Energy Planning Standards for Municipal Plans

Instructions

Before proceeding, please review the requirements of Parts I and II below, as well as the Overview document. Submitting a Municipal Plan for review under the standards below is entirely voluntary, as enabled under Act 174, the Energy Development Improvement Act of 2016. If a Municipal Plan meets the standards, it will be given an affirmative "determination of energy compliance," and will be given "substantial deference" in the Public Service Board's review of whether an energy project meets the orderly development criterion in the Section 248 process. Specifically, with respect to an in-state electric generation facility, the Board:

[S]hall give substantial deference to the land conservation measures and specific policies contained in a duly adopted regional and municipal plan that has received an affirmative determination of energy compliance under 24 V.S.A. § 4352. In this subdivision (C), "substantial deference" means that a land conservation measure or specific policy shall be applied in accordance with its terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure or policy. The term shall not include consideration of whether the determination of energy compliance should or should not have been affirmative under 24 V.S.A. § 4352.

Municipal Plans should be submitted by the municipality's legislative body to the Regional Planning Commission (RPC) if the Regional Plan has received an affirmative determination of energy compliance. If a Regional Plan has not received such a determination, until July 1, 2018¹, a municipality may submit its adopted and approved Municipal Plan to the Department of Public Service (DPS) for a determination of energy compliance (determination), along with the completed checklist below. After a Municipal Plan and completed checklist have been submitted to the RPC (or DPS), the RPC or DPS will schedule a public hearing noticed at least 15 days in advance by direct mail to the requesting municipal legislative body, on the RPC or DPS website, and in a newspaper of general publication in the municipality. The RPC or DPS shall issue a determination in writing within two months of the receipt of a request. If the determination is negative, the RPC or DPS shall state the reasons for the denial in writing and, if appropriate, suggest acceptable modifications. Submissions for a new determination following a negative determination shall receive a new determination within 45 days.

The plans that Municipalities submit must:

- Be adopted
- Be confirmed under 24 V.S.A. § 4350
- Include an energy element that has the same components as described in 24 V.S.A. § 4348a(a)(3)
- Be consistent with state energy policy (described below), in the manner described in 24 V.S.A. § 4302(f)(1)
- Meet all standards for issuing a determination of energy compliance (see below)

¹ These standards will be revised after July 1, 2018 to reflect that Municipal Plans should be submitted only to the Regional Planning Commissions – which will all have had an opportunity to seek a determination of energy compliance – from that point forward.

Municipalities are encouraged to consult with their reviewer (either their RPC or DPS) before undertaking the process of plan adoption, which may help in identifying any deficiencies or inconsistencies with the standards or other requirements that would be more difficult to remedy after a plan has gone through the formal adoption process.

The state's Comprehensive Energy Plan (CEP) is revised on a 6-year basis. When the next CEP is published in 2022, it will include a revised set of standards, as well as Recommendations that are customized to regions and municipalities. The Recommendations that accompany this initial set of Standards represent a subset of recommendations from the 2016 CEP, which were not written with regions and municipalities specifically in mind. A Guidance document – which is expected to evolve as best practices from regions and municipalities emerge – will be published shortly after the Standards are issued. It will serve as the warehouse for relevant recommendations from the 2016 CEP, links to data sources, instructions on conducting analysis and mapping, and sample language/best practices. Once issued and until the 2022 CEP is published, this Guidance document will supplant the Recommendations document.

Affirmative determinations last for the life cycle of a revision of the Municipal Plan, and Municipal Plans that are submitted after the 2022 CEP is issued will be expected to meet the Standards that are issued at that time. Municipalities are encouraged to consult with their RPC or DPS regarding interim amendments that might affect any of the standards below, to discuss whether a new review is triggered.

If you wish to submit your Municipal Plan to your RPC or to DPS for a determination, please read closely the specific instructions at the start of each section below, and attach your Municipal Plan to this checklist.

Determination requests to an RPC (and any other questions) should be submitted to your RPC's designated contact. Determination requests to DPS until July 1, 2018 – and only for municipalities whose Regions' plans have not received an affirmative determination – should be submitted to: PSD.PlanningStandards@vermont.gov.

