CHITTENDEN COUNTY RPC
Communities Planning Together

CCRPC Long Range Planning Energy Sub -Committee

AGENDA

*=attached to agenda in the meeting packet

DATE: **Tuesday, October 17, 2017**

TIME: **5:00 p.m. to 7:00 pm**

PLACE: **CCRPC Office, 110 West Canal Street, Suite 202, Winooski, VT.**

Wi-Fi INFO: **Network = CCRPC-Guest; Password = ccrpc$guest**

1. **Welcome + Introductions (5 minutes)**
2. **Review September 19, 2017 Minutes* (5 Minutes)**
3. **Discussion of Siting Policy Statements* (20 Minutes)**
4. **Review Municipal Comments* (20 Minutes)**
5. **Generation Targets* (20 Minutes**)
6. **Review Energy Summary* (10 minutes)**
   Energy will be the first topic that we 'launch' for public outreach and feedback. Staff has summarized the energy planning work into a concise document that we'll use to garner feedback.
7. **Next Steps** *(5 minutes)*
   Meeting Schedule for November

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CHITTENDEN COUNTY RPC
Communities Planning Together

CCRPC Long Range Planning Energy Sub -Committee

Minutes

DATE: **Tuesday, September 19, 2017**

TIME: **5:00 p.m. to 7:00 pm**

PLACE: **CCRPC Office, 110 West Canal Street, Suite 202, Winooski, VT**

Attendees:

- Catherine McMains, Jericho (Chair)
- Karen Adams, Colchester
- Matt Burke, Charlotte alternate
- Keith Epstein, South Burlington
- Jeff Forward, Richmond
- Will Dodge, Essex

Staff:

- Melanie Needle, Senior Planner
- Regina Mahony, Planning Program Manager
- Emily Nosse-Leirer, Planner

1. Review August 15, 2017 Minutes

Karen Adams made a motion to approve the minutes as drafted. Keith Epstein seconded the motion. The committee voted unanimously.

2. Discussion of Siting Policy Statements*

Melanie explained that staff has edited and reorganized the energy siting policies based on discussion with the Board, the Executive Committee, the PAC, the LRPC and the Energy Subcommittee. The constraints on energy development are now described in Strategies 3.2.3 and 3.2.4, which currently discuss natural resources preservation. Strategy 3.2.2.4 still includes energy plan actions and policies. Siting policies are now split into two sections: "Constraint Policies" and "Suitability Policies".

"Constraint Policies" place limits on renewable energy generation development.

Keith asked why the constraint policies include state regulations. Staff explained that it is intended to be education for readers. The committee discussed whether more explanation would be useful, and whether policy ii belongs at all. Melanie suggested making it an action to work with municipalities on screening. Karen suggested just adding explanatory language about the fact that the policies here apply to municipal standards that must be adopted in accordance with state statute.

Melanie explained that “Suitability Policies” provide a list of desirable characteristics for energy facilities on unconstrainted lands, which are considered guidelines rather than regulations. The committee expressed their desire for a different numbering system that doesn’t include Roman numerals.

Jeff asked that “disturbed portion” be removed in relation to gravel pits. The committee discussed the fact that permitted gravel pits often have reclamation plans that can impact solar development. These projects will probably always have to go through Act 250 because of these plans. Fontaine Solar in Williston is an example of a project that faced this issue.

Matt asked whether we needed to include a definition of infill development for Policy iv to make it clear that infill development does not include solar development. Jeff expressed concern with this policy, siting several places in areas planned for growth that have solar developments proposed or would be good sites for solar, so saying “provided infill development is not precluded” is unclear. Karen thinks that ground mounted solar always precludes infill development and also expressed her concerns about who determines when infill development is precluded. Jeff suggested striking the “precluded” clause. Catherine McMains suggested replacing it with “where possible.” Melanie wondered if this policy should be that we support colocation with load in areas planned for growth outside of designated centers. Will suggested that all the policies on ground mounted facilities could be replaced by saying that sites should be identified in joint letters. The committee decided against this approach. Staff will continue this discussion at the board meeting tomorrow. The committee said that it is necessary to have language that explicitly states the intention of this policy, which is that load and generation should be located close to each other wherever possible to minimize distribution and transmission lines, minimize working landscape fragmentation and balance growth with energy development in areas planned for growth. Co-locate is likely not the correct term. Whatever language we come up with must be consistent with the policies in Section A of this chapter as well.

