



CHITTENDEN COUNTY RPC

Communities Planning Together

CCRPC Long Range Planning Energy Sub -Committee

AGENDA

*=attached to agenda in the meeting packet

DATE: Tuesday, February 21, 2017

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

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

1. **Welcome + Introductions** (5 minutes)
2. **Review Minutes from the January 31, 2017 meeting*** (5 Minutes)
3. **VEIC Presentation on Transportation Energy** (30 Minutes)
VEIC Staff will be present their research findings on areas that are comparable to our region in terms of size and who have seen a decrease in vehicle miles traveled. This research will inform how the LEAP inputs for transportation are revised to help us understand the impacts alternative transportation modes have on achieving the 90X2050 goal.
4. **Regional Solar + Wind Targets, Solar Town Targets** (30 minutes)
5. **Updating the ECOS Plan to meet Act 174 Standards*** (30 minutes)
Staff is proposing that we shift away from thinking about developing a standalone Regional Energy Plan and move towards identifying how we need to enhance the current ECOS Plan to meet the Act 174 standards. To prepare for this discussion, please look at the excerpts attached that make up the energy components of the energy plan. Staff is also proposing that the [Climate Action Guide](#) be the resource for providing towns examples of actions they can consider in their planning.
6. **Next Steps** (5 minutes)
By April 2017, CCRPC must have municipal energy analysis and targets set. The draft plan is due to DPS in May 31, 2017.



CCRPC Long Range Planning Energy Sub -Committee

Draft Meeting Summary

Tuesday, January 31, 2017

Attendees:

Irene Wrenner, Town of Essex
Robin Pierce, Essex Junction
Catherine McMains, Chair, Jericho
Matt Burke, Charlotte
Keith Epstein, South Burlington
Jeff Forward, Richmond
Karen Purinton, Colchester
Sharon Murray, Bolton

Staff:

Eleni Churchill, Transportation Program Manager
Marshall Distel, Staff Planner
Regina Mahony, Planning Program Manager
Melanie Needle, Senior Planner
Emily Nosse-Leirer, Staff Planner

1. Review Minutes from the December 20, 2016 meeting

Jeff Forward motioned and Karen seconded. The minutes were accepted with some name spelling corrections.

2. Review Regional Energy Plan Schedule* (5 minutes)

Melanie Needle discussed the schedule for the plan going forward, noting that there has been a significant delay in data analysis due to the raw data being unavailable from the State.

Jeff Forward asked how the committee intended to function on making key decisions in the future—if there are disagreements, is this a majority vote system or a process of working towards consensus? When the plan is done, how will the committee “approve” it? Melanie explained that this group is a subcommittee of the Long-Range Planning Committee, and the Energy Subcommittee will reach

consensus on this document to the greatest degree possible, recommend it to the Long Range Planning Committee and then the LRPC will recommend it to the Board, which will vote on it. Jeff reiterated that he feels strongly that the committee be able to have a serious discussion about the maps and generation allocations.

Sharon Murray asked how this plan will be incorporated into the ECOS plan, and Regina Mahony explained that the best way to do this will likely be to include the analysis as part of Chapter 4 in the ECOS Plan and to include relevant policies in Chapter 2 and 3.

Matt asked for clarification on the Energy Planning Training that will be held on May 11, 2017, and what its purpose is. Melanie explained that the training will present the full draft of the plan and that the training is late in the process to ensure that all local-level data will be available from VEIC. Keith Epstein asked who will be doing the training from VEIC, and Melanie said she would provide that information.

3. Act 174 Technical Assistance Project + VEIC Transportation Energy Project Update

Melanie mentioned that CCRPC staff will be working with several municipalities to provide technical assistance to help them comply with Act 174. General technical assistance will be breaking out the baseline energy data and targets by town, and a deeper level of analysis will be conducted for Shelburne, Colchester, and Winooski. However, for other municipalities, Northwest RPC will prepare a compendium of best practices from all the regions (ex: sections, maps and pathways) as a useful resource.

