



# TOWN OF NANTUCKET

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## **Policy Guidelines for Town Roles in the Achievement of Energy Efficiency Goals and Objectives and Development of Renewable Electric Generating Facilities**

### **Appendix B. Final Version for Public Discussion**

*Released November 2012*

#### **1.0 Introduction**

The Town of Nantucket spends nearly \$3.0 million per year to purchase energy in the forms of electricity and liquid fuels for use by municipal facilities and equipment. In particular, in fiscal year 2012,

- Town buildings and facilities consumed over 12,000 MWh of electricity at 77 metered electric accounts at a total cost of more than \$1.8 million. During the fiscal year, the Town generated 194 MWh of electricity at the 100-kW wind turbine that the Town owns and operates adjacent to the High School (the High School Turbine). The remaining 11,800 MWh of electricity was imported into the Town via two underground cables that connect the New England regional electric grid on Cape Cod with National Grid's Candle Street Substation off south Washington Street.
- The Town consumed approximately 162,000 gallons per year of #2 fuel oil at 17 locations; 41,000 gallons per year of propane at 28 locations; premium diesel fuel at four locations; and gasoline for vehicles at the airport, the fire department and the department of public works. In fiscal year 2012, the Town total cost to purchase liquid fuels was approximately \$1.05 million.

During the year, the Town sponsored development of two projects that were intended to reduce these costs by generating electricity from renewable sources on Nantucket for the Town's own account. Both projects were terminated in the development phase before construction would have begun. In particular:



- A proposed project for the Town to own, finance, construct and operate a 900-kW wind turbine adjacent to the Town landfill was terminated at the annual Town Meeting in March 30, 2012, when Town residents voted against passage of a warrant article for a debt exclusion override.
- An initiative for the Town to lease four public sites to a private entity for development of solar photovoltaic (PV) electric generating facilities was cancelled after concerns emerged regarding the approach to procurement and the suitability of the sites for development of solar PV facilities.

The aftermath of these project terminations revealed a lack of consensus among Town elected officials, board members, professional staff and concerned residents regarding how involved the Town ought to be in the development of electric generation from renewable sources in particular, and in the achievement of energy efficiency goals and objectives in general. A broad spectrum of opinions was expressed regarding general and specific goals that might be set for the Town and the actions that might be taken by the Town to achieve them. To address the lack of consensus, in May 2012, the Town issued a request for proposals for a senior energy consultant (the RFP) that, as part of the required deliverables, requested the respondent to

“...provide and present a draft policy guidance document to the Board of Selectmen through Town Administration to stimulate discussion regarding appropriate goals and objectives as well as the Town’s roles in all energy-related matters such as energy efficiency, conservation and the potential development of renewable energy resources.” RFP, Page 4.

This document was prepared to stimulate discussion regarding Town roles and policies in energy-related matters as indicated in the RFP. The document was prepared by Commonwealth Resource Management Corporation, or CRMC, of Boston, Massachusetts, which was selected by the Town as the senior energy consultant in response to the RFP.

The remainder of this document is comprised of three main sections and one appendix. First, CRMC poses a set of questions intended to raise key trade-offs related to Town roles in the development of electric generating facilities and achievement of energy efficiency goals and objectives. Next, CRMC discusses a range of possible responses to each question and identifies a range of policy guidelines that might result from the various responses. Then, CRMC discusses a brief process for the Town to solicit feedback on the policy guidelines. Appendix

A provides a first draft of responses to the questions that comprise one potential set of policy guidelines.