Keith asked why these policies only address wind and solar. Regina explained that staff have only been able to facilitate discussions on a limited number of technologies so far; some of these may be relevant to all technologies. We will look into this further.

Keith suggested that we change policy iii to say “on or near” existing structures, rather than just on structures.

The committee discussed the issue of 3-phase power. The committee decided to change “within 1000 feet” to something like “proximate to” since we’re not able to reasonably decide a distance.

Keith mentioned that he doesn’t like the word “alternative” forms of heating, since we’re hoping to make these methods the mainstream. Maybe “sustainable” is the right choice.

Jeff expressed his support for the fact that the constraints are not just decisions that CCRPC made unilaterally, but instead represent restrictions that are already in place at the state and local level.

Jeff asked about the difference between what municipalities can plan for and what the regional plan says regarding energy beyond siting. Melanie clarified that the regional plan does discuss issues like conservation and efficiency, but that municipalities have more information in their plans on these issues because they have different authority and influence than the RPCs. Committee members expressed enthusiasm for the greater ability of municipalities to enact specific policies.

Karen stated that she appreciated that the policy focus is not on mandating things for municipalities, but gives the option for each municipality to do what works for them in most cases.

3. <u>Update</u>

a. Generation Targets

At a prior meeting, the committee discussed the fact that the amount of energy generation reported by the Vermont Energy Atlas plus Burlington Electric Department and the Department of Public Service is different, with the former being a smaller amount. Melanie explained that these two numbers are closer now, but the number from the energy atlas and BED is still about 50,000 mWh lower than the DPS number. She also explained that DPS confirmed that we can use the lower number if we are more comfortable with the data, as long as we explain that there is a difference.

b. DPS Comments*

Melanie explained that staff have received comments from the Department of Public Service, which were generally positive. The committee agreed that wherever possible, the more specific actions are, the better. Specifically, the committee asked that we get more specific in response to this DPS comment "The plan states support for an EV charging network and natural gas and biodiesel HDVs, but does not include any implementation actions." Melanie provided what we do on this front, and we can make the actions more specific.

4. <u>Next Steps</u> *(5 minutes)*

The next meeting will take place on October 17, 2017.

3.2.2 STRIVE FOR 80% OF NEW DEVELOPMENT IN AREAS PLANNED FOR GROWTH, WHICH AMOUNTS TO 15% OF OUR LAND AREA AND PROTECT NATURAL, CULTURAL, HISTORIC, OR SCENIC RESOURCES

4. Energy – Transform the Region's energy system to meet the goals of Vermont's energy and greenhouse gas reduction goals.

a. Reduce energy consumption and decrease greenhouse gas emissions, to support the State's goals:
   - Reduce greenhouse gas emissions 50% from 1990 levels by 2028,
   - Reduce greenhouse gas emissions 75% from 1990 levels by 2050,
   - Reduce per capita energy use across all sectors (electricity, transportation and heating) 15% by 2025,
   - Reduce per capital energy use across all sectors (electricity, transportation and heating) by more than 1/3 by 2050, and
   - Weatherize 25% of all homes by 2020.

   i. Continue partnerships with Vermont Gas, Burlington Electric Department, Efficiency Vermont and the State Weatherization Assistance Program to facilitate the weatherization and increased energy efficiency of housing stock and other buildings.
   ii. Decrease fossil fuel heating by working with partners such as Efficiency Vermont to educate developers and homeowners on the benefits of technology such as cold climate heat pumps, wood heating and geothermal systems. Examples include district heating (for example, using waste heat from the McNeil Plant to heat buildings in Burlington) and biogas generation (capturing the methane produced by landfills or farms and using it instead of natural gas).
   iii. Work with partners to establish a consistent energy code for all jurisdictions and geographic areas to avoid disincentives for infill development in areas planned for growth.
   iv. Reduce fossil fuel consumption in the transportation sector, through the Transportation Demand Management and electric vehicle promotion strategies outlined in Part 6c of this section and in the Metropolitan Transportation Plan (MTP) included in this plan.
   v. Collaborate with the State of Vermont and utilities to ensure that state energy policy implementation (i.e. permits for non-renewable fuels) reflect state energy goals and our policies in Section b.
   vi. ~~Work with partners to increase rooftop solar generation wherever possible, especially net metering on~~ Encourage renewable energy generation to support publicly owned buildings ~~to reduce public money spent on energy costs, provided infill development is not precluded~~.
   vii. Provide assistance to municipalities to enhance town plans to be consistent with Act 174 standards for the purpose of enabling municipalities the ability to gain substantial deference in the Certificate of Public Good Section 248 process. This assistance will include working with municipalities to identify natural, cultural, historic, or scenic resources

