Norwich Energy Plan Working Group
March 18th, 2026
@ 7:00pm

To be held in person at the
NORWICH HISTORICAL SOCIETY

Zoom Information:
Topic: Energy Plan Working Group
Time: March 18th, 2026, 7:00 PM
https://us02web.zoom.us/j/84163196985
Meeting ID: 850 4576 3743

AGENDA

1. Open meeting
2. Public comment on items not on agenda
3. Review updated data and text for the Energy Chapter
4. Discussion of Task Assignments/Next Steps
5. Adjourn

Enclosures:
Norwich Town Plan Energy Chapter_Draft_3-18-2026_Revised with new Sections

ENERGY

Overview

We have understood for at least fifty years that human dependence on fossil fuels is not sustainable. Only now are we beginning to grapple with the climate crisis resulting from burning fossil fuels. We also need to develop community resiliency to better withstand the disruptions caused by the changing climate. There is an active grassroots effort in Vermont and around the world to act locally in addressing the climate crisis and in building resiliency.

This chapter details an energy plan for Norwich residents, businesses, and town government in the context of Vermont's "90 percent renewable by 2050" energy goal. Policies and objectives focus on those decisions directly within the control of the town, assuming the current regulatory scope and commitment of resources. Opportunities for promoting changes in residential energy consumption with existing town volunteer resources are also identified. Assumptions made in the Vermont ~~2016~~ 2022 Comprehensive Energy Plan (CEP) and the shortcomings in available data are noted to encourage more rigorous planning at the state level, where the vast majority of decisions regarding energy markets (fossil fuel and renewable) are made.

In developing this chapter, the town relied upon:

- 2022 TRORC Municipal Summary Worksheet and Energy Maps. This is included in Appendix X
- The EAN Vermont Energy Dashboard
- The EAN Statewide Greenhouse Gas (GHG) Emissions Dashboard
- Efficiency Vermont's 2023 Energy Burden Report

Current Energy Use

According to the ~~2018 Progress Report by the~~ Energy Action Network's (EAN) Greenhouse Gas (GHG) Emissions Dashboard, Vermont greenhouse gas emissions have generally ~~been increasing~~ decreased ~~despite significant reduction commitments~~over the last decade, but not significantly enough to meet the state's GHG reduction goals established in the Global Warming Solutions Act of 2020.

Transportation and thermal energy (heating and cooling) are the largest contributors to the ~~state's~~ Norwich's ~~greenhouse gas~~GHG emissions. ~~This plan assumes that this state-level analysis applies to Norwich as well.~~ The accepted estimate of the total amount of energy being used in Norwich is from the ~~Energy Action Network Community (EAN Energy Dashboard)~~Two Rivers-Ottauquechee Regional Commission's (TRORC) Municipal

Commented [BK1]: We can estimate this for Norwich using the data from the Municipal Summary Worksheet. You don't have to use the state as a proxy.

Commented [BK2]: This functionality has been permanently stood down on the EAN Dashboard.

Summary Worksheet for Norwich . This source suggests that in 20224~~16~~ (the latest year actual use figures are available) Norwich consumed ~~508,115~~535,679 MMBTUs (million ~~BTUs~~British Thermal Units) for electricity, thermal, and transportation ~~(see Figure 11)~~.

Energy use in Norwich reflects the settlement pattern, which is dominated by low density residential lots, and little or no industrial or commercial activity. Transportation accounted for 29.6% of the energy consumed in Norwich in 2022. Almost all of this transportation energy was consumed by internal combustion engine (ICE) vehicles. Thermal heating for both residences and commercial establishments accounted for over half (59.0%) of the energy consumed in Norwich in 2022. The overwhelming majority of this thermal energy consumed is from heating fuels. Lastly, electricity use accounted for about 11.3% of the energy consumed in Norwich. Unlike the sources of transportation and thermal energy, it is likely that a majority of the electricity consumed in Norwich is from renewable sources.