## **2.0 Policy Questions**

The following questions are intended to address the range of potential Town roles in the development of electric generating facilities from renewable sources and achievement of energy efficiency goals and objectives:

1. Should Town involvement in energy-related activities be viewed differently than other Town actions? If so, why and in what way?
2. Should the Town set its own specific goals for energy conservation or reductions in consumption? If so, what actions should the Town take to ensure that the goals are achieved?
3. Should the Town pursue designation as a “Green Community” under the Green Community Program of the Massachusetts Executive Office of Energy and Environmental Affairs (MassEOEA)?
4. Should the Town be involved in the development of electric generating facilities from renewable sources? What Town roles are clearly acceptable or unacceptable?
5. Should the Town reserve its capacity to participate in the net metering program for either (a) Town-sponsored projects only; or for (b) Town- or privately-sponsored projects located on Nantucket only?
6. Should the Town require energy products and energy-related services to be purchased through competitive procurement processes?
7. What other policies might the Town follow to achieve energy-related goals and objectives?

### **3.0 Policy Alternatives**

This section presents brief discussions of each questions, as well as comments that describe how the questions might be addressed by those holding either a restrictive view or an expansive view of the involvement of the Town in energy-related issues and policies.

#### **3.1 Should Town involvement in energy-related activities be viewed differently than other Town actions?**

The Town would benefit from cost-effective actions that reduce its energy costs. In the absence of other considerations, ongoing initiatives to reduce Town energy costs would be evaluated purely on their economic merits on the same basis as initiatives to reduce other types of Town operating costs. Similarly, in the absence of other considerations, capital projects to reduce Town energy costs would be evaluated on their economic merits in competition with other Town capital projects for available funding.

From public discussions on the wind turbine project, however, it emerged that energy projects bring into play many considerations other than the projected economic merits.

Thus, it is appropriate for the Town to contemplate adoption of policy guidelines that reflect both a restrictive and an expansive view of Town involvement in the energy arena. It is also appropriate to reconsider how the policy guidelines might mesh with prior votes of the Board of Selectmen related to Town energy plans.

#### **A restrictive view of Town involvement**

Some residents might argue that the Town should be careful to restrict its role in energy-related activities. Per this view, Town initiatives in the energy area are not a necessary function of the Town, but are voluntary. As such, these initiatives should be limited to clearly prudent ventures that involve very attractive returns at an absolute minimum of risk or potential adverse impact, and that can withstand review to this standard as applied by Town Administration, by Town Boards in their areas of jurisdiction and, ultimately, by the Board of Selectmen. When energy projects are evaluated, the economic projections need to recognize that energy costs, which have fallen in recent years, are projected to stay low, and that

energy savings from such projects are often overestimated. The economic projections would discount the value of relying on future incentives or federal- or state-level policies that might be discontinued or reduced in scale.

Consistent with this view, the Town would adopt policy guidelines to ensure that Town operating initiatives and capital investments in energy-related projects are treated as discretionary, low-priority, and non-essential actions. The potential impacts of such actions on Town residents, and the potential economic and other risks, would be evaluated more carefully than other Town investments. Some types of projects or initiatives might be precluded entirely.

#### An expansive view of Town involvement

Other residents might argue that the Town should deliberately expand its involvement in energy activities beyond what the ordinary economic analysis might justify. Accordingly, per this view, Town initiatives in the energy area, though not mandated by statute or regulation, should be encouraged for reasons such as the following:

- Reducing environmental impacts. Per this view, the Town has an obligation to its residents to reduce municipal energy use, and/or to generate electricity from renewable sources. The objective is to reduce the Town's contribution to climate change, with its potential threats of global warming and rising sea levels, and to reduce other environmental impacts, in ways that go beyond what is captured by the economics of such projects. Some might see a symbolic value in the Town as a leader, role model and educator in the areas of energy efficiency and renewable power development.
- Accounting for the value of energy independence. Less money to import energy into Nantucket translates into more money available for the Town to provide local services or to reduce the tax burden. The overall impact of additional local services or reduced taxation has a multiplier effect not captured in simple project economics. The same consideration applies to the value of avoiding fuel imports into Nantucket from other regions of the U.S. or even from other countries. Moreover, reduced reliance on imported energy sources contributes to

the reliability of the local energy supply system -- and to the national security of the US.