to be protected from all development types and identify preferred locations for renewable energy generation facilities.

viii. Use the ~~Vermont~~ Energy Action Network (~~V~~EAN) Energy Dashboard to educate residents and municipalities about opportunities to reduce energy use and switch to renewable energy sources.

ix. Support a wide variety of renewable energy generation types, including sustainable uses of biomass for heating, bio-digesters for electricity generation, and optimizing the energy potential for existing hydro-electric dams.

x. Work with the utilities on long-range infrastructure capacity planning.

xi. Support in-place upgrades of existing facilities, including existing transmission lines, distribution lines and substations as needed to reliably serve the municipality and region throughout the County.

~~xi.~~ Support changes in federal and state policies to achieve the state of Vermont CEP Plan goals.

Commented [MN1]: From Hinesburg:
We feel that the regional energy plan should address the selling of renewable energy credits outside of the region or the state. This is common practice, and could inflate the required coverage of renewable energy generation in the county if we are unable to get credit for facilities sited here.

~~b.~~ To meet the Vermont Comprehensive Energy Plan's goal of using 90% renewable energy by 2050, xx,xxx MWh of new renewable energy generation will need to be sited in Chittenden County in a manner that is cost effective and respects the natural environment.. The following statements are CCRPC's renewable energy generation facility siting policies and will inform CCRPC's preferred sites policy, see chapter 4 for more details.

Commented [MN2]: Need to discuss CCRPC's policy for responding to letter of support request from 248 applicants who are seeking to take advantage of the net-metering credit.

Constraint Policies: Ground mounted renewable energy generation is constrained in certain areas due to state and local restrictions on development.

i. Site renewable energy generation to avoid state and local known constraints and to minimize impacts to state and local possible constraints, as defined in strategies 3.2.3.1.f, 3.2.4.1.e, 3.2.4.2.e.

ii. Site ground-mounted solar development in accordance with setback standards as defined in 30 V.S.A. §248(s) and municipal screening requirements adopted in accordance with 30 V.S.A. §248(b)(B).

Commented [MN3]: We are renumbering the strategies and actions so this will change.

Suitability Policies: After considering the constraints referenced above and found in section, ~~Unconstrained areas have~~ different levels of suitability exist for different scales and types of renewable energy generation depending on location within the County. . First review the constraints above and then look at the polices ~~-~~below to determine how and where CCRPC encourages renewable energy generation facilities. ~~In unconstrained areas, locate energy generation facilities to meet as many of the following guidelines as possible and relevant~~. We want to encourage the location of renewable energy generation following these guidelines as relevant. Inability to meet these guidelines does not limit the ability to develop renewable energy development.

i. Locate energy generation proximate to existing distribution and transmission infrastructure with adequate capacity and near areas with high electric load.

i. Locate renewable energy generation in areas designated by a municipality in an adopted plan for such use, including specific preferred sites for solar.

ii. Locate solar generation (including but not limited to net ~~on~~metering) on previously impacted areas (such as ~~on or near existing structures~~, ~~as well as at~~ parking lot~~s canopies~~, previously developed sites, brownfields, landfills, ~~or~~ gravel pits~~/ or~~ quarries, or on or near existing structures).

iii. Locate ground-mounted solar generation, and small-scale wind (1 or 2 turbines, no higher than ~~30~~ 50 meters hub height) in Chittenden County's areas planned for growth, while allowing infill development wherever reasonably practical.

iv. Locate ground-mounted solar larger than 15 kW ~~ac~~AC and wind turbines with a hub height larger than 30 m~~large-scale wind~~[1] installations outside of state designated village centers, growth centers, downtowns, new town centers, neighborhood development areas, and historic districts on the State or National Register.

v. Locate wind generation in areas with high wind potential, such as the prime and base wind potential areas shown on Map X.