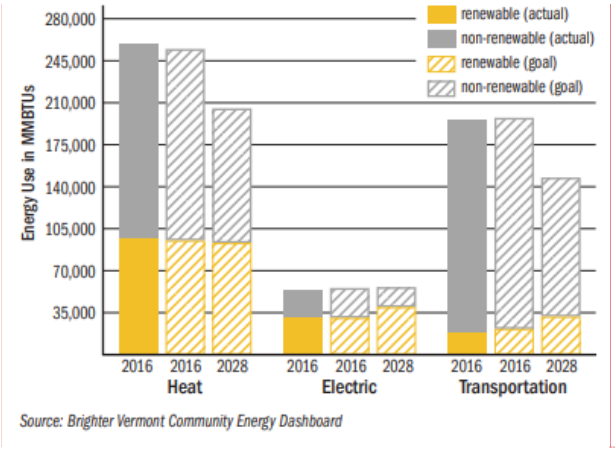

Figure 11. Energy Use and Goals by Sector

Commented [BK3]: We can discuss new graphics later.

~~In developing this chapter, the town relied upon:~~

- ~~2017 Two Rivers Ottauquechee Regional Commission (TRORC) regional energy planning~~
- ~~The EAN Energy Dashboard which tracks the progress of each Vermont community towards the state's goal of meeting 90 percent of local energy needs through efficiency and renewable energy by 2050.~~

~~The Act174 Supplement prepared for Norwich by TRORC is incorporated into this plan and included in Appendix B.~~

Commented [BK4]: Moved to Overview Section.

Transportation

According to the Municipal Summary Worksheet, there were 204 electric vehicles (EVs) and 2,325 ICE vehicles operated by Norwich residents in 2022. Since 2022, adoption of EVs has increased among Norwich residents, as the EAN dashboard reports there were 353 EVs in Norwich in 2024.

Using the figures reported in the Municipal Summary Worksheet, the estimated the total energy consumed by ICE vehicles in Norwich is 155,840 MMBTUs and the total energy consumed by EVs is 2,900 MMBTUs. Together, EVs and ICE vehicles consumed 158,740 MMBTUs in 2022.

Thermal Heating

According to the Municipal Summary Worksheet, 1,299 Norwich households consumed 142,890 MMBTUs of energy on thermal heating in 2022. The Municipal Summary Worksheet also estimated that Norwich's 182 commercial establishments consumed 173,258 MMBTUs of energy in 2022. Together, thermal heating for residential and commercial structures amounted to 316,148 MMBTUs of energy in 2022.

The Municipal Summary Worksheet also used 2022 American Community Survey (ACS) 5-Year Estimates to report the percentage of homes using different heating sources. The overwhelming majority of Norwich households (82.1%) primarily consumed fossil fuels, such as heating oil, kerosene, propane, butane, or liquified petroleum gas, to heat their home. A minority of homes (15.6%) relied primarily on wood or other biomass sources. It is also likely that many Norwich homes supplemented their heating using wood or biomass sources. Lastly, an exceedingly small number of homes (2.3%) used electricity as their primary heating source. It is likely that these homes used either heat pumps or electric baseboard heaters.

The EAN Dashboard reports an increase in the adoption of heat pumps over the last few years. In 2022, the EAN Dashboard reported 313 cold-climate heat pumps and 111 heat pump water heaters in Norwich. By 2024, the EAN Dashboard reported that there were 526 cold-climate heat pumps and 154 heat pump water heaters in Norwich. These figures include cold-climate heat pumps and heat pump water heaters for both residential and commercial structures.

Electric Use

Data on electricity consumption is specific to Norwich and up-to-date because Green Mountain Power (GMP) as a utility regulated by the VT Public Utilities Commission (PUC) provides detailed statistics about electricity generation and use as part of their license to

operate. Approximately ~~60~~ 79 percent of the GMP portfolio is made up of renewable energy, predominantly hydro-electric from Quebec. Current commercial transportation energy use and future trends were not assessed by TRORC as part of their Act 174 energy planning. The published figures for thermal and transportation energy are rough estimates, based on statewide averages and Census data. More reliable and accurate data is needed for town energy planning to be meaningful and effective.

According to the Municipal Summary Worksheet, Norwich residences consumed 14,050 megawatt hours (MWh) of electricity, while Norwich's commercial structures consumed 3,766 MWh of electricity. Together, Norwich's residences and commercial structures consumed an estimated 17,896 MWh of electricity in 2022. A single MWh is equivalent to 3.412142 MMBTUs. Using this conversion factor, Norwich's residences and commercial structures consumed 60,791 MMBTUs of electricity.

