

TOWN OF NEW HAVEN
78 NORTH STREET
NEW HAVEN, VERMONT 05472

TO: June Tierney, Commissioner, Department of Public Service
FROM: Town of New Haven
RE: Certification of Town Plan
DATE: 17 July, 2017

Commissioner Tierney:

I am writing to you, on behalf of the New Haven selectboard, to urge you to certify the New Haven Town Plan, but also to offer some context and explanations that we believe will be helpful as you make your decision. The town has put extraordinary work into the new Town Plan, and especially into the energy component. We believe that the energy chapter of the plan reflects the town's recent history of both being well ahead of the rest of the state in renewable energy development, and at the same time our frustration in trying to support agricultural community values, economy, culture and landscape while addressing that development.

Act 174 was adopted with the stated intention of allowing towns a greater say in renewable energy siting, yet it is clear that the deeper purpose of the statute is to mandate that all towns within the state engage in their 'fair share' of renewable energy development. The Town of New Haven has met that 'fair share' and far more, and has played a leadership role in energy conservation and development, contributing positively to the statewide conversation regarding our energy future including substantive and meaningful participation not only in individual electrical facilities cases affecting the town, but also in the adoption process for regulations, and in industry-shaping matters like the GMP net-metering cap case.

Act 174 allows the standard of review of Town Plans during electrical facility siting hearings at the Public Utilities Commission to be 'bumped up' from 'due consideration' to 'substantial deference'. In order to attain that higher standard of review, towns must go through an extensive, detailed and expensive planning process addressing issues far beyond renewable energy siting, including areas over which small rural towns have little control and over which the PUC has no jurisdiction, such as transportation planning and residential heating. Ironically, to attain this brass ring of 'substantial deference', the state legislature mandates that towns go far beyond the accomplishments of the state, which has to date failed to adopt meaningful transportation solutions such as public transportation systems, and continues to support fossil-fuel residential heating projects like gas pipelines.

Act 174 was clearly intended to create a mechanism by which towns that do not yet have substantial – or any – renewable energy development will plan for and develop renewable energy. Such is not the case for New Haven. As the host community for the Belden Dam, the town supported the approval received by GMP in 2014 to upgrade and expand this green-certified hydropower source in its new 40-year FERC license. GMP personnel were quoted at the time as noting that this is the cleanest renewable energy source in the utility's portfolio.

New Haven is also the host of the state's first 2.2MW solar array – Cross Pollination on Route 7. The town was strongly supportive of the development of this project, and acknowledged the need to promote solar projects in order to help the industry to evolve and become more reasonably priced over time. The town did negotiate aesthetic mitigation components of the project, including larger setbacks from Route 7 (which was accomplished) and an extensive landscaping plan. The latter, seven years later, has not yet been achieved.

In the wake of the experience with Cross Pollination, as well as the Town's hard-fought but unfortunately unsuccessful attempt to compel the VELCO lines to be placed underground at scenic points in New Haven, the New Haven Planning Commission wisely undertook to amend the Town Plan to include parameters on future utility projects within the town. Those parameters included that the projects would need to serve and benefit the local community rather than be pass-through projects, and that solar development projects be limited to 300kW in size. (The VELCO decision was a rare split-decision of the PSB, with the Board chair supporting New Haven's request, and issuing an eloquent dissenting opinion describing the quintessential beauty of New Haven's iconographic Vermont landscape.)

The reason for this size limit -- adapted from the Brookfield plan written by then-PSB legal counsel Aaron Adler -- was to reflect the scale of the community. The 300kW limit was higher, in terms of energy consumption, than any residence or business in the Town could consume on-site, and the footprint of a 300kW array is in keeping with the scale of the barns and small-business structures in our rural community landscape. In short, it was a well-grounded planning position allowing for renewable energy development at a pace and size in keeping with the aesthetic, land-use-pattern, and economic scale of the community.

Little did the town know when it took the position of support for Cross Pollination that it would soon be inundated with ground-mounted solar array projects--or that the (then) Public Service Board would utterly ignore, sometimes with pointed disdain, New Haven's planning efforts. Despite the town's scale limitations, and despite other provisions of the Town Plan such as declaring Route 7 a scenic corridor and attempting to preserve the gorgeous open views on this once beautiful stretch of Ethan Allen highway between Rutland and Burlington, the PSB approved solar project after solar project for the town. Out-of-area, out-of-state, and out-of-country developers sited projects in New Haven that were well over the 300kW limit, in areas zoned for rural development only, along the scenic corridors of Route 7, on prime agricultural soils, and even in habitat areas of species of special interest.

