

**Town of Hinesburg**  
**Planning Commission**  
**July 8, 2020**  
Approved August 26, 2020

Members Present: Maggie Gordon, Denver Wilson, Barbara Forauer, Dennis Place, John Kiedaisch, Marie Gardner, James Donegan, and Rolf Kielman

Members Absent: Dan Myhre

Public Present: Chuck Reiss (Representing the Energy Committee), Jacob Royer

Also Present: Alex Weinhausen (Director of Planning & Zoning) & Laura Sau (Recording Secretary)

Maggie G. chaired the meeting, which was called to order at 7:04 PM.

- I. **Remote Meeting Connection & Procedures:** Meeting was held remotely due to the current State of Emergency in our best conformance with the Governor's executive order.
  - a. Mute/ unmute at lower left of screen with microphone icon. Alex W. will mute people if there are echoes.
  - b. Identify yourself when you start to speak since not all participants are on video.
  - c. This meeting is being recorded by VCAM
  - d. If there are bandwidth issues and audio is crackling, you can try turning off the video and using only audio.
  - e. Chat has been disabled.

II. **Agenda Changes:**

- a. None

III. **Public Comments for Non-Agenda Items:**

- a. None

IV. **Energy Plan- Proposed Town Plan Revision – Chapter 8:**

--- Discussion with Energy Committee Representatives---

*Proposed revision of Town Plan. Last updated in 2017. During last draft, energy planning in Vermont was taking a different direction. There was an opportunity to do more municipally and reap benefits when reviewed at the state level. Regional planning commissions statewide have provided assistance to Towns to update plans. Chittenden county regional planning commission reached out to town Energy Committee to work. Blend of Energy Committee of Hinesburg goals, and Chittenden County Regional Planning Commission input to meet state level goals.*

Alex displayed the proposed Energy Plan (Document can be viewed in the Meeting Materials Dropbox Folder)

**Introduction and purpose of proposed energy plan**

- a. Chuck R.- Get document to the point where it can be adopted by Regional Planning Commission and could be later passed onto the Public Service Utility. At that point, document will be recognized, and the town will have significantly more input on placement of renewable energy systems in town.
- b. **Goals**

- **8.1** Adopt the State enhanced energy planning goals for Hinesburg and develop strategies and shorter-term objectives to achieve them
  - Goals state has adopted in Comprehensive Energy Plan with identified actions
- **8.2** Support the develop of alternative renewable energy sources and business opportunities and site an additional 13,517 to 23,594 MWh of annual generation in Hinesburg to contribute to **Vermont's goal of obtaining 90% of energy from renewable sources by 2050**
  - Numbers derived by Long-Range Energy Alternative Planning ('LEAP' model provided by Regional Planning Commission)
  - State provided numbers on current production and projected future needs to meet 2050 goal
- **8.3** Preserve any existing or potential renewable energy resource
- **8.4** Adopt programs to Improve Energy Efficiency
  - Focus of conserving energy before efforts towards making energy
  - Renewable will have to increase AND Per capita use will have to go down
  - Wants to avoid putting renewable energy into not sound buildings – i.e., weatherize homes to improve energy efficiency first
  - **Top Priority:** *Maximize energy efficiency in town-owned buildings and vehicles.*
- **8.5** Reduce transportation related energy demand and switch transportation fuels to renewable electricity and biodiesel.
  - Transportation energy use around 40% in state- significant and will need to reduce.
  - Encourage Electric Vehicles- Start with town vehicles and charging stations.
  - Encourage Public Transit
- **8.6** Reduce building energy demand by adoption of a stretch (greater energy efficiency than the minimum statewide standard) and work towards 28% of business and **100% of homes being weatherized by 2050.**
  - Building Code then Energy+ code. Didn't make it through Selectboard
  - Not just energy efficiency, but also how buildings are being made. Energy Code is a way to accomplish that oversight.
  - Encourage in new construction
- **8.7** Encourage a balanced approach between the placement of utility services and the character of the rural and village areas.
  - Balance of rural aesthetic and industrial renewable energy with placement. With state and regional utility
- **8.8** Continue to define the role of the Hinesburg Energy Committee
  - Education on how to achieve 90% renewable energy goals.
- c. Alex W.- Work is being propelled by 2016 Vermont Comprehensive Energy Plan (CEP)
  - No way state will meet ambitious energy goals if everyone doesn't do their part. Needs to trickle down to local level. State plan is where the targets come from. Vermont hasn't been good about meeting these goals, energy use has gone up instead of down.
  - Barbara F.- Some of the goals are only 4.5 years away.