Renewable Energy Resources

Vermont's Renewable Energy Goals

~~Greenhouse gas (~~GHG~~)~~ emissions caused from human activities are driving the global climate crisis. In 2011 Vermont adopted a goal to obtain 90 percent of the total energy used in the state (primarily electricity, thermal, and transportation) from renewable sources by 2050. Advisory 2050 targets have been set for each Vermont municipality. The energy and conservation targets for Norwich are shown in Figure 12. Specific targets for renewable energy generation are included in Appendix B, Energy Targets and Conservation Goals.

Figure 12. **Norwich Energy Targets**

Year	Renewable	Nonrenewable	Efficiency	Total
2014 (baseline)	144.3	380.1	0	524.4
2016 (actual)	145.4	362.7	8.7	508.1
2025 (target)	160.1	273.8	47.9	434.0
2035 (target)	174.5	177.2	91.5	351.7
2050 (target)	196.1	32.3	156.8	228.4

All values expressed in thousand MMBTUs.
Source: Energy Action Network 2050 Energy Pathway Analysis

Figure 12

Commented [BK5]: This table combines energy generation and energy conservation. Those are very different things. Recommend replacing with a generation table with 2022 figures and 2025, 2035, and 2050 targets. Group can chose other metrics they want put into a table using 2022 actuals and 2025, 2035, and 2050 targets.

Town-level efforts to meet the State's '90 by 50' goal will focus on redirecting energy demand to renewable electric sources. These efforts will be challenged by the limited authority of municipalities to affect energy use outcomes. Energy products (including efficiency and renewables) are allocated via markets which are regulated by State and US

governments. Municipalities are best understood as institutional consumers who have no jurisdiction over the structure and operation of energy markets. In the case of Norwich, the town is a very small consumer, even compared to local school districts and larger regional employers.

Municipalities do have the authority to regulate land use (an authority granted to municipalities by state statute and case law). Because land use patterns in Norwich have been consistent for many decades, and the rate of development is exceedingly slow, changing land use patterns will not play a major role in achieving the targets within the timeframes identified by the VT CEP. Nevertheless, Norwich will use this opportunity to review the zoning and subdivision regulations to encourage future development patterns that reduce energy use and preserve forest and agricultural lands for ecosystem services. These concerns are addressed in more detail in the Land Use, Housing and Transportation chapters.

Each year GMP reports the energy mix of its service area. GMP is the sole electric generation and distribution utility servicing Norwich. ~~Fifty seven~~Seventy nine percent of the electricity consumed in ~~Norwich~~ the GMP service area is from renewable sources ~~(based on the GMP renewable portfolio and local generation), 0.5 percent below the 2016 EAN Dashboard target~~. Converting current electricity use to renewable sources has been relatively straightforward in response to state policies such as the Renewable Energy Standard, which required utilities like GMP to procure ~~55~~ 100 percent of their electricity from renewable sources by 2030~~in 2017~~. ~~That figure will increase incrementally to 75 percent by 2032.~~ Conversion of transportation and thermal energy (most of the energy used in Norwich) to renewable sources are beyond the regulatory scope of the municipality, and thus the Town can only influence the outcome at the margins.

In summary, it is important to acknowledge that the town's ability to meet the ambitious and necessary state energy goals is limited. It falls primarily in 1) land use regulation, 2) modeling the adoption of energy conservation and renewable energy in Town facilities and equipment, and 3) ensuring local regulations are not a barrier to necessary change. Norwich is, nevertheless, determined to take concerted action to make progress.

Energy Costs

Supplies of electricity, gasoline, biomass, or various heating fuels are subject to price volatility and potential disruptions at the global, national, and regional levels. While the Town of Norwich does not have regulatory control over the supply of these energy resources, it is in the Town's interest to encourage its residents, businesses, and civic

Commented [BK6]: Towns cannot truly know the source of their electricity. GMP posts yearly breakdowns of the energy mix for their service area, but there is no way to extrapolate that for towns. Within a service area, all of the electrons from each source mix together. It could be that 100% of Norwich's electricity came from renewables sources in 2024, or it all could have been from nonrenewable sources. There's no telling. At best, the Plan could state the 2024 energy mix for the GMP service area as a proxy.