Consistent with this view, the Town would adopt policy guidelines to ensure that Town operating initiatives and capital investments in energy-related projects are treated as higher priorities than other Town investments. Economic projections would be adjusted to account for future increases in energy prices from levels that are currently depressed. The potential non-economic benefits of such actions on Town residents would be included in the evaluation, and might be considered more important than the project economics.

#### Prior Town involvement with climate change and energy plans

In evaluating future Town policy toward involvement in energy-related activities, it is helpful to understand activities of the Nantucket Board of Selectmen related to environmental impacts and climate change in the last few years that form a backdrop for the present interest in developing energy policy guidelines through a public process. Specifically:

- In March 2008, the Board of Selectmen voted to join the Cities for Climate Protection Campaign, which is a program of the International Council of Local Environmental Initiatives (ICLEI)<sup>1</sup>. The Town subsequently commissioned the performance of a baseline analysis of greenhouse gas emissions on Nantucket and a recommendation for an emissions reduction target. To support these efforts, a Town Energy Study Committee was created in 2008. At the 2009 annual Town Meeting, a budget of \$30,000 was appropriated to support the activities of the Energy Study Committee.
- In March 2009, the Board of Selectmen received an analysis of baseline greenhouse gas emissions from the Town as a whole. At its public meeting on March 25, 2009, the Board of Selectmen voted to adopt a target, based on that analysis, to reduce greenhouse gas emissions to 10 percent below 2000 levels, or 20 percent below the

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<sup>1</sup> The Town's membership in ICLEI lapsed in fall 2012 and has not yet been renewed.

2007 baseline levels, by 2020. The Town subsequently commissioned the development of a Climate Action Plan.

- In August 2010, the Board of Selectmen received a Climate Action Plan advising that the Town continue to implement recommendations per the ICLEI protocol, and that the Town develop a Nantucket Energy Plan. At its public meeting on November 17, 2010, the Board of Selectmen did not vote to accept the Nantucket Climate Action Plan that had been prepared for the Town (a motion for approval died for the lack of a second). The Climate Action Plan was criticized on a number of grounds, including that the analysis and recommendations were generic and not appropriate or applicable to Nantucket; were not transparent regarding underlying assumptions and political agendas; and did not build on recent local experience. Subsequently, the Board of Selectmen, by a vote of 4-1, approved development of an energy plan involving (1) cost savings to produce energy locally; (2) becoming a leader in rationalizing its own use of energy; and (3) educating the community on its use of energy.
- A draft Nantucket Energy Plan, based on the Climate Action Plan, was circulated in May 2011, but was never taken up by or approved by the Board of Selectmen. Rather, the Board of Selectmen responded favorably to an offer by a local foundation, ReMain Nantucket LLC, to fund a Nantucket Energy Office to implement initiatives related to energy efficiency and long-term energy strategy on Nantucket. The Board of Selectmen accepted an initial grant from ReMain in July, 2011, to fund services during fiscal year 2012. Initially, the activities of the Nantucket Energy Office included a mix of (a) education regarding local energy use; (b) promotion and implementation of energy efficiency activities on the island; and (c) staff support services for public presentation and analysis of the Madaket wind project, which had been advanced as a cost-saving project to produce electricity locally. The grant was renewed by ReMain, and accepted by the Board of Selectmen in July, 2012, to fund services during fiscal year 2013. At present, the Nantucket Energy Office consists of a full-time program manager/outreach professional, with support from a technical consultant on a part-time basis. Recent activities of the Nantucket Energy Office have involved energy efficiency and cost reduction projects almost exclusively, with emphasis on initiatives to save energy and costs at Town facilities and on behalf of Town



residents and businesses. The Nantucket Energy Office is not currently involved in the development of any renewable energy facilities.

3.2 Should the Town set specific numeric goals for energy conservation or reductions in consumption? If so, what actions should the Town take to ensure that the goals are achieved?