Commented [MN4]: Staff researched the height of the dynapower turbine it is just above 30 m and in an area planned for growth.

Commented [MN5]: This list was reordered to discuss more general policies first, then solar, and then wind.

[1] ~~Large-Scale Wind means any wind turbine with a hub height of 50m or higher, not including the blade. Commercial-scale wind has a capacity between 100kW and 1MW, and utility scale wind has a capacity of 1MW or more.~~

3.2.3 Improve the safety, water quality, and habitat of our rivers, streams, wetlands and lakes in each watershed.

While striving toward all of these ECOS strategies, and particularly Strategy #2 – 80% of growth in 15% of our land area, it is essential to do so in such a way that we do not impair our essential water resources (including potable water) and that we prepare ourselves for the impacts of a changing climate.

1. **River Hazard Protection** – Develop and implement adaptation strategies to reduce flooding and fluvial erosion hazards. While supporting planned growth, ensure that growth is evaluated in terms of preparedness for a changing climate. Chittenden County will continue its efforts, along with the municipalities, to avoid development in particularly vulnerable areas such as floodplains, river corridors, wetlands, lakeshore and steep slopes; protect people, buildings and facilities where development already exists in vulnerable areas to reduce future flooding risk; plan for and encourage new development in areas that are less vulnerable to future flood events (see Section 3.2.2); and implement stormwater management techniques to slow, spread and sink floodwater (see the Non-Point Source Pollution section below).
    a. Identify problem locations - Conduct on the ground inventories and map flow and sediment attenuation locations and problematic infrastructure (undersized culverts, eroding roadways, "vulnerable infrastructure" - infrastructure subject to repeat damage and replacement, etc.).
    b. Revise bridge/culvert designs - Revise public works and zoning ordinances with culvert and bridge design specifications that allow for wildlife passage and movement of floodwater and debris during high intensity events. Implement culvert and bridge designs that produce stable structure in river channels (i.e. fluvial geomorphology).
    c. Protect river corridors– Existing bylaws protect the majority of Fluvial Erosion Hazard (FEH) areas with stream setbacks and floodplain regulations. Work with ANR to get the FEH data incorporated into the River Corridor Protection Area maps. Work with municipalities and ANR to improve bylaws to protect the River Corridor Protection Areas or River Corridors not currently protected and enforce these bylaws. Continue protection of river corridors including non-regulatory protection measures such as stream re-buffering, river corridor easements on agricultural lands, river corridor restoration and culvert and bridge adaptation.
    d. Support non-regulatory conservation and/or preservation of vulnerable areas through public and land trust investments, including identification of repetitively damaged structures and provide assistance to elevate, relocate or buy out structures, and identify where flood storage capacity may be restored and conserved.
    e. Participate in the development and implementation of the Lamoille, Winooski and Direct to Lake Tactical Basin Plans. CCRPC will work with the State, municipalities and other partners to address river hazard protection, flood resiliency and water quality through these Plans – including prioritizing projects for funding.
    f. To protect water quality, ~~locate~~ development should be located so as to avoid field-verified state and local known constraints, and to minimize impacts to field-verified state and local possible constraints.

i. State and Local Known Constraints, as protected by municipalities and State agencies, are shown on Map 6 and include the following: DEC River Corridors, FEMA Floodways, and Municipal Water Quality Setbacks, Local Known Constraints TBD, as of (date)
ii. State and Local Possible Constraints are shown on Map 6 and include the following: FEMA Special Flood Hazard Areas and hydric soils, Local Possible Constraints TBD, as of (date)

3.2.4 Increase investment in and decrease subdivision of working lands and significant habitats, and support local food systems.