Commented [BK7]: Act 179 of 2024 changed this requirement.

Commented [BK8]: Request feedback from group on text like this. It is not wrong or inaccurate, but do they find this to be useful and complete.

institutions to compare the upfront costs of fuel switching, weatherization and energy efficiency projects, and new renewable energy generation projects against their potential long-term cost savings.

While this plan acknowledges that weatherization and energy efficiency projects can pose a substantial financial burden for Norwich's residences, businesses, and civic institutions, these programs offer significant cost savings after implementation. The resulting reduction in thermal heating and cooling costs also reduce the consumption of heating fuels, electricity, or biomass. Thus, more of these resources are conserved.

Similarly, fuel switching projects, like replacing ICE vehicles with EVs or replacing older fossil fuel-burning heating systems with heat pumps, will often lead to significant cost savings over time. Again, this plan acknowledges that these projects may pose additional upfront financial burdens on Norwich's residents and businesses. However, an EV consumes far fewer MMBTUs of energy per mile driven than an ICE vehicle. Similarly, the efficiency of modern heat pumps exceeds that of older furnaces and boilers. This increased efficiency results in both cost savings and GHG emission reductions.

Energy Scarcity

There are few scarcities of energy foreseen in the 8-year life of this plan. Total energy demand is likely to shrink modestly in the near term as Norwich's population is not expected to grow much, and more fuel switching, weatherization, and energy efficiency projects are anticipated over the life of this plan. While this plan predicts there will be an ample supply of heating and transportation fuels over the next eight years, this plan nevertheless encourages a shift away from the use of these fossil fuels. Wood is also plentiful local source of heating fuel, and many more cords could be sustainably harvested as a thermal heating energy source. There are also no foreseen scarcities of electricity, as GMP generates and distributes an ample supply of electricity across its service area. GMP will also need to increase its purchase or generation of renewable energy as mandated by Vermont's Renewable Energy Standard, which requires GMP to produce or procure 100 percent of its electricity from renewables by 2030.

Energy Problems

The lack of any foreseen energy scarcity is not meant to imply that the energy consumed in Norwich poses no known issues. Foremostly, the consumption of fossil fuels for transportation, electric generation, and thermal heating are all contributing to anthropomorphic climate change through the emissions of GHGs. The reduction of GHGs

through fuel switching, greater energy efficiency, weatherizing buildings, and the expansion of renewable energy generation are objectives of this plan.

The consumption of GHGs also poses threats to the health of Norwich residents. The burning of any fossil fuel causes air pollution. In indoor settings, inadequate ventilation from appliances that burn fossil fuels can cause deleterious health effects on individuals' cardiovascular systems. And if not properly maintained, any underground or aboveground storage tank has the potential to leak fossil fuels into the ground and groundwater.

As noted above, fossil fuels have varied widely in price over the last several years. While the cost of energy is not an issue for some families, it is still an issue for some. Efficiency Vermont's Energy Burden Report shows that 5.9% of Norwich's households are considered energy burdened in 2023. While this figure is lower than every neighboring town except Strafford, Norwich households spend more on energy than both neighboring Strafford and Hartford. While 10.8% of Hartford households are energy burdened compared to 5.9% of Norwich's households, the average Hartford households spend less on energy ($6,649) than the average Norwich household ($7,207).

Consistency with the electric grid can also be a problem in Norwich. The power may fluctuate, which is due to the condition of utility power lines. Norwich also has few 3-phase transmission lines. This limits the siting and implementation of new larger renewable energy generation projects in locations in Norwich without 3-phase transmission lines. Furthermore, many transmission lines are at half capacity, while some are at two-thirds capacity or maximum capacity. This potentially limits the siting and implementation of new smaller-scale renewable energy generation projects.

R**enewable Energy Generation Potential**
Act 174 Maps.

As required by the state under Act 174, TRORC has mapped areas of Norwich that have potential for renewable energy generation (see Appendix B). The maps for solar potential rely heavily on analyzing aspect (south-facing landforms are most suitable for solar generation). The maps do not correct for features that will limit uptake of solar projects including: current land use and lot boundaries, extent of forest cover, proximity to roads, and distance to electric distribution (particularly 3-phase power and transmission infrastructure). Each of these factors presents serious limitations to utility scale (>500 kW) solar energy development.