Many municipalities, including the 103 Massachusetts municipalities that have been designated as Green Communities (see Section 3.3 below), have set specific numeric goals for reducing their municipal energy consumption. In 2009, as noted previously, the Board of Selectmen adopted an island-wide target for reductions in greenhouse gas emissions, but did not adopt (and has not yet adopted) a specific numeric target for reducing energy consumption. At this time, the Town does not have in place a specific multi-year goal for reducing energy consumption that would bind future boards and staff to achieving the goal with mechanisms that transcend annual fiscal years budgets and the annual goal-setting process.

Those having a restrictive view of Town involvement in energy initiatives would likely argue against adopting a specific numeric goal for reducing energy consumption, either for energy consumption in Town facilities or for Town-wide energy consumption. For the reasons stated in Section 3.1, per this view, Town energy initiatives would be limited to clearly prudent ventures that involve very attractive returns at an absolute minimum of risk or potential adverse impact. In such event, it would not be justified to pursue initiatives that would not otherwise be pursued merely to achieve a specific goal.

Those having an expansive view of Town involvement in energy initiatives might likely argue in favor of adopting a specific numeric goal for reducing energy consumption in Town facilities and for Town-wide energy consumption. Having binding goals would provide additional justification to pursue initiatives in Town facilities, and for the Town as a whole, which would not otherwise be pursued in order to reduce environmental impacts or otherwise achieve benefits not accounted for in a normal economic analysis.

Those that would evaluate Town energy-related initiatives purely on their economic merits would not factor achievement of a mandatory numeric

goal into their evaluation of such initiatives. Nonetheless, goals are often powerful tools to provide motivation for changes in behavior. In this context, a targeted energy reduction goal might be used as an administrative tool to provide incentives for municipal staff to reduce energy use in the same way that other budget-reduction goals are used to motivate cost savings. Consistent with this view, the Town would not adopt a mandatory Town-wide energy reduction goal as a policy guideline, but would allow energy-reduction goals to be set within municipal government as an administrative tool. In this context, the Town might allocate resources (via the Nantucket Energy Office or otherwise) to provide information to individual Town department heads and facility managers on their electricity use as part of a larger educational effort to reduce energy consumption and promote energy efficiency in municipal facilities.

The Town might investigate alternatives to overall goals to encourage Town staff to pursue energy conservation and efficiency in their workplaces and in the facilities under their control or jurisdiction. Measures to be pursued might include measures and policies to minimize printing; encouraging central break rooms; limiting the number of personal appliances; installing devices to reduce water consumption; and similar measures.

3.3 Should the Town pursue designation as a “Green Community” under the MassEOEA Green Community Program?

The MassEOEA Green Community Program is a state-level initiative to encourage Massachusetts municipalities to reduce energy use in municipal facilities, benefit from development of renewable electric generating facilities, and pursue other policies for energy conservation and reduced energy use. To be designated a Green Community, a municipality must meet all five of the following criteria:

1. Provide as-of-right siting in designated locations for renewable/alternative generation, research and development, or manufacturing facilities.
2. Adopt an expedited application and permit process for as-of-right energy facilities.

3. Establish an energy use baseline and develop a plan to reduce energy use by twenty percent (20%) within five years.
4. Purchase only fuel-efficient vehicles.
5. Adopt the Stretch Code put forth by the Massachusetts Department of Public Safety, Board of Building Regulations and Standards (BBRS)<sup>2</sup>, or otherwise set requirements to minimize life-cycle energy costs for new construction.

Green Communities are rewarded by becoming eligible for state funding under the MassEOEA's Green Communities Designation and Grant Award Program. As of the end of August 2012, 103 of the 351 cities and Towns in Massachusetts had been designated as Green Communities, and had been awarded a total of \$20.35 million in grant funding not available to non-qualifying municipalities. More than 121 municipalities have adopted the BBRS Stretch Code. More information on the Green Communities program is available at the MassEOEA website at <http://www.mass.gov/eea/energy-utilities-clean-tech/green-communities/gc-grant-program/>.