VEIC will run 2 scenarios using LEAP (mode shifting and MTP). These two scenarios will allow for a better level of analysis to examine transportation energy use between now and 2050. The scenarios will incorporate the use of the population forecasts that are being developed for the regional plan, bringing important consistency to the analysis in the plan. VEIC will also analyze preferred scenarios from the MTP to see if those scenarios will get the region to 90% renewables by 2050. VEIC will also revise the natural gas use projections to make them more realistic compared to what Vermont Gas is planning.

4. Regional Solar + Wind Targets, Solar Town Targets, Draft County Maps*, Update on Local Constraint Mapping Process *(40 minutes)

Melanie explained that new statewide energy resource data and our regional targets was made available to us on 1/17. Those data were used to develop the draft solar at the municipal level for three test towns: Colchester, Jericho and Essex. Determining the division of generation between municipalities was done by averaging each town's share of the county's population with each town's share of the "prime" resources.

Jeff asked whether issues such as 3-phase power availability was analyzed in these maps, and Melanie said that because these have been based on state analysis, it was not analyzed here but could be in the future.

Keith mentioned that he thought the figure of 1 MW per 8 acres was too small, and thought it was closer to 1 MW per 3-5 acres. Melanie mentioned that 1 MW per 8 acres is based on Northwest's calculations, and that she would look into different estimate styles. Sharon mentioned that the siting committee analysis may be useful.

Keith wanted to know whether renewable energy potential on rooftops and other impervious surfaces is analyzed here, and Melanie said it was not. The committee wants to see that analysis done here so that the plan can explain why it is impossible or not to meet the energy goals with rooftop solar only.

Melanie reiterated that existing wind and solar are based on where projects are sited, but does not consider where the electricity is used or where the RECs are sold. She will confirm that the existing capacity reported includes all types of projects, including net metered.

Keith mentioned that the capacity factor varies extremely in wind generation depending on location, and so the target should be measured by power (KWh) rather than energy (KW).

Melanie used the state methodology of averaging town share of population with town share of prime energy resource to develop a municipal generation target.

Jeff asked that in the future, it be reported what percentage of its goal each municipality is meeting.

The committee was concerned about this methodology, because the land mass of a municipality has nothing to do with its energy needs. However, the committee also agreed that to develop a methodology to weight things appropriately would be a difficult task.

Robin Pierce made the point that the raw numbers do not show the relative value of different parcels of "prime solar" land. Regina Mahony said that these tables are intended to be viewed with the maps, which do "prioritize" different areas.

Committee members agreed that instead of the just averaging the population and solar/wind resource, consumption should be added as well. It could also be interesting to look at areas available within 1 mile of 3 phase power by town, or substation capacity if possible.

Melanie concluded by warning that not all towns will be able to meet their targets given the level of constraints that some towns proposed, and wanted to know the committee's opinion. Talking to the towns is a best first move, but it's important to look at all factors, and this is an issue that will need more discussion in the future.

5. Review of draft Regional Energy Plan Strategies

Emily Nosse-Leirer reviewed the regional energy plan draft strategies with the Committee to identify what should be maintained, edited, and to identify any missing language.

The Committee's discussion began with the suggested strategies regarding the strategies that meet Act 174's energy compliance standard 6A. Matt Burke explained his suggestion for a strategy that enables aggregated procurement of renewable energy supplies. He told the Committee that this is an example implemented in California and will look into this in more detail for Vermont.

The Committee had a lengthy discussion on the energy retrofit time of sale ordinance and its relevance to the Regional Plan. More clarity is needed to understand how town plans would be reviewed in light of the new enhanced energy plan requirements. Staff does not want to make the bar so high that towns can't achieve a positive determination and recognizes that a balance needs to be struck.

Robin Pierce expanded the suggested strategy of developing a property owner and user conservation manual. He explained that this it could be a document that tells someone how to operate a home with energy efficiency in mind.