Part I: Applicant Information					
The plan being submitted for review is a:	 ✓ Municipal Plan in a region whose regional plan has received an affirmative determination of energy compliance from the Commissioner of Public Service Please submit these plans to your RPC 	 ☐ Municipal Plan in a region whose regional plan has not received a determination of energy compliance Until July 1, 2018, please submit these to the DPS. After July 1, 2018, this option ceases to exist. 			
Applicant:	The Town of Morgan				
Contact person:	Steve Matson, Morgan Zoning Administrato	or			
Contact information:	smatson43@gmail.com				
Received by: Irene Nagle, NVDA	Date: April 8, 2019				

Part II: Determination Standards Checklist

The checklist below will be used to evaluate your plan's consistency with statutory requirements under Act 174, including the requirement to be adopted and approved, contain an enhanced energy element, be consistent with state energy policy, and meet a set of standards designed to ensure consistency with state energy goals and policies.

Please review and attach your plan (or adopted energy element/plan, along with supporting documentation) and self-evaluate whether it contains the following components. Use the Notes column to briefly describe how your plan is consistent with the standard, including relevant page references (you may include additional pages to expand upon Notes). If you feel a standard is not relevant or attainable, please check N/A where it is available and use the Notes column to describe the situation, explaining why the standard is not relevant or attainable, and indicate what measures your municipality is taking instead to mitigate any adverse effects of not making substantial progress toward this standard. If N/A is not made available, the standard must be met (unless the instructions for that standard indicate otherwise) and checked "Yes" in order to receive an affirmative determination. There is no penalty for checking (or limit on the number of times you may check) N/A where it is available, as long as a reasonable justification is provided in the Notes column.

Plan Adoption Requirement

Act 174 requires that municipal plans be adopted and approved in order to qualify for a determination of energy compliance. In the near term, it is likely municipalities will revise and submit isolated energy plans or elements, particularly due to long planning cycles. Therefore, the plan adoption requirement can be met through an amendment to an existing plan in the form of an energy element or energy plan, as long as the amendment or plan itself is duly adopted as part of the municipal plan and incorporated by reference or appended to the underlying, full plan (i.e., is officially "in" the municipal plan), as well as approved for confirmation with the region. If this route is chosen, the municipality should also attach the planning commission report required for plan amendments under 24 V.S.A. § 4384, which should address the internal consistency of the energy plan/element with other related elements of the underlying plan (particularly Transportation and Land Use), and/or whether the energy plan/element supersedes language in those other elements. Standards 1 and 2 below must be answered in the affirmative in order for a plan to receive an affirmative determination of energy compliance.

1. Has your plan been duly adopted and approved for confirmation		☐ No	Click here to enter text.
according to <u>24 V.S.A. § 4350</u> ?	March 25, 2019		
	Confirmation date:		
	Pending board		
	decision following		
	public hearing		
2. Is a copy of the plan (or adopted energy element/plan, along with	⊠ Yes	□ No	Notes: NVDA staff completes this
underlying plan and planning commission report addressing consistency of			checklist
energy element/plan with other elements of underlying plan) attached to			
this checklist?			

Energy Element Requirement

To obtain a determination of energy compliance, Act 174 requires municipalities to include an "energy element" that contains the same <u>components</u> described in 24 V.S.A. § 4348a(a)(3), which was revised through Act 174 to explicitly address energy across all sectors and to identify potential and unsuitable areas for siting renewable energy resources:

An energy element, which may include an <u>analysis</u> of <u>resources</u>, <u>needs</u>, <u>scarcities</u>, <u>costs</u>, <u>and problems within the region across</u> <u>all energy sectors</u>, including electric, thermal, and transportation; a statement of policy on the conservation and efficient use of energy and the development and siting of renewable energy resources; a statement of policy on patterns and densities of land use likely to result in conservation of energy; and an identification of potential areas for the development and siting of renewable energy resources and areas that are unsuitable for siting those resources or particular categories or sizes of those resources.