As of this writing, the Town does not meet any of the five criteria to achieve Green Community designation. The Town would need to undertake new initiatives to satisfy the requirements of each of the criteria, which, in some cases, would need to reverse previous Town decisions. In particular:

- Regarding the first criterion, at the 2011 Town Meeting, the Town put forth a warrant article to provide as-of-right siting for wind turbines in a new overlay district to be located at the landfill (Article 46). The article was ultimately not called, then moved to take no action by unanimous voice vote.

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<sup>2</sup> The Stretch Code (780 CMR 115 AA) is an appendix to the Massachusetts state building code that has additional and more stringent standards for energy-efficiency in new construction than are incorporated in the base code. The base code is the International Building Code (the IBC), 2009 version, with Massachusetts amendments. The IBC is scheduled for another update in 2013. Under the Green Communities Act, the BBRS is mandated to update the base code and the stretch code every three years, and to maintain a level of additional stringency in the Stretch Code.

- Regarding the second criterion, at the 2009 Town Meeting, the Town put forth a warrant article to expedite permitting of solar PV facilities by requiring the Historic District Commission (the HDC) to (a) treat solar collectors as a structure on which it could not impose unreasonable limitations or costs (Article 51); and (b) adopt a written policy supporting and encouraging solar energy systems to the maximum extent feasible without having a significant adverse impact upon its purpose (Article 57). Neither of these articles was adopted.
- Regarding the third criterion, the Town has accumulated sufficient information on its energy consumption to establish an energy use baseline, but, as mentioned previously, the Board of Selectmen have neither adopted the energy plan that was submitted in 2010 nor adopted any other written energy plan that would satisfy this criterion.
- Regarding the fourth criterion, the Town owns and operates approximately 200 vehicles. Nearly are 80 pick-up trucks or utility vehicles. Most of the rest are specialty transportation vehicles, construction vehicles, fire apparatus or police cruisers. Only three of the Town vehicles (other than the police cruisers) are sedans. To this point, the Town has not enforced a policy for purchasing energy-efficient vehicles, nor has it monitored vehicle mileage or the efficiency of vehicle use.
- Regarding the fifth criterion, at the 2011 Town Meeting, the Town put forth a warrant article to amend the Town Building Code to adopt the Stretch Code (Article 71). The warrant was removed from the warrant and moved to take no action by unanimous voice vote.

Those having a restrictive view of Town involvement in energy initiatives would likely argue against new Town initiatives to qualify as a Green Community. Per this view, rather than spend resources chasing future grant funding that might not be continued, the Town's efforts should be limited to clearly prudent ventures that involve very attractive returns at an absolute minimum of risk or potential adverse impact. Furthermore, concerns have been expressed that adoption of the Stretch Code, with its additional stringent standards for energy efficiency, would raise costs for local builders.

Those having an expansive view of Town involvement in energy initiatives might likely argue in favor of new initiatives to qualify as a Green Community. Per this view, being a Green Community would not only provide a basis for further development of renewable energy generating facilities and for new energy efficiency standards for Town vehicles and island-wide construction, but would also provide symbolic value for the Town as a leader and role model.

Those that would evaluate Town energy-related initiatives purely on their economic merits would favor pursuit of Green Community designation only to the extent that (a) all five criteria could be feasibly achieved; and (b) grant funding would be available and useful to support other programs of benefit to the Town. From this perspective, the focus of the Town's efforts would be on those elements of the Green Community program that are most applicable to and appropriate for Nantucket.

3.4 Should the Town be involved in the development of electric generating facilities from renewable sources? What roles are clearly acceptable or unacceptable?

One approach for the Town to reduce spending on purchases of electricity is to develop its own facilities to generate electricity from local resources. Resources available on Nantucket that might be used to generate electricity include solar energy, the wind, tidal and ocean energy, and perhaps the recoverable energy content of various waste materials. Development of facilities to utilize these resources to generate electricity at a scale that would be economically meaningful to the Town, however, is a complicated and time-consuming endeavor that would be beyond the scope of duties of existing Town staff and would require external support and resources. Successful development would encompass completion of some or all of the following tasks:

- Identifying locations on the island (or off-shore) with access to adequate resources for a facility to be feasible.
- Preparing a design concept for the facility that identifies size, technology, location and necessary business arrangements (that is, the preferred approach to ownership, energy sales, financing, construction and operations).