1. **Habitat Preservation** - Protect forests and wetlands ~~and agricultural lands from development~~, and promote vegetative landscaping in urban areas in order to maintain natural habitats, natural storm water management and carbon sequestration. This will keep people and infrastructure out of harm's way and allow for natural flood attenuation areas.
   a. Inventory - Conduct on the ground surveys and inventories of significant habitats (include wetlands), connectivity corridors, scenic resources and locations of invasive species and map this information. Incorporate this data into municipal and regional plan text and maps and establish specific policies that address and protect these resources.
   b. Municipal Development Review Regulations - Develop clear definitions of the resources to be protected and establish standards to describe how to protect these resources within zoning and subdivision regulations.
   c. Education - Educate engineers, developers, real estate professionals, planners and the public regarding resources and methods for restoration and protection.
   d. Non-regulatory Protection - Support non-regulatory conservation and/or preservation through public and land trust investments. Establish invasive plant removal management plans, implement the plans and include long-term monitoring.
   e. To protect significant habitats, ~~locate~~ development should be located so as to avoid field-verified state and local known constraints, and to minimize impacts to field-verified state and local possible constraints
      - State and Local Known Constraints, as protected by municipalities and State agencies, are shown on Map 6 and include the following: State -significant natural communities and rare threatened and endangered species, vernal pools (unconfirmed and confirmed), and Class 1 and Class 2 Wetlands, Local Known Constraints: TBD (as of date)
      - Possible State and Local Constraints, as protected by municipalities and State agencies, are shown on Map 6 and include the following: Protected Lands (state lands in fee simple ownership and privately conserved land), deer wintering areas, the Agency of Natural Resources Vermont Conservation Design

Highest Priority Forest Blocks, Local Possible Constraints: TBD (as of date)

2. **Working Lands Implementation** – To preserve the soul of Vermont, as well as move forward into the future with resiliency, Vermont needs to protect the farmland and forestland we have and support existing and new operations in order to meet this plan's renewable energy goals, ensure local food production and support the local economy.
    a. Municipal Development Review Regulations - Develop clear definitions of working lands to be protected and establish zoning and subdivision standards to describe how to protect these areas from development so that they may be retained and accessible as "working" lands. Maintain access and scale of working lands to ensure viability after subdivision in the rural landscape (including but not limited to protection of log landings of previously logged forested parcels, zoning techniques such as fixed area ratio zoning to separate lot size from density, conservation zoning and homeowners association bylaws that allow for farming on the open space lots, etc.); while promoting urban agriculture in areas planned for growth. While farming is generally exempt from municipal zoning, some structures such as farm houses, processing facilities, the generation of energy for on-farm use, and on-farm retail and related enterprises may be regulated. The economic viability of farm enterprises can often depend on these facilities so municipal regulation should not impede reasonable farm related improvements.
    b. Infrastructure & Systems – support establishment of food processing industries, value-added product markets, workforce training, etc to help support the viability of these industries.
    c. Support non-regulatory conservation and/or preservation through public and land trust investments (including but not limited to municipal land conservation funds).
    d. Work with farmers and the Farm to Plate Initiative to balance this plan's goals of a strong local food system and increased production of renewable energy.
    e. To preserve working lands, locate development to avoid field-verified state and local known constraints, and to minimize impacts to field-verified state and local possible constraints

        - Possible State or Local Constraints, as protected by municipalities and State agencies, are shown on Map 6 and include the following: Agricultural soils and Act 250 agricultural soil mitigation areas. Local Possible Constraints TBD

