needed

- *Updated! See Standards checklist!*

Two references to 2021 VELCO Long-Range Transmission Plan should be updated to 2024 plan (and associated conclusions drawn should be reviewed)

- *UPDATED Page 202*

Electric Transmission

The Vermont Electric Power Company, Inc. (VELCO) manages the safe, reliable, cost-effective transmission of electric power throughout Vermont and as part of the integrated New England regional network. VELCO

updates its Long Range Transmission Plan every 3 years. The 2021 and 2024 Long Range Transmission Plans[1] highlights that peak demand is forecast to grow due to accelerating electrification of the heating and transportation sectors. While the transmission system had sufficient capacity to serve expected future demand for the first 10-years of the 20-year planning horizon in the 2021 plan, in one of the two forecast scenarios in the 2024 plan load growth was projected to create grid reliability concerns within the 10-year horizon:

- *The 2024 LRTP offers a call to action for greater collaboration and focus on generation siting including storage, and on flexible load management to improve system resiliency, lower costs, and increase overall sustainability. Load management is necessary to serve high electrification loads consistent with Vermont's total energy and emissions goals in the 10- and 20-year planning horizons;*
- *A change between the 2021 and 2024 plans includes the transition from DG projects reviewed on a project-by-project basis without regard to transmission system impact to a cluster-based interconnection process[2] to prevent further stressing transmission and distribution systems, careful coordinated statewide planning is required to successfully integrate future distributed generation and storage without significant grid reinforcement especially as interconnection studies for small-scale DG do not include transmission system studies. Tables 8 & 9 in the 2024 LRTP suggests that there are potential transmission thermal impacts of high solar pv scenario within our region including on lines Berlin VT-Barre, Barre-Granite, Middlesex-Berlin; and transformers (Barre and Berlin). At the sub-transmission level this includes Berlin-Middlesex, Little River-Duxbury, Danville-Marshfield, North End-Barre, Websterville-South Barre, Montpelier-Berlin, North End- Berlin, Montpelier-Mountain View, Montpelier-East Montpelier, South End-Barre, and Middlesex-Moretown. These upgrades could be avoided in part with storage, load management, grid-optimized locations, and generation curtailment. It is likely a combination of transmission upgrades and non-transmission upgrades will be required. (Note storage is most impactful closest to constraints and the 2024 LRTP suggests a state-wide scheme including 15MW in the Montpelier area to mitigate these high solar scenario issues). It should be noted that CVRPC's own regional targets for generation have been adjusted since our 2024 plan and are misrepresented in the 2024 LRTP as nearly 3 times our actual goal- please see table in supplement which shows significantly fewer concerns as related to transmission and sub-transmission capacity for our region specifically. Future LRTP are unlikely to continue to run this higher solar pv scenario and thus CVRPC is working with the VSPC to identify more appropriate planning touch points in the future.*
- *There are sub-transmission scale reliability issues (categorized as causing high or low voltage, or a thermal overload in which equipment exceeds its rate temperature) including Montpelier-W. Berlin-Northfield, Moretown-Irasville-Northfield- West Berlin, Moretown-Bolton Falls, Barre Area, Websterviller-South Barre, South End-Barre, Marshfield-Danville, and East Montpelier (pages 50-51, 2024 LRTP).*
- *The transmission system will experience reliability deficiencies due to peak demand growth in both summer and winter (more severe in winter) near the ten-year time frame, and load control may*

[1] https://www.velco.com/assets/documents/2021%20VLRTP%20to%20PUC_FINAL.pdf
101252_Velco_CC24_singles.pdf

[2] *The Vermont Systems Planning Committee, which plays a key role in the planning process for Vermont's electric transmission system including the preparation of the LRTP, regularly includes Transitional Cluster Study updates at their quarterly meetings from ISO-NE, VELCO, DUs, and developers e.g. July 2026 quarterly meeting.*

become less effective as loads continue to increase during the 20-year planning horizon. Within our region Barre transformer was noted as part of the "Northern Area" bulk system regional groupings (Table 2, 2024 LRTP).