The standards below are generally organized to integrate each component of the enhanced energy element with related determination standards that evaluate the plan's consistency with state goals and policies. **Energy element components are identified in bolded text.**

While municipalities may choose to primarily address energy used for heating, transportation, and electricity in the required energy element, they may also choose to address some of these components in related plan elements (e.g., Transportation and Land Use) and should indicate as much in the Notes column. To the extent an energy element is designed to comprehensively address energy, it should be complementary to and reference other relevant plan elements.

3. Does the plan contain an energy element, that contains the same	□ No	Page: Pages 33-49
components described in 24 V.S.A. § 4348a(a)(3)?		Notes: Click here to enter text.
Individual components of the energy element will be evaluated through the		
standards below.		

Consistency with State Goals and Policies Requirement

Act 174 states that regional and municipal plans must be consistent with the following state goals and policies:

- Greenhouse gas reduction goals under 10 V.S.A. § 578(a) (50% from 1990 levels by 2028; 75% by 2050)
- The 25 x 25 goal for renewable energy under 10 V.S.A. § 580 (25% in-state renewables supply for all energy uses by 2025)
- Building efficiency goals under 10 V.S.A. § 581 (25% of homes or 80,000 units made efficient by 2020)
- State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b
- The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005

The standards in the checklist below will be used to determine whether a plan is consistent with these goals and policies. The standards are broken out by category. *Analysis and Targets* standards address how energy analyses are done within plans, and whether targets are established for energy conservation, efficiency, fuel switching, and use of renewable energy across sectors. *Pathways (Implementation Actions)* standards address the identification of suitable and unsuitable areas for the development of renewable energy.

Municipalities may choose to incorporate the information necessary to meet the standards in their energy elements, and/or in other sections of their plans (many transportation items may fit best in the Transportation chapters of plans, for instance). However, plans must be internally consistent, and applicants should cross-reference wherever possible.

Analysis and Targets Standards

For the *Analysis & Targets* determination standards below, municipalities will be provided with analyses and targets derived from regional analyses and targets no later than April 30, 2017 (and likely much sooner). Municipalities may choose to rely on these "municipalized" analyses and targets to meet the standards in this section. Municipalities which elect to use the analysis and targets provided by a region will be presumed to have met the standards in this section. Alternatively, municipalities may develop their own custom analyses and targets or supplement the analyses and targets provided by the regions with specific local data; if this option is chosen, the analysis and targets must include all of the same components and meet the standards required of regions, as described below.

For municipalities that choose to undertake their own analysis and target-setting (and for regions), DPS is providing a guidance document to explain the expected level of detail in and data sources and methodologies available for meeting the standards (including areas where it is understood data at the municipal level is unavailable, and therefore not expected). Note that standards 5A-4E are all derived directly from requirements in Act 174 (with minor modifications to make them feasible) and must be met affirmatively in order for a municipal plan to receive an affirmative determination of energy compliance.

Targets set by regions and municipalities should be aligned with state energy policy (see the goals and policies listed above). Where targets (and efforts to reach them) depart significantly from state energy goals and policies, an explanation for how the plan otherwise achieves the intent of the state goal or policy should be provided. The guidance document also offers additional clarification on alignment with state goals and policies.

The analysis items below are intended to provide regions and municipalities with an overview of their current energy use, and with a sense of the trajectories and pace of change needed to meet targets, which can be translated into concrete actions in the *Pathways* standards below. Targets provide regions and municipalities with milestones or checkpoints along the way toward a path of meeting 90% of their total energy needs with renewable energy, and can be compared with the potential renewable energy generation from areas identified as potentially suitable in the *Mapping* standards exercise below to give regions and municipalities a sense of their ability to accommodate renewable energy that would meet their needs.

