

1 CHITTENDEN COUNTY REGIONAL PLANNING COMMISSION
2 ENERGY SUB-COMMITTEE - MINUTES
3

4 DATE: Tuesday, April 18, 2023
5 TIME: 6:30 p.m. to 8:00 p.m.
6 PLACE: Virtual Meeting via Zoom with link as published on the agenda
7

Members Present:

Keith Epstein, South Burlington
Henry Bonges, Milton
Daniel Parkins, Essex
Kevin Thorley, Williston
Dwight DeCoster, Underhill
Jim Donovan, Charlotte

Staff:

Melanie Needle, Senior Planner
Taylor Newton, Planning Program Manager
Darren Schibler, Senior Planner
Eleni Churchill, Transportation Program Manager

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9
10 M. Needle called the meeting to order at 6:32 PM. Everyone introduced themselves.
11

12 **1. Approve March 20, 2023 Minutes**

13 K. Epstein noted one place where Kevin's name was spelled wrong.
14

15 *K. Epstein made a motion, seconded by D. Parkins to approve the March 20, 2023, Minutes with the*
16 *corrections noted. All in favor.*
17

18 **2. Sub-Committee Chair Discussion**

19 M. Needle explained the chair role. D. Parkins said he would volunteer, but worried that he is not a
20 content expert.
21

22 *J. Donovan made a motion to appoint D. Parkins the Chair. K. Epstein seconded the motion. All in*
23 *favor.*
24

25 **3. Renewable Energy Generation Target**

26 D. Schibler reviewed the memo from the packet and outlined the calculations used in the 2018 ECOS
27 Plan for new renewable electricity generation targets. He explained that for the 2023 plan, the
28 Department of Public Service (PSD) has provided a tool which generally reflects CCRPC's 2018
29 methods but provides more structure and a single target rather than the two scenarios CCRPC had
30 used previously. It sets Chittenden County's share of new in-state electricity generation at 16% of the
31 State's total based on the average of its share of the state's total population and total land area.
32

33 D. Schibler explained that the PSD's new tool allows regions to model reaching their targets with a
34 mix of renewable technologies. He explained that some technologies could be excluded because there
35 are regulatory limitations on development of new facilities using wind and hydroelectric, and that
36 renewable natural gas and biomass do not seem likely to provide a significant amount of the region's
37 electricity. Therefore, staff propose that the Chittenden County's 2050 renewable generation target
38 would be achieved using 50% ground-mounted solar and 50% rooftop solar.
39

40 H. Bonges asked for clarification that the proposed targets (100% solar split 50% each between
41 ground-mounted and roof-mounted) are for new generation going forward, not the total electricity
42 generated. Schibler said that is correct, because we already have existing generation from other
43 technologies. He also noted that it would be ideal to include a diversity of other technologies, but for
44 the purpose of modeling and meeting the total generation target, solar is the only technology we can
45 rely upon with certainty at this point. Future iterations of the regional plan may be able to incorporate
46 other technologies.

1
2 H. Bonges asked about how batteries and energy conservation will be considered in the plan and
3 whether they could reduce the reliance on solar. Schibler explained that the plan will also consider
4 conservation and peak demand management, but since those are not direct sources of electricity
5 generation, they are not included in the PSD tool. He also noted that even with these measures, there
6 will still be an increase in total electricity demand given the electrification of the heating and
7 transportation sectors.

8
9 D. Schibler also explained that the tool does include grid constraints but only as a point of
10 information. The PSD is encouraging planners not to use these as limits to new generation potential,
11 but rather to help inform policy discussions on grid infrastructure at the state level.

12
13 J. Donovan asked if the rooftop solar data is detailed for the whole state. M. Needle said it has been
14 processed for the whole state.

15
16 D. Parkins asked about how the plan provides additional resources or capacity for installation of solar
17 given the limitations on solar development. D. Parkins also asked how it's feasible to plan solely for
18 solar, noting that effective, stable grids have a mix of technology to account for fluctuations in output
19 from various sources. He asked if the plan will be based solely on political will vs. what would be
20 prudent for efficient and effective generation. M. Needle noted that the staff's proposal is not set in
21 stone, and they are seeking committee feedback. She noted that it is possible to include wind in the
22 modeling, but staff felt it may not be worthwhile given the limitations of the sound rules. Schibler
23 noted that staff could make two models, one as proposed and one with more wind included. T.
24 Newton clarified that the plan would talk about the importance of using a diversity of renewable
25 sources for a stable grid, but that the modeling is based more on current political will.

26
27 D. Schibler also clarified that this modeling still only accounts for 50% of the state's electricity
28 demand; the remaining 50% would be imported from out-of-state from a mix of resources that
29 balance the limitations of solar.

30
31 K. Thorley clarified, and Schibler confirmed, that establishing generation targets does not consider
32 peak demand but total energy consumption. K. Thorley highlighted that an all-solar scenario means
33 that we're providing cheap electricity when it's cheap, but zero electricity when it's most expensive
34 and dirtiest in the winter. Solar alone will not get us to effectively offset greenhouse gas emissions.
35 Solar plus batteries would be better to offset peak demands for part of the year, but he is worried
36 about peaks later in the day after solar is unavailable. He asked whether as the largest county, CCRPC
37 could push the state for alternative recommendations in its plan.