- *Granite substation (Williamstown) flagged for evaluation and likely mitigation (repair); out of several lines identified for extensive repair and structure replacements both the lines extending from the Granite substation to the Barre substation and from the Granite substation to the National Grid Comerford substation were include (project timing approx. through 2029).*

As DUs take on more and more interconnection of distributed energy projects, coordination between VELCO, DUs, the Region[3], and municipalities will be increasingly important to ensure not only Vermont and its stakeholders can meet their respective goals, but that we do so in a manner that minimizes negative impacts to our landscapes and natural resources and maximizes benefits to all Vermonters foremost those who have been disproportionately burdened by energy costs and reliability issues to build resilience for all. CVRPC continues to work with DUs to integrate their Integrated Resource Planning into regional and municipal planning and project development and to advocate that regional and municipal energy planning and goals in turn are considered in their Integrated Resource Planning Processes.

Regional targets appear to be in line with transmission targets by order of magnitude, please provide municipal generation targets by technology type in MW that correspond with municipal generation targets in MWh (as likely already calculated in Generation Scenarios Planning Tool) and display their alignment against distribution system capacity limits

- *Resource Potential Areas (Acres) Provided by Town and Technology Appendix A page 52 Table A23*
- *Table A24 Output Resources Available (MW) from Land Available (Acres) Appendix A page 52*
- *Generation Scenarios: Incremental New Renewable Energy Generation Targets (starting with assumptions & background) Section starting page 58 of Appendix A provides Municipal Targets by year in MWh and MW in Table A29 by Town*
- *Appendix A pages 61-66 include section on Municipal Customization and include Tables A29 Municipal Incremental Renewable Capacity Targets (MW) by Technology Type for each target year, Table A30 Acres Needed to Meet 2050 Targets and % of Town Area and Table A31 Acres Needed to Meet 2050 Targets and % of Prime Area by Town*

12E - More specificity needed on "specific areas or parcels" as in standard in addition to preferred types of location

See discussions page 126 (local constraints), pages 128-139 (preferred sites), Section on Local Siting and Regional Policy (pages 131-137) which includes a summary from across town plans of local constraints, considerations, preferences and policies and then discusses implications for regional policy, page 140 (targets&mapping), Appendix A pages 45-66 especially page 51 "Next Steps in Mapping: Preferred Sites and Local Identified Resources" and page 61 on Municipal Customization (of Incremental Renewable Energy Generation Targets). These detail that many municipal plans do not identify with the level of specificity desired, however ongoing collaborative work with municipalities on enhanced energy plans and town plans is helping ensure that stated general preferences are associated with map data which typically results in increased specificity and the ability to integrate local planning preferences into the regional maps. For example:

- *Ongoing work already cited "CVRPC is working with municipalities to best maximize the opportunity to define and map additional preferred sites to shape the form and benefits of implementation in our*

[3] noted also by the Department of Public Service in the 2022 Vermont Comprehensive Energy Plan (e.g. pages 68, 87) https://publicservice.vermont.gov/sites/dps/files/documents/2022VermontComprehensiveEnergyPlan_0.pdf

region. We anticipate that this additional specificity of these planning efforts to connect stakeholders and have lasting impacts on investment in and across our region and thus the reliability, resilience, affordability, and independence of our energy infrastructure" page 128 (actions to be updated in 2027 plans)

- *Added "the interconnection of renewable generation projects on preferred sites, and the identification of vulnerable or ill-suited infrastructure" on page 122 to make clearer fostering generation interconnection on preferred sites*
- *page 128 CVRPC offers technical assistance and support to all 23 municipalities in their town planning and enhanced energy planning efforts. As municipalities and communities designate preferred sites to the parcel level in municipal plans they will be integrated into the regional plan (and will not be designated at the regional level until specific in municipal plans or by a municipal legislative body e.g. in the 248 process).*