4. Does your plan's energy element contain an analysis of resources, needs, scarcities, costs, and problems within the municipality across all energy sectors (electric, thermal, transportation)?	⊠ Yes	□ No	Page: Needs include improved telecommunications infrastructure to support telecommuting (thus reducing number of vehicular trips), and improved bicycle infrastructure to support alternative transportation (page 37). Problems include grid congestion (page 43). No scarcities are noted. Notes: Click here to enter text.
--	-------	------	--

by your Munici their re targets develop	s your plan contain an analysis that addresses A-E below, either as provided r Regional Planning Commission or as developed by your municipality? palities may meet this standard by using the analysis and targets provided by egions, or by developing their own analyses and targets. If using the analysis & provided by your region, please answer "Yes-Region" and skip ahead to #6. If ping a custom analysis, please answer "Yes-Custom" and address 5A-5E tely, below.	✓ Yes-Region✓ Yes-Custom	□ No	Page: pages 34-42 Paragraph #: multiple Notes: Data provided by NVDA
A.	Does the plan estimate current energy use across transportation, heating, and electric sectors?	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
В.	Does the plan establish 2025, 2035, and 2050 targets for thermal and electric efficiency improvements, and use of renewable energy for transportation, heating, and electricity?	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
C.	Does the plan evaluate the amount of thermal-sector conservation, efficiency, and conversion to alternative heating fuels needed to achieve these targets?	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
D.	Does the plan evaluate transportation system changes and land use strategies needed to achieve these targets?	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
E.	Does the plan evaluate electric-sector conservation and efficiency needed to achieve these targets?	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.

Pathways (Implementation Actions) Standards

This section examines whether plans meet the Act 174 expectation that they include pathways and recommended actions to achieve the targets identified through the *Analysis and Targets* section of the Standards (above). Plans are expected to include or otherwise address all of the pathways (implementation actions) below; some actions may not be applicable or equally relevant to all applicants (small vs. large municipalities, for instance), in which case N/A may be checked (if available) and the justification provided in the Notes column. There is no penalty for choosing N/A one or more times, as long as a reasonable justification is provided in the Notes column, preferably including an explanation of how the plan alternatively achieves attainment of the targets should be included. If N/A is not provided as an option, the standard must be met, and "Yes" must be checked, in order for the plan to meet the requirements for a determination (unless the instructions particular to that standard indicate otherwise).

DPS will be issuing a guidance document in the near term providing potential implementation actions derived from the Comprehensive Energy Plan (relevant formal Recommendations as well as opportunities not specifically called out as Recommendations), from recent regional and municipal plans, and from other sources. The guidance document will be revised after the regions have compiled best practices from early municipalities pursuing energy planning to seek a determination of energy compliance, in the summer of 2017.

For the time being, we offer potential implementation action options for consideration as italicized text under each standard. Plans are encouraged to promote as diverse a portfolio of approaches as possible in each sector, or if not, to explain why they take a more targeted approach. Implementation actions may fit best in a holistic discussion contained within a plan's energy element, though cross-referencing to other relevant plan elements is also acceptable. Municipalities must demonstrate a commitment to achieving each standard in both policies and implementation measures in clear, action-oriented language. 6. Does your plan's energy element contain a statement of policy on the Page: 39 X Yes ☐ No conservation and efficient use of energy? Paragraph #: last Notes: Click here to enter text. A. Does the plan encourage conservation by individuals and organizations? ⊠ Yes □ No Page: Page 56 - 57 (Actions could include educational activities and events such as convening or Paragraph #: bulleted items sponsoring weatherization workshops, establishing local energy committees, Notes: encourages carpooling by providing encouraging the use of existing utility and other efficiency and conservation info on Town website programs and funding sources, etc.) B. Does the plan promote efficient buildings? ⊠ Yes Page: Pages 56 -57 ☐ No (Actions could include promoting compliance with residential and Paragraph #: bulleted items commercial building energy standards for new construction and existing Notes: Carry out recommendations from buildings, including additions, alterations, renovations and repairs; energy audits of public buildings; provide info promoting the implementation of residential and commercial building on efficiency and weatherization on town efficiency ratings and labeling; considering adoption of stretch codes, etc.) website C. Does the plan promote decreased use of fossil fuels for heating? Page: Pages 40-41; 56-57 ⊠ Yes □ No (Actions and policies could promote switching to wood, liquid biofuels, Paragraph #: "2. Switch from fossil fuel heat to biogas, geothermal, and/or electricity. Suitable devices include advanced clean renewable sources"; bulleted items wood heating systems and cold-climate heat pumps, as well as use of more Notes: Click here to enter text. energy efficient heating systems; and identifying potential locations for, and barriers to, deployment of biomass district heating and/or thermal-led combined heat and power systems in the municipality) D. Does the plan demonstrate the municipality's leadership by example with ⊠ Yes ☐ No Page: Pages 56-57 respect to the efficiency of municipal buildings? Paragraph #: Click here to enter text. \square N/A (Actions could include building audits and weatherization projects in schools Notes: Supports carrying out and town offices, etc.) recommendations from energy audits of public buildings. E. Other (please use the notes section to describe additional approaches that ☐ Yes Page: Click here to enter text. ☐ No Paragraph #: Click here to enter text. your municipality is taking) \boxtimes N/A Notes: Click here to enter text.