These projects were sited, not based on scientific study of superb solar resource areas, but rather based on where cheap land was available—where farmers were suffering economic hardship or where residential homeowners were in arrears on their taxes. The RECs for most if not all of these projects were sold out of state. In opting for a merchant, free-market model of renewable energy development rather than a planning-based model, the state set up a system with no safeguards to ensure wise siting or protection of natural and scenic resources, and guaranteed that solar arrays would be developed in our most scenic and ecologically important areas which, coincidentally, happen to comprise the cheapest real estate. Rather than be placed in the most effective locations—that is, near to usage—solar development boomed in places like New Haven’s farmland, far from any electrical demand.

With the full support of the Department of Public Service Public Advocacy Division, the then-PSB approved within the Town of New Haven a connected string of 150kW arrays that circumvented the higher review of larger arrays; numerous 500kW arrays, some with additional adjoining arrays that thus circumvented the state’s 500kW net metering rule; and more recently yet another 2.2MW array that was hard-fought by the town. The 2.2MW array is slated for development adjacent to a 150kW array that the town has been fighting an enforcement action on for two years relative to its failure to install the landscape screening. Array after array was constructed along the Route 7 corridor, in blatant disregard of New Haven’s decades of work attempting to preserve the visual integrity of this valuable scenic resource.

As New Haven became, according to the Community Energy Dashboard, the state’s top town for ground-mounted solar arrays, the utility distribution network in New Haven grew overburdened. Nearly all the electrical lines in the town are on GMP red-designated circuits. Those that are not red are generally on single-phase, very sparsely populated roads. Local residents seeking to install renewable resources to serve local homes and businesses other than on-site consumption will be hard-pressed to do so because they will not be able to interconnect on these overloaded distribution circuits. Local farmers who wish to install methane digesters for electric generation cannot do so because projects whose RECs are being sold out of state have fully occupied the available resource. The town has also been informed that additional renewable development could result in curtailment of energy production from Belden Dam—an absurdity in which the greenest form of renewable development would be dialed back to accommodate less-efficient, more-costly development that occupies valuable agricultural land and degrades scenic and cultural resources.

Thus, while developing its new Town Plan, the town was not in a position of trying to figure out how it could identify, plan for and encourage additional renewable energy development. The town was in a position of being host to distributed generation facilities producing many times over the amount of energy consumed in the town, and trying to protect the ability of local homes and businesses to utilize renewable energy in the face of a saturated distributed generation environment.

The town was also faced with attempting to do the kind of planning that the state should be doing regarding our energy future—seeking to diversify its energy resources such that Belden Dam remains at full production and goes forward with its planned expansion, and that non-solar energy developers like farmers seeking to install methane digesters (thereby also reducing the amount of manure nutrients released into the environment) have space on the lines to do so. This being the case, some of the aspects of Act 174, which is designed to enlist towns in bolstering solar development, are an awkward fit for the New Haven town planning process. This is not because the town is anti-renewable-energy (which it certainly is not) but rather because the town already suffers from an embarrassment of riches in the renewable electrical generation realm.

Due to the timing issues of the need to adopt a new town plan by vote at Town Meeting in March 2017, New Haven was on the front of the wave of enhanced energy compliance planning, and as a result was chasing a moving target in regards to ensuring compatibility with DPS guidelines. The resource materials now available—including DPS online apps for calculating usage of certain types of fuels, resource mapping, and the DPS guidelines for municipalities—were being rolled out during and after our town planning process. As you know, the adoption of a Town Plan involves a long series of mandated steps including public outreach and several required public hearings prior to vote of adoption at Town Meeting. The town incorporated components of the required energy planning into their Town Plan as they became available, and established within the plan guidance for incorporating additional components, such as resource mapping, into future iterations of the plan. It is the town's intention to enhance this Plan on a rolling basis for at least the next several years, rather than wait the allotted eight years for a subsequent plan revision.

Highlights of the New Haven Town Plan regarding Energy include:

ELECTRICITY CONSERVATION and GENERATION

- The Town Offices and Library model energy efficiency by utilizing high-efficiency lighting systems.
- Through information sharing the town encourages efficient construction designs.
- The town seeks to diversify its distributed electrical generation, especially in its efforts to meet the 25X25 goals in the electric generation sector, by encouraging the development of appropriately sited biomethane energy generation.
- The town encourages additional distributed electrical generation, whether wind or solar, installed for the purpose of use on-site. The most efficient use of renewable energy is placement

near to demand, where it does not overburden distribution systems. This also assures that the facilities benefit local residents and businesses.