At present, the most salient factors for determining where non-residential renewable energy projects may feasibly be located is proximity to the existing power grid (3-phase power and transmission lines) and the capacity of the grid to accommodate additional load. As of 2019, the GMP Solar Map 2.0 indicated that there were system limitations on the circuit along the Thetford-Norwich border and to the far west of Norwich near the Sharon town-line. Norwich operates on circuit 71G1 of the Wilder substation, which the utility lists as having ~~72~~ 50 percent of its capacity remaining (approximately 7.1~~10.2~~ MW). Therefore, installation of numerous 150 kW solar arrays is feasible. Three-phase power lines currently run along Main Street as far as Willey Hill Road, Route 5 South, and Route 5 North (to just south of Farrell Farm Road). Beyond these areas infrastructure upgrades would be required for larger projects.

SOLAR POWER. The EAN Dashboard identifies 190 small PV sites in Norwich, with a total capacity of almost 1,800 kW (approximately 11 percent of the generation goal). The Norwich Energy Committee tracks solar installations, including households that have purchased shares of solar projects located in other towns. This count tallies 283 residences, businesses, or churches that have "gone solar" — more projects of this scale and type are likely. The EAN Dashboard ranks Norwich 12th out of 250 towns in Vermont for the number of solar electric sites.

While large scale development of solar energy will require proximity to a substation and three phase power, the utility grid in Norwich is well-suited for projects of about 150kW or smaller. Using the Act 174 mapping methodology, 6,341 acres out of a total 28, 620 acres in Norwich has solar potential (southern facing slopes). But, 22,116 acres (or 77 percent) of Norwich is forested. About 67 percent of the area identified as having solar potential is currently under forest. Aside from the economic cost of clearing, the release of carbon from cleared lands would diminish the climate benefits of solar development on these sites. The mapping of solar potential also includes the Right-of-Way (ROW) for interstate 1-91 and other lands not available for development.

About ~~16~~ 2.1 MW of installed solar would be needed for Norwich to meet its renewable energy generation target of about ~~20,000~~7,522 MWh ~~per year~~by 2050 (Appendix B~~, table 1Q~~). This is the town share of projected statewide energy demand in 2050, in proportion to its population. Based on current solar technology. ~~16~~ 2.1 MW of solar generation would require about ~~160~~ 39 acres total, or about 0.1~~45~~ percent of the town's total land area. Assuming that solar panels continue to increase in efficiency, the area needed to meet Norwich energy demand will decrease as a result. Today 150 kW solar arrays typically require about of a third of an acre. To the extent that homes and businesses take up roof

Commented [BK9]: Could hyperlink to this resource.

Commented [BK10]: Cannot update this data directly. PSD's Pathways model that TRORC had to use per Act 174 documents existing generation for solar, wind, hydro, biomass, and other. Norwich only had solar generation: 3.5 MW converted to 4,578 MWh using PSD's conversion factor.

Commented [BK11R10]: But this model does not tell us how many PV arrays contributed to that generation figure.

Commented [BK12]: Can we request an update from the Norwich Energy Committee?

Commented [BK13]: Again, because EAN Dashboards functionality and data was completely changed in 2022/2023, we cannot update this.

Commented [BK14]: In Table 9C of the updated Municipal Summary Worksheet, TRORC removed any lands that were part of a priority forest block mapped by Vermont Agency of Natural Resources. **It shows there are 884 acres of land available for solar generation that are considered "prime" in that they have no known constraints.**

Commented [BK15R14]: Could rewrite this section to incorporate the new data in 9C, which addresses many of the issues highlighted in this section.

Commented [BK16]: PSD assumes 7 acres per MW of solar generation. So roughly about 143 KW per acre.

and parking lot installations the need for larger ground-based solar arrays will be reduced.