Jeff Forward suggested that "Provide financial incentives for energy efficiency" be replaced with "encourage an uptake of incentives for energy efficiency" Keith Epstein introduced the idea of an Energy Service Company (ESCO) and wondered if one strategy could be CCRPC facilitating an ESCO contract to introduce opportunities for building energy efficiency. Sharon Murry added that this aligns with town's ability to enter into inter municipal agreements with RPCs. McMains offered that Jericho is working on being a clearing house for the financial incentives available for residents to make their homes more efficient.

6. Next Meeting February 21st, 2017

2.5.5 ENERGY

Energy Goal: Reduce Chittenden County's consumption of energy and reliance on non-renewable, energy. Improve the cost-effectiveness, efficiency and reliability of the energy production, transmission, and distribution system.

Key Issues/Trends/Insights

[Data for this section drawn from: [Energy Analysis Report](#) and [Climate Change Trends and Impacts Report](#)].

- Chittenden County citizens, businesses, and industries spent about \$617 million on energy in 2009 (25% of Vermont's total). Much of this money leaves the County and state immediately. This outflow of energy dollars acts as a drain on the local economy.
- The price of energy is forecasted to continue increasing in the future, which will result in an additional burden on the County's residents and businesses, unless energy consumption can be reduced.
- Chittenden County has a long history of electrical and natural gas energy efficiency programs, dating back to 1990, which have provided significant energy savings and economic benefits to the state and County. These programs along with improvements in federal standards have led to a reduction in per household and per employee energy consumption of electricity and natural gas. Reduction in energy consumption directly results in a reduction in energy bills.
- While efficiency programs targeting electricity and natural gas have been largely successful, there is an urgent need to fund and develop similar programs for non-regulated thermal fuels and for the transportation sector.
- Fossil fuel combustion increases the atmospheric concentration of carbon dioxide and other greenhouse gases, which are the causes of global climate change. Climate change will have profound impacts on the environment, public health, infrastructure, and economy of Chittenden County.
- Vermont, and the County, relies heavily on fuel oil for building heat and on gasoline and diesel for transportation. Gasoline consumption has increased as more residents drive to and from work, run errands, and consume for goods.
- Vermont's rural nature offers challenges for the transmission and distribution of energy. It is important to maintain and develop an energy production, transmission, and distribution infrastructure in Chittenden County that is efficient, reliable, cost-effective, and environmentally responsible. Current energy distribution projects include: Extension of 3-phase power in south Hinesburg along VT116 by Green Mountain Power; Extension of natural gas service in Hinesburg up Richmond Road by VT Gas; and Extension of natural gas service to St. George village center. In addition, Burlington's plan to recapture "waste heat" from the McNeil power plant and distribute it to the Old North End of Burlington and heat greenhouses at the Intervale is a thermal energy project with a more efficient distribution of a previously wasted energy source. See the CEDS Project list in Section 4.2.6 for cost estimates, funding sources and proposed timelines for these projects.
- The cost of electricity is related to the distance it travels. When electricity is transmitted over long distances, a significant amount of electricity is lost. Improving line efficiency or encouraging distributed generation (such as locally sited small scale renewable projects) reduces losses and could result in more cost effective rates.
- Every three years, Vermont Systems Planning Committee (VSPC) launches a process to update and identify constrained areas and reliability needs for the electric transmission grid. Chittenden County has areas identified as needing improvement.

- Electric efficiency programs have always worked to reduce electrical demand especially during peak periods but the development of the Smart Grid will provide a powerful tool to address this issue. Smart Grid coupled with education, behavior change, and load control technologies can help reduce peak demand and defer substation upgrades which can result in substantial cost saving.
- Chittenden County has many non-fossil fuel based, renewable energy production sites owned by utilities, private parties, and municipalities. Reliable, cost effective, and environmentally sustainable energy availability is critical to support the economy and natural resources of Chittenden County.
- The more widespread adoption of electric vehicles should reduce the total energy consumption in the County, due to better efficiency (an EV gets the equivalent of 100 miles/gallon). To prepare for widespread adoption of electric vehicles, charging infrastructure should be developed. In addition, policies and pricing structures to encourage off peak charging need to be considered to mitigate grid constraints.
- Chittenden County is home to an international airport and a National Guard base, therefore the transportation fuel consumption in the County not only includes gasoline, diesel, and compressed natural gas, but also aviation gasoline and jet fuel.