– The town has designated for solar development all those areas which are already so developed, and allows those locations to remain in solar photovoltaic development for so long as their CPGs remain valid—which for most if not all is indefinitely. Nothing in this designation precludes solar array owners from continuing generation—or from seeking to modify their CPGs to allow for more intensive solar photovoltaic production without enlarging their footprints, as, for example, solar panels become smaller and more efficient so that increased production may result from the same project footprint.

– Perhaps most importantly, the town currently produces, by renewable means, several times the electrical energy that it consumes.

TRANSPORTATION

– Within the transportation component of the Town Plan, New Haven promotes and encourages the use of public transportation by supporting ACTR (Addison County Transit Resources) routes and carpooling. The town installed and maintains a park-n-ride in the village center. The town will continue to participate in and encourage increased public transportation options as those arise, including expansion of the ACTR bus schedule and routes, and restoration of passenger rail service (the infrastructure for a station still exists at New Haven Junction).

– Transportation is a difficult conservation issue for the state and communities throughout the state. New Haven residents utilize public transportation at slightly higher levels than the state average.

– Within the transportation and recreation components of the Town Plan, New Haven encourages walking, biking and horseback riding.

– The Village Center designation encourages efficient car trips and walking, with safe pedestrian ways between the elementary school, town offices and town library, and the village green and its store.

– Land development patterns support reduction of transportation needs, particularly the strong support for home/farm occupations and businesses that promote a vibrant local economy while diminishing the need for commuting and other road travel.

HEATING

- In regards to thermal energy, New Haven already meets exceeds the Vermont 25X25 program—an often forgotten or ignored state goal to meet 25% of the state’s thermal energy requirements with wood or crop products. It is doubtful that many other towns or planning regions meet this standard. According to the US Census, over 30% of New Haven residents use heating methods other than fossil fuels or electricity. These sources include the popular external wood boilers as well as wood stoves, pellet stoves, corn stoves.
- New Haven Town Offices and Library serve as a community model in utilizing ground-source heat pumps, which are one of the most efficient heating technologies currently available.
- The town promotes and publicizes to town residents energy efficiency and energy assistance programs such as those provided by Efficiency Vermont.

Concerns of the Department of Public Service

In recent communications with DPS staff pertaining to review of the New Haven Town Plan, two concerns were expressed which we would like to comment on here. While the town deeply appreciates the communications and feedback from the Department, as well as the new resources that the Department and Regional Planning have been releasing regarding energy planning, we believe the Town Plan adequately addresses the areas of concern, both within the Plan and by virtue of policies being considered for adoption by the Selectboard as discussed below. These policies close any perceived gaps until such time as the next round of Town Plan amendments may be voted at Town Meeting.

A). Calculations Regarding Thermal and Transportation Fuel Usage

DPS staff expressed concern that the Town Plan did not include the town’s transportation fuel usage and the town’s thermal fuel usage in Btus. As the Plan was being written, we found that this information was not readily available. However, this has been recently remedied with the publication of the DPS municipal consumption template, and is discussed in the policy letters below.

We feel, however, that this is a minor issue and that we are well within the spirit of the law.

In terms of statutory mandate:

- Act 174 Section 5 amends 24 VSA §4348a(a)(3) to state that a municipal plan energy element “may include an analysis of energy resources.” No specific methodology of doing so is mandated.

– Act 174 Section 6(c)(2) reiterates that the section referenced above should be included in the Town Plan.

– None of the statutory analysis requirements mandate any particular methodology or specific calculations to be conducted in analyzing town energy use.

For a small rural town, New Haven has taken extraordinary efforts to reduce the community's thermal and transportation fuel usage: installing ground-source heat pumps at the town offices and library, installing and maintaining a park-n-ride, supporting the area bus routes, and encouraging a vibrant local economy including home occupations and businesses, small businesses and farm-related enterprises.