transpo	s your plan's energy element contain a statement of policy on reducing ortation energy demand and single-occupancy vehicle use, and encouraging renewable or lower-emission energy sources for transportation?	⊠ Yes	□ No	Page: 36 – 37; 57 Paragraph #: Click here to enter text. Notes: The Town supports the development of park & ride lots to encourage ride sharing; town supports improved telecommunication so residents can work from home; supports Village Center designation which provides funds for EV charging stations.
A.	Does the plan encourage increased use of public transit? (Actions could include participation in efforts to identify and develop new public transit routes, promote full utilization of existing routes, integrate park-and-rides with transit routes, etc.)	⊠ Yes	□ No □ N/A	Page: 17 Paragraph #: first Notes: supports RCT's efforts to establish shuttle services serving the community.
B.	Does the plan promote a shift away from single-occupancy vehicle trips, through strategies appropriate to the municipality? (Actions could include rideshare, vanpool, car-sharing initiatives; efforts to develop or increase park-and-rides; enhancement of options such as rail and telecommuting; education; intergovernmental cooperation; etc.)	⊠ Yes	□ No	Page: 56-57, Paragraph #: bulleted items Notes: supports carpooling, park and ride, telecommuting
C.	Does the plan promote a shift away from gas/diesel vehicles to electric or other non-fossil fuel transportation options through strategies appropriate to the municipality? (Actions could include promoting the installation of electric vehicle charging infrastructure, providing education and outreach to potential users, supporting non-fossil fuel vehicle availability through outreach to vehicle dealers, etc.)	⊠ Yes	□ No	Page: 57 Paragraph #: bulleted items Notes: suggests energy fairs and VC designation which provides funds for establishing EV charging stations.
D.	Does the plan facilitate the development of walking and biking infrastructure through strategies appropriate to the municipality? (Actions could include studying, planning for, seeking funding for, or implementing improvements that encourage safe and convenient walking and biking; adopting a "Complete Streets" policy, etc.)	⊠ Yes	□ No □ N/A	Page: 37 Paragraph #: first Notes: Click here to enter text.
E.	Does the plan demonstrate the municipality's leadership by example with respect to the efficiency of municipal transportation? (Actions could include purchasing energy efficient municipal and fleet vehicles when practicable, installing electric vehicle charging infrastructure, etc.)	☐ Yes	□ No ⊠ N/A	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: There is no municipal transportation system
F.	Other (please use the notes section to describe additional approaches that your municipality is taking)	☐ Yes	□ No 図 N/A	Page: Click here to enter text. Paragraph #: Click here to enter text.