	A	B	C	D
2	**Town**	**Type of Comment**	**Comment**	**Staff Recommendation/Next Step**
3	Hinesburg	siting policy	Constraints on renewable energy development: 5. We do want the regional plan to prohibit energy generation in areas with known constraints; however, we recognize that gaining access to unconstrained areas may require passing through a constrained area. We allow for this in traditional development projects as follows (section 6.12.1 #2, Subdivision Regulations): "Building sites and related development areas (e.g., roads, driveway, lawn, etc.) shall avoid primary resource areas and minimize impact on secondary resource areas. Limited impacts to primary resource areas for access (e.g., road or driveway) may be allowed, at the discretion of the Development Review Board, if there are no alternate development plans and no other means of access. In such cases, the access shall be designed to impact as little of the primary resource area as possible." We encourage the regional plan to take a similar approach. 6. We feel that it is critical that the plan language provide guidance on how impacts on secondary resources (i.e., possible constraints) should be minimized. Or at least, how the PSB should judge whether a project is in fact minimizing its impacts. We offer three principals on this front: a. Ensure the development footprint in the secondary resource is small relative to the resource area and the overall development project – including the location of the generation facilities, access roads, and supporting infrastructure. Has the project demonstrated that the design enables the minimum impact possible? b. Ensure the development is put on the edge of the secondary resource area, rather than in the middle. This is particularly important for impacts to core wildlife habitat (i.e., large interior forest blocks) and agricultural soils. c. Ensure that the development does not create a barrier for the use of the secondary resources in question. As noted above, this is particularly important for impacts to core wildlife habitat (wildlife movement and dispersal) and agricultural soils (access and viability of continued use). d. Ensure that site specific assessments are conducted to assess extent of resources and impacts. 7. If any resource areas are impacted during construction, they should be restored the maximum extent possible after construction. For example, large access roads are needed to install industrial size wind turbines; however, the width of these roads can be reduced once construction is completed. 8. Although not listed as a constraint, we feel strongly that development in general and renewable energy generation in particular should be sited so as to be visually absorbed by the surroundings. We suggest incorporating language into the regional energy plan that factors this into siting considerations. For example… Existing vegetation and/or topography shall break up the visual impact of the development (particularly at the perimeter of the project), such that development is visually absorbed into the surroundings. The development need not be sited so as to be hidden, but rather to ensure it blends with the surroundings. As such, the character of the area shall be considered – e.g., industrial or other highly developed areas being less sensitive than residential or lesser developed areas. 9. We feel that the regional energy plan should address the selling of renewable energy credits outside of the	Is this too granular for the ECOS Plan? Would it be appropriate to include use of the Energy Policies & Standards: The Guide for Southern Windsor County Communities (http://swcrpc.org/wp-content/uploads/2014/12/SWCRPC-Model-Energy-Policies-and-Standards.pdf) as an action in the ECOS Plan when we work with towns to implement Act 174 standards?
4	Bolton	constraint policy	We questioned why there are no regionally defined constraints (in relation to ECOS plan recommendations for natural resource protection, GMC/Long Trail corridor, etc.). Also no setbacks from residences for wind (per new PSB rules)—which would eliminate some areas of Bolton. We included residential buffers in our initial list of constraints, but understand that this is a regional/state issue w/re to siting wind facilities. It will likely come up again, however, in relation to local energy planning—particularly with regard to potential sites above the Notch Road.	no constraints emerged as being universal restrictions to development across the county. Therefore, no region-wide constraints were added
5	Bolton	preferred site	Not at present (though there was some discussion re use of parking areas at Bolton Valley for solar). Identifying locally preferred sites will require more community input and discussion – especially w/re to commercial wind – as part of a local energy planning process. That said, there appears to be strong support on the Planning Commission and Select Board for rooftop solar, especially given little potential and significant limitations/constraints for the siting of commercial solar installations/arrays in town. We also discussed the use of old quarries and gravel pits but, because of our mountains, the few we have in town do not have much solar access.	Rooftops and parking areas will be included in our preffered site list and these areas are part of the siting policies
6	Burlington	preferred site	Without broader public input on preferred sites, the Planning Commission is not prepared to offer extensive input on this question at this time. However, the Commission would like for Landfill Park in the Burlington Intervale to be identified as a preferred site. The Commission will include a discussion of any other preferred sites as part of its Municipal Development Plan update.With this in mind, the Planning Commission has no objections to the "automatically preferred sites" identified by the state, including rooftops and other built structures, parking lots, previously developed sites, brownfields and Superfund sites among others....	include Landfill Park and automatically preferred sites
7	Charlotte	preferred site	The preferred sites which the EC recommends are: • Charlotte Central School • Town owned land that already has paved areas • Train depot and park & ride • State-owned land west of the park & ride • Commercial and residential roof areas	Staff will seek a list of parcel Ids for the town owned land list