The town selectboard is, by the policy attached below, considering adoption of the DPS municipal consumption template as a guidance document to inform future policy and planning efforts in the town, and will direct the Planning Commission to utilize the then-current version of this information in future planning efforts, as well as to analyze and incorporate into future Town Plans any more specific data which might be available indicating why and how New Haven might differ from the state averages utilized in the DPS calculation tool. For example, New Haven has a significantly higher percentage of non-electric/non-fossil-fuel heated residences than the state average. This might not alter Btus, but it alters the interpretation of what that means in terms of non-renewable fuel use. Additionally the prevalence of roof-mounted solar in the town may well mean that electric heat consumption in New Haven is in good part a renewable, rather than non-renewable, thermal resource.

The lack of these calculations in the current Town Plan is a minor omission which will be corrected by the selectboard policy below, and we don't feel that certification of energy compliance should be withheld from this Plan on that basis.

<http://publicservice.vermont.gov/content/act-174-recommendations-and-determination-standards>

B) Absence of Base Solar and Wind Resource Maps

DPS staff also expressed concern about the absence of base solar and wind resource maps as a component of the mapping analysis exercise. Given New Haven's unique circumstances, this absence—which will be rectified by the Town Policy discussed below—should not result in a non-certification of the Plan.

The Act 174 purpose for directing municipal mapping analysis was for towns to envision new locations in which solar might be developed. New Haven, however, is overwhelmed with solar development, and both its energy and natural landscape are highly constrained. The Town did engage in mapping analysis, but rather than focus on the not-yet-available solar and wind data maps, it looked to the Community Energy Dashboard maps regarding where renewable energy

resources were already located, the GMP distribution circuit and three-phase line maps, as well as many layers of known and potential constraints.

In terms of statutory mandate:

– 24 VSA §4348a(a)(3) says that Town Plans ‘may’ include an analysis of energy resources -- this is not mandated.

– Under Act 174 Section 6, 24 VSA §4352 is amended to read, in relevant part (d), that the state energy plans shall include *recommendations* that include *strategies and options*. Again, this does not state a direct statutory mandate.

– Under Act 174 Section 9, the only *mandated* mapping is (b)(2) “identification and mapping of existing electric generation and renewable resources.” This was the only mandate of Act 174 that specifically required mapping. All other mapping requirements are DPS interpretations. The town has met the statutory mapping requirements, and substantially complied with the DPS guidance through its policy adoption, below.

As noted on p. 51 of the Town Plan, the issue of scarcity and need for New Haven in regards to electricity is inverted. Town electric needs, according to the Community Energy Dashboard, are 5,227,600kWh/year; the town’s electric generation is 15,558,572kWh per year. Accordingly, we did not feel the need to identify potential additional resources for distributed electrical generation. Even had the town set a goal of 100% energy produced by renewable energy, we have exceeded that goal three times over. If all towns follow this model and stop looking for potential resources when they were producing three times the electricity consumed within their town, the State will have far exceed its renewable energy goals.

Due to the somewhat unusual position that New Haven finds itself in, maps of solar and wind resources are less relevant to New Haven’s energy planning goals than they are likely to be in other towns. However, solar development potential is mapped on page 58, and is comprised of the Community Energy Dashboard map of where group-mounted solar is already located. The Town Plan encourages rooftop solar and home- or farm-scale wind development that primarily serves on-site uses everywhere in the town.

New Haven is highly constrained for distributed electrical generation development. The vast majority of the town is on GMP red distribution circuits. Of the portion of the town not on red distribution circuits, most is on single-phase lines; this small portion of the town also contains vernal pools, state-listed wetlands, and several state-listed natural communities/rare, threatened and endangered species as well conservation areas. These areas are indicated on our known and possible constraints maps. It should also be noted that we exercised Act 174 Section 6 Amendment 30 VSA §202(j) and requested, by letter of 26 September 2016, that the Department provide us with information regarding electric transmission and distribution

infrastructure in New Haven; we were provided with some VELCO maps and a reference to the GMP distribution circuit maps that we utilized in the plan.

At the time of drafting this Plan, maps of solar and wind resources were just beginning to become available from Regional Planning. Without the time and ability to overlay the early solar resource map with the various constraints maps, however, or the ability to correlate them to parcel maps, the information was not helpful to either the town planning effort or the public. The locations for solar development in the town were in fact chosen by *industry*, and not by *government*, and thus the town designated those locations already selected as the locations for such development going forward. The town had no need to seek additional locations.

Addison Regional Planning posted the resource and constraints maps in April, 2017, a month after the Town Meeting at which this plan was adopted. The Town Plan does contain, however, at p. 25, a note regarding maps, indicating that over the next few years the town will be updating its maps to include incorporating the energy resource maps into the plan, as well as updating town road designations and adding maps for the planning efforts under way regarding scenic viewsheds and town-owned lands.