38
39 D. Schibler agreed that this is a challenge, but also noted that Vermont's current electricity mix is
40 diversified as shown in the Comprehensive Energy Plan. M. Needle also reemphasized that this
41 modeling is solely to demonstrate that the county has set aside enough land area to produce the
42 renewable electricity needed to meet projected demand and that target setting is not meant to be
43 prohibition on wind or other technologies. She also emphasized that we are only discussing
44 development of new electricity resources. K. Thorley was still concerned that focusing only on solar
45 is not going to make meaningful impacts on reducing Vermont's greenhouse gas emissions, since
46 most of this impact comes from purchasing fossil fuel source electricity at times when solar is not
47 available, and that excess solar generation is more likely to be exported or used to offset Hydro
48 Quebec. T. Newton noted that Epstein's suggestion about pairing solar with batteries will be
49 incorporated into the text.

50

1 K. Epstein reiterated that batteries use/store energy and shift the demand. K. Epstein asked for more
2 explanation about the estimates for rooftop solar. M. Needle said staff is still working on a better
3 estimate after subtracting existing generation from the mix, and that not every rooftop could feasibly
4 accommodate a system. K. Epstein asked if we could separate and favor parking lot ground mount
5 versus green field ground mount. M. Needle said that unfortunately the PSD tool does not allow for
6 this distinction, but that this could be included in a siting policy and that this could be shown on a
7 map. K. Epstein said that text context should explain why the tool assumes only solar, and that wind
8 could be incorporated if the sound rules change. D. Parkins seconded that proposed approach, and
9 also noted that additional rooftop solar is only possible if we ease net-metering rules for more off-site
10 commercial solar. H. Bonges talked about angle of solar panels and impact of generation across
11 seasons.

12
13 J. Donovan recommended included some wind to be forward looking and encourage policy changes.
14 M. Needle asked for percentages. H. Bonges agreed with including wind but is not sure on
15 percentage. K. Epstein and J. Donovan asked to include recommendations to change policy on wind
16 and look to include 10% or 15% of it in the mix. K. Thorley suggested emphasizing that we could not
17 responsibly meet our targets under the current regulatory atmosphere, and therefore the plan aims for
18 10% to 20%.

19
20 M. Needle summarized that the subcommittee would like to see wind included somewhere between
21 10-20%; staff will try to provide more precise estimates for potential wind and rooftop solar and
22 present a revised mix at the next meeting. D. Parkins suggested setting the wind target at an amount
23 that would account for the gap left by solar for off-peak evening demand. D. Schibler confirmed that
24 the committee does not want to include other technologies (biomass, hydroelectric, and natural gas) in
25 the modeling, but that the text will emphasize that a greater diversity of sources is preferable. K.
26 Thorley was reluctant to include RNG, which still creates carbon emissions, especially if it will offset
27 hydro from Canada.

28 29 **4. EECBG Program Formula Grant**

30 T. Newton provided an update. The Department of Energy has changed course and determined that
31 only the county court systems are receiving these funds because they are the only form of county
32 government in Vermont. He has reached out to the courts but has not heard back about their plans for
33 the use of the funds.

34 35 **5. ECOS Plan Energy Key Trends and Issues, Strategies and Actions**

36 M. Needle reviewed the ECOS Plan. The Committee talked about the section title and the term
37 “climate adaptation” versus “climate mitigation” or “greenhouse gas emissions reduction” but
38 decided to retain the latter. J. Donovan asked to add language noting the natural environment impacts
39 of renewable generation technologies in the energy goal.

40
41 K. Thorley reiterated that in the energy overview, there should be greater focus on producing
42 electricity resources in-state, perhaps noting the 50% in-state goal. He also wants to understand the
43 total percentage of dollars that leave the state vs. stay within for all energy sources (not just fossil
44 fuels). M. Needle agreed and mentioned that the 2022 Energy Action Network Report likely includes
45 this information which we can incorporate into the discussion.

46
47 M. Needle reviewed the weatherization goals. D. Parkins suggested providing a better connection to
48 the economy section and Comprehensive Economic Development Strategy (CEDS) in regard to
49 workforce.

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1 M. Needle reviewed the section on fuel switching and electrification. K. Epstein asked for rephrasing
2 regarding natural gas and electric prices to indicate that natural gas is currently cheaper, and to use
3 consistent units when comparing costs.
4

5 K. Epstein asked for discussion of the shift in infrastructure needed to accommodate e-bikes. E.
6 Churchill said it's referenced in the Metropolitan Transportation Plan (MTP), which is currently
7 under review, but this could be cross-referenced here to MTP and Active Transportation Plan. D.
8 Parkins asked to include information about ground-sourced heat pumps in fuel switching for heating.
9 K. Epstein asked to include language about encouraging conformance to the state's stretch code for
10 energy efficiency; M. Needle said the current language addresses ensuring that energy codes are
11 consistent for all types of development.
12

13 M. Needle reviewed the sections addressing the transition to renewable energy, renewable energy
14 generation, and energy and land use planning. K. Thorley asked if the plan can address total energy
15 demand versus peak demand in the LEAP model, expressing concern about the narrative that
16 renewables transition will destabilize the grid. Staff will try to address within text and speak to those
17 different and additional challenges. D. Parkins again expressed how geothermal heating can assist
18 with peak winter electricity demand. E. Churchill pitched providing comments on the MTP related to
19 energy and encouraging alternative modes of transportation directly to the Board.
20

21 J. Donovan asked about revisiting how wetlands are treated as a constraint for renewables
22 development (i.e., downgrade to a possible constraint depending on the type of wetland). M. Needle
23 suggested discussing an action about asking to change wetland rules at the next meeting.
24

25 **6. Schedule of Energy Sub-Committee**

26 M. Needle reviewed the draft schedule.
27

28 The meeting adjourned at 8:08 PM.
29

30 Respectfully submitted,
31 Darren Schibler