Key Indicators

- Energy Consumption Estimates and Population Trend in Chittenden County

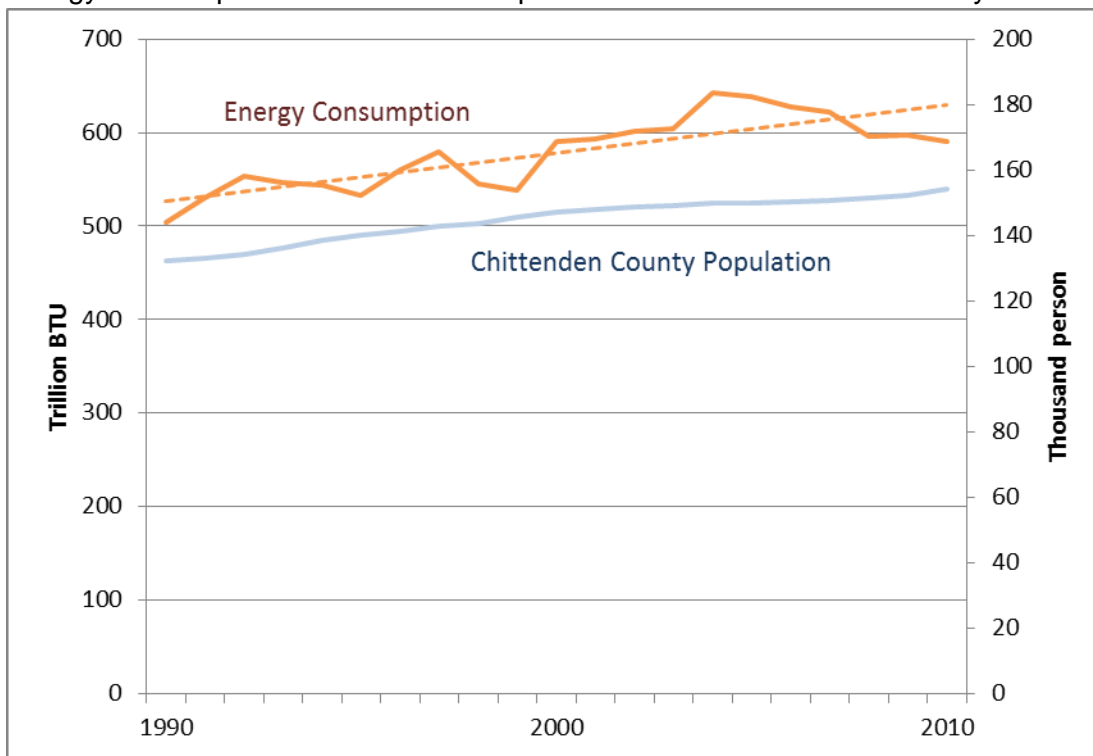


FIGURE 49 - ENERGY CONSUMPTION ESTIMATES AND POPULATION TREND IN CHITTENDEN COUNTY

- **2009/2010 Total energy consumption per person (per household for the residential sector) and by sector (transportation, residential, commercial, and industrial).** Reduction in consumption will lead to a reduction in energy bills, relative to what they would be without that reduction in consumption.