As of this date, the Town of New Haven through its Selectboard is considering adoption of the energy resource maps published by Regional Planning in April 2017 and directed the Planning Commission to utilize them (in then-current form as necessary) as they move forward with future planning efforts.

By using maps in existence at the time this Plan was adopted, by mapping the current distributed generation facilities via the Community Dashboard, by considering adopting a policy limiting ground-mounted solar to those existing facilities, and by stating in the Plan and by considering adopting a policy that energy resource maps will be added to the Plan within the foreseeable future as they become available, we feel that New Haven has fulfilled the purpose of Act 174 with regards to mapping energy resources. It is expected that these policies will be adopted within a month. Therefore, we do not feel that certification of energy compliance should be withheld from this Plan on that basis. To do so would be to effectively punish the Town for its extraordinary success in renewable energy development—a result antithetical to the goals of Act 174.

CONCLUSION

The Town of New Haven has done its fair share in renewable energy planning—and continues, and will continue, to do so, adapting to rapidly changing information and regulatory schemes as well as rapidly changing energy and conservation technology. We strongly urge certification of this Town Plan in order that the town's long-standing efforts to ensure that renewable energy development occur at a reasonable pace and without degrading valuable community environmental, economic and aesthetic assets will be respected in the PUC process. We have

put incredible effort and due diligence into the plan, with a primary goal, from the beginning, of ensuring that it be given "substantial deference" by the PUC. We feel that it is important to the success of Act 174 that towns have a sense that this goal is not impossible to achieve, and thus urge the Department to work with us in this effort.

Kathleen J. Barrett

Kathy Barrett, Selectboard Chair

Duly adopted: (date) 7/17/17

POLICY of the SELECTBOARD of the TOWN OF NEW HAVEN
REGARDING SOLAR AND WIND RESOURCE MAPS

DATE: 11 July 2017

It is the policy of the Town of New Haven, by and through its Selectboard, to hereby adopt for purposes of guidance of future town policies and planning, the solar and wind resource and constraints maps as published by the Addison County Regional Planning Commission in April 2017, and as may be from time to time amended by ACRPC, and which may be found at the following link:

http://54.172.27.91/public/energysiting/municipal_maps/NewHaven_all36x48.pdf

These resources may also be found at the following public cloud-storage link in interactive mapping format:

http://ggiscloud.com/acrpc/Regional_Energy_Siting/?e=-8197470%3B5445152%3B-8095870%3B5500291&t=Regional_Energy_Siting&l=Municipal%20Boundaries%2CSecondary%20Solar%20Siting%20Areas%2CPrime%20Solar%20Siting%20Areas&bl=mapnik&st=

The Selectboard also notes that the constraints map may be altered in the future by changes in GMP distribution circuit designation as well as by Town or Regional planning efforts; for example, by adoption of scenic viewshed or other conservation protections. Thus it is the policy of the Selectboard to direct the Planning Commission to utilize the versions of these maps which are then-current in undertaking future planning activities for the Town.

DULY ADOPTED by vote:

Date:

In favor:

Opposed:

Signed: _____
Selectboard Chair

POLICY of the SELECTBOARD of the TOWN OF NEW HAVEN
REGARDING ENERGY USAGE CALCULATIONS

DATE: 11 July 2017

It is the policy of the Town of New Haven, by and through its Selectboard, to hereby adopt for purposes of guidance of future town policies and planning, the DPS Municipal Consumption Template as a guidance document to inform future policy and planning efforts in the Town, and to direct the Planning Commission to utilize the DPS Municipal Consumption Template, as it may be from time to time amended, to inform future planning efforts. The Planning Commission shall also analyze and incorporate into future Town Plans any more specific data that might be available indicating why and how New Haven might differ from the state averages utilized in the DPS calculation tool.

It is further the policy of the Town of New Haven to recognize that as of the date of adoption of this policy, the DPS Municipal Consumption Template indicates that the population of the Town of New Haven, comprising 0.26% of the population of the State, utilizes 74,198 mBtus of energy for transportation, 71,060 mBtus of energy for residential heating and 25,409 mBtus of energy for commercial heating.

<http://publicservice.vermont.gov/content/act-174-recommendations-and-determination-standards>

DULY ADOPTED by vote:

Date:

In favor:

Opposed:

Signed: _____
Selectboard Chair