				Notes: Click here to enter text.
densiti	es of land use likely to result in conservation of energy? Does the plan include land use policies (and descriptions of current and	⊠ Yes	□ No	Page: 37 Paragraph #: First Notes: It is recognized that in this rural community, clustered development can reduce energy use; however, lack of water and sewer infastrucutre makes compact development difficult. Page: 37; 57
7	future land use categories) that demonstrate a commitment to reducing sprawl and minimizing low-density development? (Actions could include adopting limited sewer service areas, maximum building sizes along highways, policies or zoning that require design features that minimize the characteristics of strip development [multiple stories, parking lot to the side or back of the store], and requirements that development in those areas be connected by means other than roads and cars; adopting a capital budget and program that furthers land use and transportation policies; etc.)	Z 163	L NO	Paragraph #: First; bulleted item Notes: clustered development is encouraged, where possible. Village Center designation is proposed.
В.	Does the plan strongly prioritize development in compact, mixed-use centers when physically feasible and appropriate to the use of the development, or identify steps to make such compact development more feasible? (Actions could include participating in the state designation program, such as obtaining state designated village centers, downtowns, neighborhoods, new town centers, or growth centers; exploration of water or sewage solutions that enable compact development; etc.)	⊠ Yes	□ No □ N/A	Page: 42; 57 Paragraph #: P. 42, 4 th para; bulleted item Notes: "incentivesshould be provided under local regulations for energy efficient development." Village Center designation proposed
C.	Other (please use the notes section to describe additional approaches that your municipality is taking)	☐ Yes	□ No 図 N/A	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
9. Doe s	s your plan's energy element contain a statement of policy on the	⊠ Yes	□ No	Notes: page 42
develo	pment and siting of renewable energy resources?			
A.	Does the plan evaluate (estimates of or actual) generation from existing renewable energy generation in the municipality? Municipalities should be able to obtain this information from their regions.	⊠ Yes	□ No	Page: 42 Paragraph #: 1st Notes: three solar installations generate about 684 MWh

В	Does the plan analyze generation potential, through the mapping exercise (see <i>Mapping</i> standards, below), to determine potential from preferred and potentially suitable areas in the municipality? Municipalities should be able to obtain this information from their regions.	⊠ Yes	□ No	Page: 48 Paragraph #: first Notes: The Town's portion of the regional target for generation, based on population, is 215 MWh
C	Does the plan identify sufficient land in the municipality for renewable energy development to reasonably reach 2050 targets for renewable electric generation, based on population and energy resource potential (from potential resources identified in the <i>Mapping</i> exercise, below), accounting for the fact that land may not be available due to private property constraints, site-specific constraints, or grid-related constraints? If N/A, please describe how you are working with your regional planning commission to ensure overall regional objectives are achieved.		□ No □ N/A	Page: 48 Paragraph #: first Notes:
D	. Does the plan ensure that any local constraints (locally designated resources or critical resources, from12B and 12C under <i>Mapping</i> , below) do not prohibit or have the effect of prohibiting the provision of sufficient renewable energy to meet state, regional, or municipal targets? If N/A, please describe how you are working with your regional planning commission to ensure overall regional objectives are achieved.	⊠ Yes	□ No □ N/A	Page: 48 Paragraph #: entire page Notes: Morgan's new net generation goal is 215 MWh. The Town's potential for solar alone is well over this target, and there are opportuntiteis for small and mid-scale wind power generation. There are also considerable woody biomass resources.
E	Does the plan include statements of policy to accompany maps (could include general siting guidelines), including statements of policy to accompany any preferred, potential, and unsuitable areas for siting generation (see 12 and 13 under <i>Mapping</i> , below)?	⊠ Yes	□ No	Page: 42-47 Paragraph #: Notes: Detailed siting guidelines are included on the above referenced pages.
F	Does the plan maximize the potential for renewable generation on preferred locations (such as the categories outlined under 12E in the <i>Mapping</i> standards, below)?	⊠ Yes	□ No □ N/A	Page: 47 Paragraph #: bulleted items Notes: preferred sites listed
G	. Does the plan demonstrate the municipality's leadership by example with respect to the deployment of renewable energy? (Actions could include deploying renewable energy to offset municipal electric use, etc.)	☐ Yes	□ No ⊠ N/A	Page: Paragraph #: Click here to enter text. Notes: Town-owned buildings consist of a 24 x 36 foot modular town-clerk's office and the Community House which is only used in warmer months. The use of energy for town buildings is therefore minimal.

H. Other (please use the notes section to describe additional approaches that	☐ Yes	□No	Page: Click here to enter text.
your municipality is taking)		⊠ N/A	Paragraph #: Click here to enter text.
			Notes: Click here to enter text.

Mapping Standards

Act 174 requires plans to identify potential areas for the development and siting of renewable energy resources and areas that are unsuitable for siting those resources or particular categories or sizes of those resources. It furthermore requires that the standards address the potential generation from the potential siting areas.