	Total Energy (MMBTU)	Gallons of Gas
Residential Energy per Household	89	
Commercial and Industrial Energy per Employee	120	
Transportation Energy per Person		420

Source: Efficiency VT, Energy Information Administration, CCRPC, UVM VT Transportation Energy Report (2009, 2010)

FIGURE 50 – 2009/2010 TOTAL ENERGY CONSUMPTION PER CAPITA

- **Percent of natural gas saved in 2010 from building weatherization and heating equipment upgrades.**

Natural Gas (McF)	2010
Consumed	6,363,760
Savings	82,151
% Efficiency Savings	1%

Source: VT GAS, 2010

FIGURE 51 - 2010 NATURAL GAS EFFICIENCY SAVINGS AS A PERCENTAGE OF THE NATURAL GAS CONSUMED

- **Electricity Efficiency Savings as a percent of total electricity consumed.**

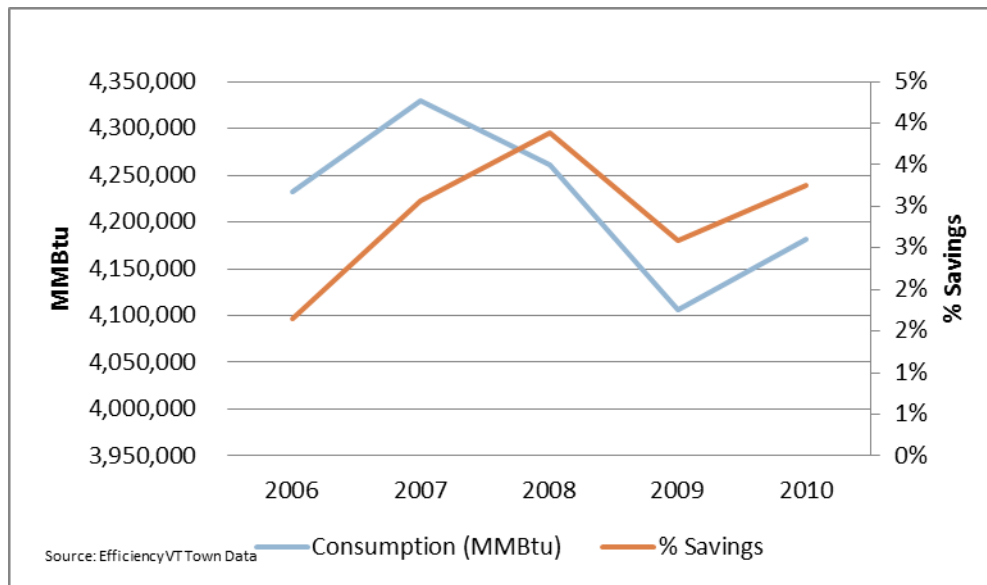


FIGURE 52 - ELECTRICITY EFFICIENCY SAVINGS AS A PERCENT OF TOTAL ELECTRICITY CONSUMED

- According to the Vermont Energy Atlas, in 2009, .06% of electricity consumed in Chittenden County is from privately owned renewable energy sources. Utility renewable energy generation is excluded because utility energy generated may not be used in Chittenden County.
- Number and capacity of renewable energy production sites in the County (Source: VT Energy Atlas, Oct. 12, 2011)

	# of sites	Capacity (kW)	MWh	Capacity (Thousand Btu)
Solar Photovoltaic	297	6,101		
Solar Thermal	42			2,975
Combined systems	12	86		588
Wind	28	491		
Hydro ¹	6		152,000	
Wood Thermal ²	9			3,900
Wood Electric ³	1	50,000		665,760

1- Six utility owned hydro stations generate electricity for Chittenden County and surrounding area. 2-Thermal capacity not recorded, only tons of wood consumed as a proxy for system size is available. 3-McNeil Power

FIGURE 53 - NUMBER AND CAPACITY OF RENEWABLE ENERGY PRODUCTION SITES IN THE COUNTY

3.2.2 STRIVE FOR 80% OF NEW DEVELOPMENT IN AREAS PLANNED FOR GROWTH, WHICH AMOUNTS TO 15% OF OUR LAND AREA.

The areas planned for growth are defined as the Center, Metro, Suburban, Village, and Enterprise Planning Areas (all but Rural) as displayed on the Future Land Use Map. CCRPC is committed to annually monitoring the quantity and location of development to measure our progress on concentrating 80% of new growth in these Planning Areas at a regional scale (not each municipality). This goal mimics the development patterns we've seen in the recent past (see Section 2.5.1 Indicators for more detail). CCRPC will monitor this through annual updates of its housing, employment, and commercial/industrial square footage databases and also by the State of Vermont's e911 locational database. The databases identify when a structure was built, number of dwelling units, employees, and square footage at a specific location. The major source of information for updating these databases will be gathered from CCRPC's member municipalities.