- Studying and confirming the potential technical and economic feasibility of the potential facility.
- Identifying potential adverse environmental and nuisance impacts of the potential facility, and determining whether such impacts are acceptable.
- Acquiring the environmental permits and licenses, and other approvals, from federal, state and local agencies that are necessary for facility development.
- Completing the arrangements for final design, engineering, financing, construction, testing, commissioning, operating and maintaining the facility.
- Completing the business arrangements to sell the electricity, renewable energy certificates and other products from the facility.

The Town might play any or all of these roles to facilitate development of renewable electric generating facilities. For example:

- Sponsor studies. The Town might limit its role to participation in early studies to identify locations on the island (or off-shore) with access to adequate resources for a facility to be feasible. Costs for such studies might be performed as a matter of routine during evaluations of the Town's space use and facility needs, or might be performed as special studies funded by grants from external agencies (such as the Massachusetts Clean Energy Center). The studies might also address choices of size, technology and conceptual design. The Town might then conclude its direct involvement by making information available to the public for use by private developers that might seek to follow up on identified opportunities on privately-owned sites. As an example, the Town, through the Nantucket Planning and Economic Development Committee, is currently hosting the Madaket Wave and Research Project, which is being sponsored and paid for by the University of Massachusetts at Dartmouth; Woods Hole Oceanographic Institute, and a private development company. The Town is providing limited staff time to the project, but is not covering any project expenses.

- Lease sites for development. To the extent that the Town identifies locations on undeveloped or available Town-owned land suitable for development, the Town might sponsor competitive procurements to lease the land for private development over an extended term. Private developers would provide proposals pursuant to which they would undertake all development, conceptual design, business arrangements, financing, construction, operations and maintenance activities. The Town would award lease and development rights to the developer whose proposal would provide the greatest overall compensation to the Town. The Town's 2011 initiative to procure solar PV facilities on four publicly-owned sites followed this approach.
- Lease sites after screening and pre-development. In a variant of the previous approach, the Town would undertake some level of pre-screening, permitting or other early-stage development of a potential site. The Town would then sponsor a competitive procurement to lease the land for private development over an extended term. The Town's pre-development work would reduce the risks and costs to the potential developer, thereby attracting more development interest and encouraging better levels of proposed compensation than if such work were purely the responsibility and risk of the developer after entering into a lease. Alternatively, the Town might develop a project or a site with the intent of selling the site to the highest bidder.
- Develop public facilities. The Town might develop the facility for its own account by taking responsibility for design, engineering, financing and other business arrangements, construction, testing and operation. This was the approach proposed for the Madaket Wind Turbine Project prior to its termination, and was the approach actually implemented by the Town for the Nantucket High School Wind Turbine, as well as for the Town's wastewater treatment plants. Alternatively, the Town might contract out for operations and maintenance services after construction and testing are complete.

#### A restrictive view of Town involvement

Those having a restrictive view of Town involvement in energy initiatives would likely argue against having the Town assume any of these roles.

Per this view, the Town's role would be restricted to cases in which various arms of the Town with regulatory authority over specified aspects of privately-developed projects (e.g., the HDC or the Conservation Commission) would exercise their authority in accordance with existing mandates. Under this approach, private development of renewable energy generating facilities would be treated on the same basis as any other type of proposed development. To preclude certain impacts, the Town might propose bans or moratoria on specific types of projects (e.g., wind turbine generators above a certain height, solar panels with adverse visual impacts) regardless of whether they are being developed by the Town or by a private entity.