	A	B	C	D
2	**Town**	**Type of Comment**	**Comment**	**Staff Recommendation/Next Step**
8	Hinesburg	preferred site	In addition to the preferred sites already identified by the State, we suggest: • Old Town landfill – south side of Observatory Road, above Town gravel pit and highway garage • Along the existing VELCO transmission corridor • Existing solar generation sites – note that solar technology continues to advance, and existing solar sites could be "repowered" in the future on the same or similar footprint to generate substantially more energy. • The proposed solar generation facility on the north side of Magee Hill Road.	need to define "along"
9	Jericho	preferred site	As far as any preferred sites go, the Town Dump, which is at 508 Browns Trace. This is also where the town highway garage is located. Also, the "Rivers property", which has an active gravel pit. That gravel pit would be an ideal location for a solar array. It is located at Browns Trace 275a. Any school roof would also be a good location	
10	Hinesburg	siting policy	We feel that the regional energy plan should address the selling of renewable energy credits outside of the region or the state. This is common practice, and could inflate the required coverage of renewable energy generation in the county if we are unable to get credit for facilities sited here.	If the facility is sited in Chittenden County it is counted here. Staff to research state policy/incentives for retiring RECs in state.
11	Bolton	constraint policy	Staff met with the Bolton Planning Commission on 10/9 to discuss their list of constraints. Staff identified that the exceptions for recreational development above slopes 25% or greater and the conditional use determinations for development within surface water setbacks put these into the possible constraint category rather than the local constraint category. The Bolton PC comments on these regulations still stand as being known constraints. PC members affirmed that most of the areas around the surface water are conserved and that the only development on steep slopes permitted is ski lifts, trails, and warming huts. The PC feels that this type of development is very different and less of an impact on water quality and erosion than renewable energy generation facilities.	As long as Bolton can achieve their target Staff recommends keeping steep slopes and surafce water setbacks in known constraints.
12	Williston	constraint policy	Our planning commission discussed the topic of local constraints on the renewable regional energy plan last week. It was mentioned that in Williston we do not allow any development on lands with slopes of 30% or greater, and significantly reduced development on lands with slopes of 15-30%. This should probably be reflected in the maps and text for the plan. Supporting Regulation: 29.5.1.1 Avoid Slopes. Development should be directed away from slopes. This bylaw calls for reduced densities on slopes over 15% (see Chapter 19 and the various zoning districts). Development is prohibited (except where a variance can be justified) on slopes of 30% or more. 31.7.2.5 Slopes: 30% or More. The protected open space must include all slopes of 30% or more, except where a variance can be justified, as provided by Chapter 8 of this bylaw.31.7.2.6 Slopes: 15%-29%. The protected open space should include all slopes of 15%-29% to the extent consistent with the landowner's right to beneficial use of his or her property. This means that if a landowner has only slopes or has no other lands physically suitable for development, the Conservation Commission and the DRB will work with that landowner to effect a transfer of development rights, as provided by Chapter 19 of this bylaw, or to create an open space development that minimizes consumption of lands that should be protected. Where development is permitted on slopes of 15-29%, its density shall be reduced to one dwelling unit per 10 acres	slopes 30% or greater-known constraint, slopes 15%-30% possible constraint

10/12/2017		Target								
Town Name	Average of Population and Electricity Use	Total Low Target (MWh)	Total High Target (MWh)	Existing Renewables (MWh)	Low Range Net Remaining	High Range Net Remaining	Low Target Per Capita (MWh per resident)	High Target Per Capita (MWh per resident)	Low Target Status	High Target Status
Bolton	1%	4,218	7,057	327.984	3,890	6,729	3.15	5.44	7.78%	4.65%
Buels Gore	0%	92	154	6.000	86	148	2.21	3.81	6.50%	3.88%
Burlington	22%	168,431	281,769	285,442	✓	✓	-	-	169.47%	101.30%
Charlotte	2%	12,607	21,090	5,059	7,548	16,031	1.97	4.19	40.13%	23.99%
Colchester	9%	67,204	112,427	2,086	65,119	110,341	3.77	6.38	3.10%	1.86%
Essex Junction	14%	104,508	174,832	40,212.12	64,296	134,620	6.62	13.87	38.48%	23.00%
Essex Town	14%	106,878	178,797	2,293.35	104,585	176,503	9.77	16.48	2.15%	1.28%
Hinesburg	2%	14,975	25,051	1,457	13,517	23,594	3.02	5.28	9.73%	5.82%
Huntington	1%	5,644	9,442	628.76	5,016	8,814	2.67	4.70	11.14%	6.66%
Jericho	2%	15,869	26,547	1,347	14,523	25,201	2.88	5.00	8.49%	5.07%
Milton	5%	39,817	66,610	102,752.32	✓	✓	-	-	258.06%	154.26%
Richmond	2%	13,445	22,491	4,485	8,960	18,006	2.18	4.38	33.36%	19.94%
Shelburne	4%	28,443	47,582	4,648	23,795	42,934	3.14	5.67	16.34%	9.77%
South Burlingt	11%	85,841	143,604	14,626.77	71,214	128,977	3.84	6.96	17.04%	10.19%
St. George	0%	2,368	3,961	311.68	2,056	3,649	2.69	4.78	13.16%	7.87%
Underhill	1%	9,420	15,759	765	8,656	14,995	2.83	4.90	8.12%	4.85%
Westford	1%	6,209	10,387	411.30	5,798	9,976	2.88	4.96	6.62%	3.96%
Williston	6%	44,647	74,691	3,434.84	41,213	71,256	4.55	7.87	7.69%	4.60%
Winooski	3%	25,633	42,882	30,297.46	✓	12,584	-	1.74	118.20%	70.65%
County Total	**100%**	**756,250**	**1,265,134**	**500,590.29**	**440,270**	**804,359**	**2.76**	**5.04**	**66.19%**	**39.57%**