The *Mapping* standards lay out a sequence of steps for planners to examine existing renewable resources and to identify potential (and preferred) areas for renewable energy development, and to identify likely unsuitable areas for development, by layering constraint map layers on to raw energy resource potential map layers. The maps should help municipalities visualize and calculate the potential generation from potential areas, and compare it with the 2025, 2035, and 2050 targets from the *Analysis and Targets* standards to get a sense of the scale and scope of generation that could be produced within the region to meet the municipality's needs. DPS will provide additional guidance to accompany the standards that fleshes out the steps, layers, and standards more fully.

Plans must include maps that address all of the standards below, unless N/A is provided as an option, in which case a compelling reason why the standard is not applicable or relevant should be provided in the Notes column. Regions must develop their own maps (already underway through support being provided to regions by DPS), and to then break out the maps for their municipalities, who can use their region-provided maps to meet the municipal *Mapping* standards (such "municipalization" work is being supported through a training & technical assistance contract between DPS and regions, and all regions must supply completed maps to their municipalities by April 30, 2017, though many are expected to do so much sooner).

Municipalities may choose to rely on the maps provided by the regions to meet the standards in this section. Those maps should be somewhat familiar to municipalities, who are expected to be consulted as regions develop their maps. Alternatively, municipalities may choose to undertake their own mapping, according to the same set of standards as regions. Additionally, municipalities are expected to work collaboratively with their regions and with neighboring municipalities to ensure compatibility between the final products.

The map and the text describing the policies or rules used to construct the map, as well as the text describing specific policies applicable to map features, should be complementary. That should help ensure that any "land conservation measures and specific policies" that might be given substantial deference in the context of a particular project review under 30 V.S.A. § 248 are clearly identifiable in the text, should a map lack sufficient clarity or granularity regarding the area in which a project is proposed.

10. Does your plan contain one or more maps that address 11-13 below, as	⊠ Yes-	□ No	Page: attached to plan
provided by your Regional Planning Commission or as developed by your	Region		Paragraph #: Click here to enter text.
municipality?	☐ Yes-		Notes: Energy maps are viewable at
Municipalities may meet this standard by using the maps provided by their	Custom		http://nvda.net/morgan.php
regions, or by developing their own maps. If using the maps provided by your			
region, please answer "Yes-Region" and skip ahead to #14. If developing			

custom maps, please answer "Yes-Custom" and address 11-13 separately, below.			
11. Does the plan identify and map existing electric generation sources? Maps may depict generators of all sizes or just those larger than 15 kW, as long as information on generators smaller than 15 kW is summarized and provided or referenced elsewhere. It is expected that the best available information at the time of plan creation will be used. This information is available from the DPS.	☐ Yes	□ No □ N/A	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
12. Does the plan identify potential areas for the development and siting of renewable energy resources and the potential generation from such generators in the identified areas, taking into account factors including resource availability, environmental constraints, and the location and capacity of electric grid infrastructure? Maps should include the following (available from VCGI and ANR), and the resulting Prime and Secondary Resource Maps will together comprise "potential areas":	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
A. Raw renewable energy potential analysis (wind and solar), using best available data layers (including LiDAR as appropriate)	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
 B. Known constraints (signals likely, though not absolute, unsuitability for development based on statewide or local regulations or designated critical resources) to include: Vernal Pools (confirmed and unconfirmed layers) DEC River Corridors FEMA Floodways State-significant Natural Communities and Rare, Threatened, and Endangered Species National Wilderness Areas Class 1 and Class 2 Wetlands (VSWI and advisory layers) Regionally or Locally Identified Critical Resources If areas are constrained for the development of renewable energy due to the desire to protect a locally designated critical resource (whether a natural resource or a community-identified resource), then the land use policies applicable to other forms of development in this area must be similarly restrictive; for this category, policies must 	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.