Increasing investment in denser, mixed use growth areas will improve economic opportunities, housing options, transportation options and improve community health. Focusing growth in the appropriate planning areas is also a cost effective approach to increasing the supply of affordable housing, reducing energy consumption and using existing infrastructure efficiently.

Actions

1. Invest in Areas Planned for Growth -

- a. Establish wastewater, water infrastructure and public transit in areas currently developed and/or planned for growth.
- b. Target reuse, rehabilitation, redevelopment, infill, and brownfield investments to the non-rural Planning Areas.
- c. Retrofit existing buildings to reduce energy use and greenhouse gas emissions.
- d. Improve design quality of high density areas, and allow flexibility for creative solutions.

2. Municipal Planning and Zoning - Strengthen and direct development toward areas planned for growth through infill development and adaptive reuse of existing buildings through municipal plan and bylaw revisions and state designation programs.

- a. Municipal Development Review Regulations should be revised to improve the mix of uses, shared parking, support for transit, access to a variety of services (for example restaurants, grocery stores, parks, entertainment) via active transportation, energy efficiency, renewable energy and the affordability of housing. A particular emphasis is needed on providing for affordable rental housing.
 - FUNDED VITAL PROJECT - South Burlington's Pathway to Sustainability –The overall project includes a series of initiatives to support, develop, and create a community that will be a leader in sustainable food production, housing, transportation, energy efficiency, natural resource protection, transit oriented development, residential quality of life and economic growth. Specifically, ECOS funding is supporting an overhaul of the City's Land Development Regulations, with a special focus on Form Based Codes, to implement the goals of ECOS and the City's Path to Sustainability.

- FUNDED VITAL PROJECT – PlanBTV Form Based Code. Burlington will develop and adopt form based code zoning for their Downtown and Waterfront districts consistent with PlanBTV.
 - FUNDED VITAL PROJECT – Shelburne Road, Shelburne Form Based Code. Shelburne will develop and adopt form based code zoning for the Shelburne Road corridor north of the Village.
 - FUNDED VITAL PROJECT – Winooski Gateway Development Regulations. Winooski will develop and adopt updated zoning for their gateway districts.
 - b. Integrate capital planning and budgeting in planning efforts to provide the right mix of infrastructure over time. Official maps can also be a useful tool to drive infrastructure improvements in the areas planned for growth.
 - c. Health Impact Assessments (HIA) provide a tool to use at the regional, municipal, agency, and organizational level to assure that planning decisions maintain or improve the public health. Access can be improved by co-locating public facilities, in particular, medical and mental health facilities in areas with easy access via active transportation and public transit. Town health officers should be encouraged to participate in community planning efforts.
 - d. Empower local officials through trainings and education on strategies to achieve the above plan and bylaw amendments, and implementation of them during development review. This could include how to effectively analyze development costs and benefits, and select appropriate multi-modal congestion mitigation measures.
3. **Affordable Housing** – Producing more affordable housing helps meet basic needs, creates jobs and 50-year hard assets. This is a critical part of the infrastructure of the community and the economy.
- a. Implement incentives that encourage more housing construction that is lower cost including, but not limited to, affordable and supportive housing. This housing should be integrated within our communities throughout the County to provide a mix of housing for different incomes and access to jobs and services. These actions include:
 - i. Chittenden County Regional Planning Commission and its partners should study the current and projected shortage of affordable housing units by type (rental, owner, multi-family, single family).
 - ii. Increase density in areas planned for growth considering community character and design.
 - iii. Revise infrastructure requirements with a goal of reducing costs for developers.
 - iv. Consider fee waivers or other development review process incentives.
 - v. Continue to work with the University of Vermont, Champlain College and Burlington College to develop specific plans to increase the percentage of students who reside in dedicated student housing.
 - FUNDED PROJECT – VHFA is working with South Burlington, Williston, and Essex Junction to analyze their local needs and suggest improved bylaws and programs to create more affordable housing and increase housing choice.
 - b. Maintain or increase local and state resources that fund additional affordable housing, make housing more affordable, and/or maintain existing affordable housing. These actions include:
 - i. The state should fully fund the Vermont Housing and Conservation Board with 50% of property transfer tax revenues. This funding should be used to increase the stock of permanently affordable housing in Chittenden County.