Energy Updates to the ECOS Plan

The Chittenden County Regional Planning Commission is updating the ECOS Plan to identify actions for reducing energy consumption and reliance on fossil fuels for all sectors of energy (heating, electricity, and transportation). Doing this planning for the region will align us with the State's energy goals and means the ECOS Plan will have a larger role in the permitting of renewable energy projects.

Enhancements to the ECOS Plan include:

- Actions for using 1/3 less energy:
  - Planning for a majority of new growth to be in compact areas to reduce travel distances, provide for more energy efficient buildings, and encourage walking, biking, and transit use. Graphic: The simplified planning area map that we've used in the annual report the last few years (we use it for the 80% growth strategy).
  - Collaborating with utilities to reduce energy use through weatherization of homes and businesses and installing more efficient appliances. Graphic: an insulated home graphic and the amount of homes we need to weatherize to meet the target (compared to our total number of HH in 2050)?
- Actions for switching energy use away from non-renewable fuels
  - Promotion of electric vehicles to transform the transportation sector to be powered by electricity. Graphic: how many do we have now, and the target.
  - Collaborating with partners to reduce fossil fuel use in the heating sector through installation of heat pumps and increased biomass heating.
- Actions for getting 90% of energy from renewable sources:
  - Estimating how much additional renewable energy the region needs to generate Graphic: amount of renewable energy we produce now, and the target. Also include a link to the energy dashboard so people can see where the current projects are?
  - Guidelines for encouraging appropriate placement for all scales of renewable energy projects (such as solar, wind, biodigesters, etc.) and defining constraints for protecting our natural, scenic, and cultural resources in the region. Graphic: a simplified constraints map (total no go areas, and proceed with caution areas) or the resource potential maps, or the two combined?

Commented [MN1]: Emma, can you grab this graphic from the annual report?

Commented [MN2]: Existing: 68,525 housing units (ACS 1-year estimates)

Target: According to the LEAP Analysis, we need to weatherize 70% of homes.

Commented [MN3]: Existing: As of Jan 2017, 542 EVs registered in Chittenden County…will ask for more current data from DEV. Total number of light duty vehicles = 106,936 (Source: DMV, 2015)

Target: 89% of light duty vehicles should be EVs.

Commented [MN4]: Existing: 500,590 MWh
Target: Low (756,250) High (1,265,134 MWh)

Commented [MN5]: Melanie will work on a simple map or we could do a few graphics to demonstrate that we want to encourage renewables on rooftops, parking lots, and other distributed areas.

- Visualizations of renewable energy generation potential and data analysis of current and future energy demand to demonstrate how use and generation of energy will be transformed for all sectors. Graphic: any other data point we want to highlight? Or perhaps we just include a direct link to the appendix here?

Commented [MN6]: We could include the circle graphic that shows total county area and the amount of land need to produce our target. I will work on this.

To read the ECOS Plan click here