- d. Chuck R.- Statewide policy is looking at greenhouse gas emissions. Ambitious but a severe consequence if not achieved. Programs in state, energy code is becoming more
  - Work towards transitioning existing homes as well.
  - Incentives for hot water heat pumps, solar pv, etc
  - Shift use towards electricity, for thermal and transportation, provided by solar and wind. In a town like Hinesburg, we could use biomass.
- e. Alex W.- threat of climate, but some argue that Vermont is a small footprint on the global climate change scale.
  - Local sustainability and resilience and an uncertain future. More robust local energy, to not rely on oil drilling elsewhere, is an important goal. Relevant regardless of Vermont's footprint.
  - Makes sense on a policy level.
- f. Barbara F.- 8.0 Act 248—When was it passed?
  - Chuck R.- Act 174 - passed by legislature, 248 is the State Statute evolved from it.
  - Alex W.- Section 248 Title 30 of state statute- has been around for a long time. Governs review of energy facilities through Public Utility Commission at state level.
  - Act 174 – now provides framework for municipalities to be taken more seriously in process
    - Previously, towns weren't given much deference to what was in their comprehensive plans. Now municipalities have a greater say.
    - Chuck R.- Previously worded-- Towns "given due consideration" with proposal. Now: "substantial deference"
  - Alex W.- If plan is approved, the State Public Utility Commission would have to assume that any recommendations in the plan are correct and must be followed. Only on special circumstances would a developer be able to challenge. With previous wording, developers wouldn't have to listen, and the PUC would not have to defer to Town Plan recommendations.
  - Barbara F.- We haven't been granted 'substantial deference' yet?
    - Chuck R.- No. Have to change town plan to reflect things Act 174 needs to see, then needs be accepted by Town, Regional Planning Commission, and Public Utility. Then it can be recognized and then granted 'substantial deference'.
  - Alex W.- Several towns in Chittenden County and in the State have achieved 'substantial deference'. State created this system as a carrot to implement state's energy plan. If towns change plan to line up with state plan, then towns will be granted more deference in say of utility placement.
- g. Barbara F.- 8.2.4 – Smart grids
  - Doesn't think they're friendly. In own home, installed devices to shield against dirty energy. Immediate observations of quieter/ more efficient appliance, and brain fog is gone.
  - *Concern-* Public will be protected against smart grids. Can you address?
  - Chuck R.- Not familiar with smart grid operations in individual homes so couldn't respond. *Will look into it.*
- h. Barbara F.- 8.4 --Why only 28% of businesses and 100% of residences, why not 100% of businesses?
  - Chuck R.- Businesses might have a harder time converting energy use. Can research that

number.

- Alex W.- Repeated in 8.6 – Don't know where this number comes from. Will look into it.
  - Mentions weatherization- so why would it be different from businesses and residential?
- i. Rolf K.- Weatherization- New buildings, goal is absolute and definable. To what extent in town? One thing to require and require in regulatory in construction. More difficult in residential renovations. Is it if the renovation of a certain dollar mark threshold to make it required?
  - Existing structures- How is it regulated? Certified?
- Chuck R.- Assessment of 3 municipal buildings- path towards net zero.
  - Tools to measure metric- Would have to do it house by house, building by building. Vintage houses- there will have to be certain techniques such as extra heat pump.
  - Easier to do with new homes- in comprehensive ... plan to require Net Zero Status
  - Potential incentives for pre-existing homes, or else will never get there.
- *Proposal*: Alex W.- Rolf made a good point of asking the *definition of Weatherization*.
  - Most weatherization is voluntary and targeted at low income homeowners. Should expand voluntary programs with education
- Chuck R.- Home performance with energy star through Efficiency Vermont. Avg- 2000/ year
  - Extensive advertising- need a little more incentives or regulation
  - Australia- Carrot, Stick and Tambourine
    - a. Carrot- Incentive
    - b. Stick- Expectation extended over time
    - c. Tambourine – Marketing effort to highlight success stories --- Most efficient
    - d. Education has plateaued
    - e. Dashboard for town monitoring.
- j. Rolf K.- Current Town Bar of where we stand?
  - Chuck R.- Don't have a good idea of BTU's. Good idea of how many homes have been weatherized through VT program. Hinesburg:1600-1800 homes, 300 have gone through weatherization effort. No metric of how many have achieved renewable energy component
    - Hoping to establish with town offices which are currently not efficient.
    - **Demonstration projects**—putting solar on 5 spaces in town. Create interest in town.
    - Some towns have done **walks to visit various Net Zero Houses** to show examples and how they did it. Show people they can do it too.
    - House built int 1907- Done with Heat Pumps, Solar and Weatherization.
    - Can provide examples through ZEN (Zero Energy Now) program
- k. Denver W.- Is wood stove considered renewable?
  - Chuck R.- Yes.
- l. Denver W.- Glad because someone can harvest a cord of wood per acre per year and heat house forever perpetually.
  - *Concern*: The Sun is a renewable resource, but Solar panels aren't. When a solar panel wears out, has it made enough energy to make another one? Infinitely maintainable source