BIOMASS. It is not known how much wood is harvested for fuel in Norwich on an annual basis. Wood is a renewable source of thermal energy and technological improvements have greatly increased the efficiency and reduced the pollution associated with burning wood. A large percentage of homes in Norwich use wood as either a primary or secondary heating source. The State of Vermont is encouraging schools and municipal facilities to install high efficiency wood pellet or woodchip heating systems. More recently Dartmouth College (in neighboring Hanover, NH) is reconsidering a proposal for a biomass plant to replace existing fossil fuel fired heat system, due to concerns about the risk of increasing greenhouse gas emissions (including the impact of trucking woodchips) and local air quality effects. While the climate benefits of burning wood for heat are being reassessed, Norwich will promote the clear path of solar electricity and switching to electric heat and transportation.

GEOTHERMAL. There is one ground source heat pump installed at a residential property in Norwich, according to the EAN Dashboard. The feasibility of installing geothermal systems needs to be assessed on a site-by-site basis. As of 2019, the town is considering geothermal heat pumps for three town buildings (Tracy Hall, the Fire Department apparatus bay, and the Town Garage).

HYDRO POWER. There are no hydropower facilities currently located in Norwich according to the Energy Dashboard. Small, run-of-the-river generators would be the only likely future hydro generation, given current state and federal regulations regarding the damming of waterways. ~~However, just over 60 percent of GMP electricity is provided by contracts with Hydro-Quebec, a public utility.~~

WIND POWER. According to the Energy Dashboard there are no wind energy projects installed in Norwich as of 2018. There is no meaningful potential for utility- or community-scale wind generation in Norwich given current turbine technology, which generally requires an average wind speed of at least 6 meters per second. Only two locations in Norwich are identified through the Act 174 mapping process with wind speeds at 6 meters per second or above (accessed via turbines set between 50 and 70 meters high). Both are off Chapel Hill Rd along the Sharon townline. These sites are not currently accessible from roads suitable for this scale of development, nor to a power transmission line.

Energy Conservation and Efficiency

Commented [BK17]: Looks like the campus abandoned this project in 2020. Recommend striking as this is not topical.

Commented [BK18]: Cannot update figure.

Commented [BK19R18]: EAN Dashboard no longer tracks this.

Commented [BK20]: Status of this?

Commented [BK21]: This can cite PSD's Pathway Model tools instead. There are no hydropower facilities in Norwich reported by PSD.

Commented [BK22]: Same comment as above. There are no wind turbines in Norwich reported by PSD.

Commented [BK23R22]: Update locations statement based on new Wind Potential Map.

STRUCTURES. The scenario for meeting the state's renewable energy goal presented on the EAN Dashboard shows that by 2050 Norwich will need to use a total of 296 MMBTUs of energy less than it did in the baseline year of 2014. Under the US and Vermont constitutions, the town has no role in shaping or regulating the market provision of energy conservation or efficiency products and services. In addition, the annual rate of new construction, or even substantial improvement, is very low. Nevertheless, the town can still play a role by encouraging energy code compliance, modeling energy-efficiency in municipal facilities, supporting outreach and information-sharing with residents, and investigating how it could take on inspection and enforcement.

TRANSPORTATION. Of note here is the assumption that the town's total energy use for transportation will go from 205,793 MMBTUs in the baseline year of 2014 to 56,348 MMBTUs in 2050 (see EAN Dashboard, regional energy planning). That is, the town's transportation energy use in 2050 will be 27 percent of what it was in 2014. It is also expected that fully 90 percent of the 2050 transportation energy budget will be provided from renewable sources. This is a major change from the town's current modes of transportation and entirely outside the control of (existing) municipal decision-making. Land-use policy, a clear area of town authority, will play an important role, as will town support for regional public transit and town infrastructure for walking, biking, and electric vehicles. Land use policy can help support reductions in the number and length of car trips — and thus greenhouse gas emissions — by encouraging future development to be located close to job and retail centers and public transit lines, and creating walkable neighborhoods.

Future Generation, Use and Conservation

Energy Targets

Future targets for energy generation, use and conservation have been set for all Vermont municipalities as part of the state's enhanced energy planning under Act 174 (see Figure 12). The planning scenario presented on the EAN Dashboard envisions that total energy consumption of Norwich will decrease from the 2014 baseline consumption of 524,4000 MMBTUs to 228,400 MMBTUs in 2050. A reduction to 44 percent of 2014 levels. Moreover, only 32,300 MMBTUs (or 14 percent of the total) will be from non-renewable sources. This reduction will primarily rely on the efficiencies of weatherization and electric transportation.