- ii. Review and amend (if necessary) local ordinances impacting the maintenance and use of existing buildings to ensure they're encouraging maintenance and retrofits of existing housing stock without adding undue cost.
 - iii. Advocate for more Tax Increment Financing (TIF) districts to help fund infrastructure improvements. Encourage the use of municipal housing trust funds to assist in the financing of affordable housing.
 - iv. Take steps to preserve existing affordable housing (including protecting subsidized housing and ensuring perpetual affordability through shared equity programs) from being converted to market rate housing; and continue to encourage shared equity for new owner homes.
- c. Engagement and education efforts should continue and be improved. These actions include:
 - i. Increase fair housing education and outreach for landlords, property managers, real estate professionals, and anyone involved in the sale, rental or finance of housing. Work with the Vermont Refugee Resettlement Program, The Association of Africans Living in Vermont, Opportunities Credit Union, and other organizations to develop strategies for new Americans to quickly develop credit history. Create educational materials that encourage landlords to use alternative criteria for new Americans that don't penalize them for a lack of credit or rental history.
 - ii. Provide fair housing and land use planning training for land use professionals and municipal officials throughout the County.
 - iii. Train municipal officials and staff, the public, and developers to promote better development practices that achieve a higher level of density with quality design.
- d. Increase efforts to comply with fair housing requirements. These actions include:
 - i. Identify gaps in municipal implementation of State Fair Housing laws and ADA compliance (including but not limited to municipal bylaws should include language that explicitly permits officials to make reasonable accommodations to accommodate the needs of people with disabilities without delay or public input).
 - ii. The Vermont legislature should enact legislation that limits security deposits to no more than one month's rent with no more than one-half month's rent and no more than \$200 for pet deposits (excluding assistance animals for persons with disabilities). For tenants with rent subsidized through public programs, security deposit amounts should be based on the tenant's share of the rent before the application of any utility allowance. These limits do not apply to service deposits for residential care/assisted living settings.
 - iii. Implement the recommendations (as best as possible within current resource capacities) of the 2010 Burlington Analysis of Impediments and the 2012 State Analysis of Impediments. This includes tracking zoning variances, local permit applications, adjusted residential permit application and denials to identify disparities and trends.
- e. Increase enforcement and testing capacity of fair housing organizations such as Vermont Legal Aid. Currently, Vermont Legal Aid is only funded to test the protected classes included in federal fair housing law. Seek funding sources that would allow Vermont Legal Aid to test and enforce state protected classes (Age, marital status, sexual orientation, gender identity, receipt of public assistance).