Standard 13

As noted elsewhere in comments, additional specificity on the areas designated as unsuitable would be productive (or if already included in plan, consider adding reference to specific municipal restrictions in narrative or pictorial form)

See discussions page 126 (local constraints), pages 128-139 (preferred sites), Section on Local Siting and Regional Policy (pages 131-137) which includes a summary from across town plans of local constraints, considerations, preferences and policies and then discusses implications for regional policy, page 140 (targets&mapping), Appendix A pages 45-66 especially page 51 "Next Steps in Mapping: Preferred Sites and Local Identified Resources" and page 61 on Municipal Customization (of Incremental Renewable Energy Generation Targets). These detail that many municipal plans do not identify with the level of specificity desired, however ongoing collaborative work with municipalities on enhanced energy plans and town plans is helping ensure that stated general preferences are associated with map data which typically results in increased specificity and the ability to integrate local planning preferences into the regional maps. For example:

- *Ongoing work already cited "CVRPC is working with municipalities to best maximize the opportunity to define and map additional preferred sites to shape the form and benefits of implementation in our region. We anticipate that this additional specificity of these planning efforts to connect stakeholders and have lasting impacts on investment in and across our region and thus the reliability, resilience, affordability, and independence of our energy infrastructure" page 128 (actions to be updated in 2027 plans)*
- *Added "the interconnection of renewable generation projects on preferred sites, and the identification of vulnerable or ill-suited infrastructure" on page 122 to make clearer fostering generation interconnection on preferred sites*
- *page 128 CVRPC offers technical assistance and support to all 23 municipalities in their town planning and enhanced energy planning efforts. As municipalities and communities designate preferred sites to the parcel level in municipal plans they will be integrated into the regional plan (and will not be designated at the regional level until specific in municipal plans or by a municipal legislative body e.g. in the 248 process).*
- *Working on a table that will be included on the CVRPC website as a resource for collaboration on siting. This is a living document as so many towns are currently in draft form (7) and will thus allow for regular updating as these plans are formally adopted at the municipal level. This will ultimately include, by town, local constraints, identified unsuitable locations, preferred sites, preferred project characteristics, siting policies, and municipal generation projects identified in current town plans. This is meant to*

supplement the summary provided in the plan of how local considerations inform and/or elaborate on regional siting policy.

Standard 14 - Looks good.

Standard 15 - Looks good. Proactive outreach to towns would be good once their maps are completed

Page 128 Municipal maps will be made available on the CVRPC website- as CVRPC continues to work with municipalities to integrate local constraints, unsuitable and preferred locations into regional and municipal enhanced energy plans, approved municipal enhanced energy plans and updated local maps on the CVRPC website should be consulted in addition to this plan as they may include more up-to-date information, data, and much higher resolution at the local scale. Municipal breakouts of these resource potential maps included in this plan integrate additional layers for planning purposes that are difficult to view at this regional scale- for example, intentional growth areas, municipal parcels, road networks (although these mirror distribution networks in much of the region), etc.. CVRPC continues to advocate for the integration of regional and local mapping layers to be integrating regularly into state-wide resources, such as the Act 174 tab of the Planning Atlas online viewer, hosted by the Department of Public Service, Vermont Center for Geographic Information, and Agency of Commerce and Community Development to ensure equitable access to authoritative, and high resolution, tools for project and community planning, development, and review.

If/Once the Regional Plan receives an affirmative determination of energy compliance, a memo will be sent to all town selectboard and planning commissions with their municipal breakouts (targets&analyses, maps, and key decisions). CVRPC is currently working with 7 municipalities, but others will be encouraged to reach out and have staff attend upcoming meetings regarding potential plan updates and enhanced energy planning. Key topics for the next plan update including large load interconnection, thermal energy networks, storage, nuclear energy, and potential changes to regional siting policies will also be discussed at this time to inform the regional plans and encourage crafting of municipal plan language.