

# SECTION



## I. EXECUTIVE SUMMARY

# I. EXECUTIVE SUMMARY

The Northwest Regional Energy Plan began as a pilot project funded by the Vermont Department of Public Service in 2017. The intent of the project was to complete in-depth energy planning at the regional level while achieving state and regional energy goals—most notably, the goal to have renewable energy sources meet 90% of the state’s total energy needs by 2050 (CAP Mitigation Scenario). This in-depth regional energy planning is needed to address three key issues: energy security, environmental protection, and economic needs and opportunities.

Specific goals to be achieved by this plan include the following:

- Collaboration with Vermont Energy Investment Corporation (VEIC) to create a regional energy model that identifies targets for energy conservation and renewable energy generation
- Creation of specific strategies to help the region achieve state energy goals
- Creation of regional maps prioritizing locations for the development of future renewable generation facilities in the region

The region’s energy supply and consumption are analyzed in Section IV to establish baseline energy use. The use of space heating energy, transportation energy, and electricity in the region is specifically examined.

The energy element of NRPC’s regional plan consists of the energy chapter of the Northwest Regional Plan and this Northwest Regional Energy Plan. While the energy chapter is a high-level overview of NRPC’s energy goals and policies, the energy plan takes a comprehensive and detailed look at the region’s energy context. This regional energy plan meets the standards required for an enhanced energy plan and therefore gives NRPC increased deference in Act 248 proceedings. The requirements for enhanced energy plans can be found in Appendix I. Since the development of NRPC’s regional energy plan, there have been several statewide planning efforts that will inform NRPC’s future energy planning. In 2020, the Legislature passed the Global Warming Solutions Act, which sets specific required emissions targets for the state. The Climate Action Plan (CAP), written in 2021 by Vermont’s Climate Council, sets out pathways to achieve these emission targets, as well as addressing how to ensure an equitable transition and climate resilience. In 2022, the state updated its Comprehensive Energy Plan (CEP). The CEP included an increased focus on ensuring an equitable climate change transition and three updated sector goals for thermal, transportation and electric sectors.

NRPC’s updated Energy Plan, adopted in 2024, further addresses these new statewide planning efforts and new regional considerations including a focus on an equitable energy transition for all residents.

The NRPC worked with VEIC to create targets for energy conservation and renewable energy generation that align with state energy goals while taking into account regional factors. The energy saved via conservation and improved efficiency is targeted to equal approximately 3.5 trillion BTUs by 2050. Conservation and improved efficiency are planned through a variety of means including increased use of efficient materials during construction and weatherization of existing structures, installation of efficient technologies, and electrification of previously fossil fuel powered technologies. Most prominently, improved efficiency is targeted through the use of electric vehicles for transportation and electric heat pumps for space heating. The resulting increase in regional electricity demand means that electricity generation in the region will also need to increase.

Goals, strategies, and implementation steps are established in Section VI to guide the Northwest region to achieve the energy conservation and renewable energy generation targets created in Section V. Goals, strategies, and implementation steps have been specifically identified for the following categories: electricity conservation, thermal efficiency, and transportation. Electricity conservation, thermal efficiency and transportation are the types of energy conservation that the Northwest Region focuses upon in this section. Achievement of the goals set by NRPC will require the cooperation of regional partners, businesses, and the

efforts of individual citizens.

A substantial part of the Northwest Region's effort to set renewable electricity generations goals involves the creation of regional energy generation maps as shown in Appendix C. The regional energy generation maps are meant to guide the development of new solar, wind, hydro, and biomass energy generation facilities in the Northwest region. The NRPC Regional Energy and Climate Committee was actively involved in this effort. The maps inform and help guide the siting of new renewable energy generation facilities in the region. The maps provide a macro-scale look at different factors that impact the siting of renewable generation facilities including generation potential. The objective of the NRPC Regional Energy Committee was to allow for sufficient renewable electricity generation in the region while avoiding undue adverse impacts upon known and possible constraints (these resources are specifically identified in Appendix B).

Section VII assesses the feasibility of meeting regional goals and outlines challenges to implementation. Regional energy generation goals are attainable while still allowing for the protection of known and possible constraints. The identified conservation goals and strategies may be more difficult for the NRPC to implement given that implementation is heavily reliant on the choices and financial means of individual consumers in the region. The thermal efficiency goals and strategies are similar. While NRPC, cannot accomplish the goals and implement the strategies in the plan alone, it can aid the efforts of other organizations to increase conservation and thermal efficiency in the region as well as increase volunteer capacity, outreach, and community engagement.

Achieving transportation-related energy goals is more straightforward. One of NRPC's core functions is coordinating transportation planning for the region and this makes NRPC well suited to achieving goals and implementing strategies for transportation. Progress on transportation-related implementation actions will be prioritized.

There are several challenges to successful plan implementation, and overcoming these challenges to implementation will likely mean bearing both economic and environmental costs. The equity issues related to who will bear those costs is of continuing concern to NRPC, and are addressed in depth in Section III.

Appendix A contains the full results of NRPC's collaboration with VEIC to set regional targets for energy conservation and renewable generation. Appendix B contains a list of the known and possible constraints identified by the NRPC Regional Energy Committee that were used to create the regional energy generation maps. Appendix C contains the regional generation maps to be used in regulatory proceedings (Section 248). Appendix D summarizes the planning approach and process used to create this plan. Appendix E contains a list of acronyms and phrases used throughout the plan. Appendix F is a summary of existing renewable generation facilities in the Northwest Region (by municipality). Appendix G includes a summary of municipal energy analysis and targets.