- of energy or replacement for fossil fuels?
- Chuck R.- Embodied life-cycle analysis. Not an expert. Energy to produce panels is incredibly low fraction of energy used by fossil fuel system. Don't have specific data to site. Weak argument for not using solar panels.
- m. Jacob Royer- Electronics Engineer- The coefficient of efficiency is extremely high in solar panels and all renewable energy when compared to fossil fuels. While burning wood is great in terms of carbon neutral, there are biproducts from burning from a wood stove which do pollute the air. Better than burning oil/ gas, a lot to be said for solar, wind, and micro-hydro and those types of technologies.
- Chuck R.- Committee is debating whether biomass is zero carbon efficient. Some research may say cutting trees down may reduce carbon pulled out of air by way of CO2.
    - Goal is to shift as much towards electric and heat pumps, with wood as back-up.
    - Heat pumps don't work in extreme winter cold, wood/ resistance electrical as back up at -20 degrees
    - If shift to biomass, use advanced combustion stoves which reduce emissions with secondary burns. Newer stoves are more efficient.
    - Also don't want whole town on biomass because that could be a problem.
- n. Dennis P- Pellet Stove?
- Chuck R.- Yes biomass/ renewable, more efficient than cord wood.
    - Good combination of solar, heat pump, and pellet stove
- o. John K.- Hypothetical situation of Developer with 30 new houses--- State encouraging to say all new buildings in 10 years from now. Seems needs to be standards to identify if it will be a Net Zero house/ building/store. In addition to regulations, need *inspectors and enforcement*. How does that play out for new construction?
- Chuck R.- Been arguing that you can't wait until 2029 for Net Zero. Need to start now. Like Rolf suggested, need to develop metric to say if a house is net zero.
    - Black Rock – Energy Committee presented to developers asking for percentage commitment or demonstration since they're all planned for Natural Gas. Need them to create model to show clients options with education of house over the 20 years. Their opinion is that it's too expensive.
    - 8.3.1 Says to change the regulations to make it required. Developer trying to make as inexpensive a home and the market will pay for it.
  - John K.- There was a time where there wasn't fire codes- and they made a process of implementing. Energy aspect has to go in same direction.
    - Chuck R.- Sort of happening by slower. Energy code changes every 3 years. Should be high performance
    - Maggie G.- How are those incremental improvements being made?
    - Chuck R.- Higher R value insulation, more insulation in roof, ..... don't have to have as many heat pumps or solar. Existing homes are trickier with 2x4 walls and harder to change underneath, but can do with other options such as extra heat pumps. Ways to do it.
  - Maggie G.- Likes idea of tambourine model and town-wide approach.
    - Is Efficiency Vermont keeping tabs of who has already received rebates to advertise numbers?

- Chuck R.- Bill Scott looked into numbers and has a problem of where it's coming from. Has been adjusted due to size of town. Proposed people doing own analysis of own home. Don't currently have information.
- p. Dennis P.- What's the average home size?
  - Chuck R.- In US. 2,000 sq ft range. In 1950's- 800 sq ft.
    - In England right now- 900 sq ft.
- q. Dennis P.- '89 2x6 walls. Is there a way for assessment of cost to make it Net Zero? Who would he call?
  - Chuck R.- Working with State to form group to make Net Zero Vermont.
    - They would come into house and give a plan. Right now, Efficiency Vermont can only do Heat Pump and Weatherization. Cannot do Solar. But with Assessment group, could inform people of Solar.
    - Proposed to give people a plan of action over time.
  - Dennis P.- Incentives from places like Green Mountain Power are getting worse and worse.
    - Rolf K.- You could sell it.
    - John K.- People could become a localized power provider.
  - Chuck R.- Example of Group Net Metering on Richmond Rd for neighborhood.
    - Community Solar - Can buy into panels to offset electricity usage. (Proposal of panels at the old Hinesburg Landfill.)
- r. John K.- If makes more than used, can't sell back to Green Mountain Power.
  - Chuck R.- lose credit at the end of the year. Used to get a check but not anymore. If more than capacity, can create own LLC.
- s. Denver W.- Heat pump is essentially a condenser, an air conditioner working in reverse?
  - Chuck R.- Like a refrigerator.
  - Denver W.- What is the advantage of electric motor versus resistive heat? Efficiency?
  - Chuck R.- Resistance heat is 1:1- Heat pump is 2:1 (every 1 unit of energy, you get 2/2.5 units out). New motors are highly efficient--Cold climate heat pumps.
  - Will get more information on the 22<sup>nd</sup>

---Discussion on Proposed Energy Committee Plan will resume next meeting.---

#### V. Minutes of June 24th Meeting

- a. Contextual adjustments were made.
- b. Maggie G. **made a motion to approve the June 24th Minutes.** John K. **seconded.** The board voted 7-0. Rolf K. abstained

#### VI. Other Business and Correspondence

- a. Focus at energy plan again next meeting
- b. Will discuss with Maggie about Energy Design Standards being included in Village Design Standards.
- c. Haystack Crossing Preliminary Plat Public Hearing may close July 21<sup>st</sup>. Get comments in.

#### VII. Agenda Items for July 8<sup>th</sup> Meeting

- a. **Next meeting:** Alex W.- Will need to have focus next meeting. Not enough expertise in Planning Commission to rework guts of chapter in terms of data and models.
- Focus on policy side of action items at this time, instead of curiosity questions.
  - Do you understand data in tables or questions about data?
  - Which should be modified, eliminated, or added?
- b. Barbara F.- Questions about energy – Will email Alex if they're things he can answer and bring up next meeting.
- c. Alex W. is away next week.

The meeting adjourned at 8:46 PM.

Respectfully submitted,  
Laura Sau, Recording Secretary