4. Energy

- a. Reduce Energy Consumption - Education and outreach to key sectors regarding weatherization, life cycle fuel costs, and behavioral adjustments will be essential elements for reducing energy use and costs over time.
- b. Decrease greenhouse gas emissions, to support the State's goal of reducing greenhouse gas emissions 50% from 1990 levels by 2028.
 - i. Encourage individual homes and businesses to include electric and thermal energy efficiency in building and/or retrofitting. Weatherization should be promoted and executed as a first step to reduce overall energy consumption before investing in renewable energy systems. There is a need for focused study to determine solutions for vermiculite removal as it relates to weatherization, in particular low income weatherization. Vermiculite was used as an insulator for decades (1960-1990) – and was mined with asbestos thus any home with vermiculite is assumed to be contaminated.
 - ii. Provide alternatives to fossil fuels for heating.
 - iii. Reduce fossil fuel consumption in the transportation sector.
 - iv. Increase resilience to potential interruptions of grid power, especially for maintaining essential services (including water supply and sewage disposal) without electrical power. Such services need, in the short term, backup power with at least a week's supply of stored fuel. In the long term, redesign these services in a more resilient way.
- c. Increase Renewable Energy Generation, to support the State's goal of 90% renewable energy by 2050.
 - i. Determine appropriate sites for community-level renewable energy generation. Recent work on this topic has included the Legislature's Solar Siting Task Force Committee in 2015; and three Regional Planning Commissions have received Department of Energy grants. CCRPC has not yet received these funds, but will benefit from the work of the other three RPC's – and will hopefully be able to build on that work if CCRPC receives its own grant to work on this task further.
 - ii. Encourage individual homes and businesses to include renewable energy options in building and/or retrofitting.

5. State/Local Permitting Coordination & Improvement

- a. Support changes to the local and state permitting process to make the two more coordinated and effective. Participate in the Agency of Commerce and Community Development's (ACCD) process to improve the State's designation programs designed to encourage development in appropriately planned places and discourage development outside of those areas. This program could be improved with regulatory and/or fiscal incentives. These could include expedited permitting processes for projects in areas that are: a) designated for growth; and, b) where a community has a robust plan, regulations and staff capacity; and reduction of redundancies such as delegation of permitting for certain local and state reviews (such as exemption from Act 250). In conjunction with delegation it may be appropriate to develop more stringent standards and thresholds for development review in rural areas.
- b. Collaborate with stakeholders to ensure local and state regulations, bylaws and plans encourage transparency, predictability and timely review of sustainable and environmentally sound development applications.

- c. Develop a transportation assessment process that supports existing and planned land use densities and patterns in Center, Metro, Suburban, Village, and Enterprise Planning Areas to allow for more congestion and greater mode choice than allowed by current standards. The CCRPC will collaborate with the Vermont Agency of Transportation (VTrans), the Natural Resources Board, and other state and local stakeholders to develop a process that evaluates the transportation impact from a multi-modal perspective rather than just a traffic flow standpoint.
 - Policies and planning studies that are adopted as part of this ECOS Plan and subsequent amendments will guide CCRPC's position in permit proceedings.

6. Metropolitan Transportation Plan Investments

- a. Adequately fund the maintenance and preservation of our existing transportation assets including roads, bridges, rail, transit, walking/biking facilities, and transportation demand management (TDM) programs and facilities.
- b. New transportation system investment should focus on the highest priority transportation projects as detailed in the ECOS/Metropolitan Transportation Plan (MTP) Project List. In the next five years, these projects will primarily be those that are included in the Transportation Improvement Program (TIP), as may be amended. The TIP projects are considered FUNDED VITAL PROJECTS for the purposes of the Comprehensive Economic Development Strategy (CEDS).
- c. Future project investments and specific focal areas for targeted implementation impact include:
 - i. For transportation planning studies that have been adopted as part of this ECOS Plan, the specific recommendations for project, policy, and program investments will guide CCRPC investment priorities.
 - ii. Expand Intelligent Transportation Systems (ITS) for the roadway network, and traffic and transit operations, to improve safety and reduce congestion;
 - iii. Expand the Go! Chittenden County Transportation Demand Management (TDM) program (including park and ride facility development) to reduce single occupancy vehicle (SOV) trips
 - iv. Increase investment in CCTA transit services to increase user accessibility
 - v. Expand walking and biking infrastructure to support active transportation and to provide interconnection with the region's transit system
 - vi. Develop a regional network of electric vehicle charging stations to accommodate the growth in low emissions, low energy costs electric vehicles and support the expanded adoption of natural gas vehicles for heavy duty fleets.