This plan's land use, housing and transportation objectives and policies call for new housing and economic development to be focused in and adjacent to the village and mixed

Commented [BK24]: Will have to update using the commercial and residential thermal efficiency targets,

Commented [BK25R24]: And/or heat pump adoption targets.

Commented [BK26]: Could replace with the targets for adoption of EVs.

Commented [BK27]: How do the members feel about a statement like this?

Commented [BK28]: Again this is a target provided through the old EAN dashboard. It is not a target that aligns with Act 174 requirements.

use areas. This is where people can live close to employment, shopping and services. Such proximity allows walking, biking and public transit, all of which reduce transportation energy use. Encouraging such a development pattern through the Town's land use regulations and public infrastructure are the most effective and direct measures Norwich government can take to move towards meeting the state's energy goals.

The ~~2017~~ TRORC ~~Energy Plan~~Municipal Summary Worksheet recognizes that Norwich ~~is currently~~ generated~~ing~~ ~~2.2~~ 3.5 ~~GWh~~MW, or 4,578 MWh in 2022. ~~/year of electricity from solar~~ and sets a target for a total of ~~20GWh~~7,522 MWh ~~/year~~ of renewable energy generation by 2050. This is based on Norwich's fraction of the regional population. The portfolio of renewable energy generating sources includes both rooftop and ground-mounted solar, and wind~~, and hydropower~~. The TRORC Municipal Summary Worksheet ~~energy plan suggests~~ proposed that ~~there is 81 times more 'suitable land' than~~ only 4.3% of the land in Norwich is needed to host such renewable energy projects (primarily for solar facilities) in Norwich.

Commented [BK29]: It did not.

Commented [BK30]: Among other factors.

Equity Discussion

The Town of Norwich is actively considering the potential equity impacts of the energy chapter's objectives, policies, and actions. None of these are anticipated to exacerbate existing inequalities. Indeed, the plan acknowledges that its energy burdened residents face the most difficulty supporting the plan's objectives. To address this, the plan calls for the Town of Norwich to undertake actions that will equitably allow energy-burdened households and individuals to support the plan's objectives.

While increased energy conservation and the efficient use of energy benefits all residents, the benefit will be greatest for Norwich's energy-burdened residents. Regretfully, energy-burdened residents may not be able to afford the upfront costs to renovate and weatherize their properties, install on-site renewable energy generation facilities, or switch to energy-efficient appliances. Therefore, the plan supports income-based financial incentives, rebates, and programs for low- and moderate-income residents available from Efficiency Vermont, Capstone, and other organizations. Furthermore, the plan supports the establishment of Property Assessed Clean Energy (PACE) program, which would provide financing for upfront commercial and residential energy efficiency, weatherization, and renewable energy generation improvements for Norwich's energy-burdened residents.

Commented [BK31]: Add spreading word about these programs as an action for the Town of Norwich and its committees.

Commented [BK32]: Could strike if no interest in considering enacting a PACE district as an action.

The plan supports the minimization of energy from the transportation sector by promoting active transportation and multimodal transportation options through developing more pedestrian and bicycle facilities, carpooling, the use of Advance Transit buses, and land use policies like clustering new development in Norwich Village. The plan also supports the Tri-Valley Transit Dial-A-Ride program wherein elderly residents, those with disabilities, or low-income individuals can receive free rides for medical appointments, pick up groceries,

Commented [BK33]: Could mention seeking Tier 1b designation for Norwich Village here.

or reach critical services. Enacting these objectives, policies, and actions will help lower energy costs for all residents, but in particular those do not own or lack access to a single-occupancy vehicle.

The plan calls for patterns of land use that are not anticipated to create any inequitable, undue, or unfair burdens or costs on any environmental justice focus population. Furthermore, with the exception of biomass generation facilities, renewable energy generation facilities do not pose a risk to public health or the environment. Therefore, this plan does not foresee any inequitable, undue, or unfair burdens on nearby environmental justice focus populations from these renewable energy generation facilities. For biomass facilities, the Plan calls for the installation of appropriate air pollution control measures and prohibits their siting near any environmental justice focus populations.

Commented [BK34]: Recommend adding these as policies.

Commented [BK35R34]: Environmental justice focus populations are defined in 3 V.S.A. § 6002.