	prohibit all permanent development (and should be listed in the Notes column). These areas should be subtracted from raw renewable energy resource potential maps to form Secondary Resource Maps			
C.	Possible constraints (signals conditions that would likely require mitigation, and which may prove a site unsuitable after site-specific study, based on statewide or regional/local policies that are currently adopted or in effect), including but not limited to: • Agricultural Soils • FEMA Special Flood Hazard Areas • Protected Lands (State fee lands and private conservation lands) • Act 250 Agricultural Soil Mitigation areas • Deer Wintering Areas • ANR's Vermont Conservation Design Highest Priority Forest Blocks (or Habitat Blocks 9 & 10, for plans using regional maps in regions whose plans will be submitted for adoption at the regional level by March 1, 2017) • Hydric Soils • Regionally or Locally Identified Resources If locations are constrained for the development of renewable energy due to the desire to protect a locally designated resource (whether a natural resource or community-identified resource, like a view), then the land use policies applicable to other forms of development must be similarly restrictive (and should be listed in the Notes column). These areas should be subtracted from Secondary Resource Maps to form Prime Resource Maps.	☐ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
D.	Transmission and distribution resources and constraints, as well as	☐ Yes	□ No	Page: Click here to enter text.
	transportation infrastructure. (Including three-phase distribution lines, known constraints from			Paragraph #: Click here to enter text. Notes: Click here to enter text.
	resources such as Green Mountain Power's solar map, known areas			Notes. Click fiele to effect text.
	of high electric load, etc.)			
E.	Preferred locations (specific areas or parcels) for siting a generator	☐ Yes	□ No	Page: Click here to enter text.
	or a specific size or type of generator, accompanied by any specific		□ N/A	Paragraph #: Click here to enter text.

siting criteria for these locations Narrative descriptions of the types of preferred areas in accompanying plan text are acceptable, though mapping of areas and especially specific parcels (to the extent they are known) is highly encouraged, to signal preferences to developers, particularly for locally preferred areas and specific parcels that do not qualify as a statewide preferred location under i. below. The locations identified as preferred must not be impractical for developing a technology with regard to the presence of the renewable resource and access to transmission/distribution infrastructure.			Notes: Click here to enter text.
 i. Statewide preferred locations such as rooftops (and other structures), parking lots, previously developed sites, brownfields, gravel pits, quarries, and Superfund sites 	☐ Yes	□ No □ N/A	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
ii. Other potential locally preferred locations For example, customer on- or near-site generation, economic development areas, unranked and not currently farmed agricultural soils, unused land near already developed infrastructure, locations suitable for large-scale biomass district heat or thermal-led cogeneration, potential locations for biogas heating and digesters, etc. These are particularly important to map if possible, as "a specific location in a duly adopted municipal plan" is one way for a net metering project to qualify as being on a preferred site.	□ Yes	□ No □ N/A	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
13. Does the plan identify areas that are unsuitable for siting renewable energy resources or particular categories or sizes of those resources? Either Yes or No ("No" if the plan chooses not to designate any areas as unsuitable) is an acceptable answer here. "Resources" is synonymous with "generators."	Yes ("Yes" for A and B must also be selected below)	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
A. Are areas identified as unsuitable for particular categories or sizes of generators consistent with resource availability and/or land use policies in the regional or municipal plan applicable to other types of land development (answer only required if "Yes" selected above, indicating unsuitable areas have been identified)?	□ Yes	☐ No ☐ N/A (if no unsuita ble areas	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.

	If areas are considered unsuitable for energy generation, then the land use policies applicable to other forms of development in this area should similarly prohibit other types of development. Please note these policies in the Notes column.		are identifie d)	
В	. Does the plan ensure that any regional or local constraints (regionally or locally designated resources or critical resources, from 12b-12c above) identified are supported through data or studies, are consistent with the remainder of the plan, and do not include an arbitrary prohibition or interference with the intended function of any particular renewable resource size or type? Please explain in the Notes column.	□ Yes	□ No	Page: Click here to enter text. Paragraph #: Click here to enter text. Notes: Click here to enter text.
14. N	Nunicipalities seeking a determination of energy compliance from the	⊠ Yes	□ No	Page:
D	epartment and not using their region's maps only: Does the plan	(also		Paragraph #:
	nsure that its approach, if applied regionally, would not have the effect	check Yes		Notes: Click here to enter text.
О	f prohibiting any type of renewable generation technology in all	if seeking		
lo	ocations?	determina		
		tion from		
		region, or		
		from DPS		
		but using		
		region-		
		Inrovidad	l	
		provided maps)		