#### An expansive view of Town involvement

Those having an expansive view of Town involvement in energy initiatives might argue for the Town to assume any or all of the aforementioned roles (as it does with its wastewater treatment facilities). In addition, the Town might further advocate for development of renewable energy facilities by (a) facilitating installation by Town residents of small-scale renewable electric generating equipment (e.g., solar PV panels or small wind turbines); or (b) working with the HDC or other boards to clarify, standardize and broaden the standards that apply to approval of such facilities.

#### A case-by-case view of Town involvement

Those that would evaluate Town energy-related initiatives purely on their economic merits might decide on a Town role on a case-by-case basis, depending on the size and type of projects. To inform such decisions, it would be helpful to have guidance regarding the following:

- The Town has received multiple inquiries and proposals regarding opportunities to install solar PV facilities on Town buildings and Town-owned land. Should the Town conduct a systematic inventory of the availability of Town-owned facilities and land to determine where the Town might sponsor development of such facilities? To what extent should the Town engage in pre-screening and development of potential sites? Are there any conditions under which the Town itself should design, install, own and/or operate and maintain such solar PV facilities?



- Generally, under what circumstances and conditions might it be acceptable for the Town to own a renewable electric generation facility? Provide financing for such a facility? Oversee construction of such a facility? Operate and maintain such a facility?
- Are there specific permitting issues (e.g., HDC approvals, wetlands delineations, conservation and management plans for endangered species) that, as a matter of policy, the Town should always pursue in advance of a procurement to lease a site or development rights to a private developer?
- What standards might the Town use to determine whether a technology is acceptable for development via a Town-sponsored project? What standards might the Town use to determine that potential project impacts are acceptable for development via a Town-sponsored project?

3.5 Should the Town reserve its capacity to participate in the net metering program for either (a) Town-sponsored projects only; or for (b) Town- or privately-sponsored projects located on Nantucket only?

Pursuant to the Green Communities Act and its implementing regulations, the Town can purchase the electrical output of solar PV and wind turbine generating projects in the form of ‘net metering credits’ that can then be used to reduce the Town’s electricity purchase costs<sup>3</sup>. The Town can use any of the following approaches to participate in the net metering program:

- The Town might purchase net metering credits from facilities being sponsored by the Town on the island.
- The Town might purchase net metering credits from facilities being developed at locations on the island that either being sponsored by the

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<sup>3</sup> For more information on net metering programs, refer to the National Grid web-site at [http://www.nationalgridus.com/masselectric/home/energyeff/4\\_net-mtr.asp](http://www.nationalgridus.com/masselectric/home/energyeff/4_net-mtr.asp) or the MassEOEA web-site at <http://www.mass.gov/eea/grants-and-tech-assistance/guidance-technical-assistance/agencies-and-divisions/dpu/net-metering-faqs.html>.

Town or are being developed privately independent of Town sponsorship.

- To the extent allowable, the Town might purchase net metering credits from project located on the mainland. The Town could only make such purchases from projects that are located (a) within areas served by the Massachusetts Electric Company, which, like Nantucket Electric Company, is a subsidiary of National Grid; and (b) within the SEMA (southeastern Massachusetts) zone of the New England power grid<sup>4</sup>. The Town is awaiting response from National Grid regarding further limitations on such purchases.

The Town's ability to make and benefit from such purchases is constrained by two additional limits. Specifically:

- Under current law, the total nameplate generating capacity of projects on Nantucket eligible for participation in the net metering program is 2.4 MW -- 1.2 MW for publicly-sponsored projects and 1.2 MW for privately-sponsored projects.<sup>5</sup>
- The Town would gain benefit from the net metering program only to the extent that the value of the credits being purchased does not exceed the amount of electricity the Town actually purchases each year. Stated another way, the Town's costs for electricity would go up, not down, if it spends more to buy net metering credits than it would have spent to buy the electricity.

#### A restrictive view of Town involvement

Those having a restrictive view of Town involvement in energy initiatives might argue against having the Town reserve capability to purchase net metering credits to support municipally-sponsored projects. Per this view, the Town would be best served by engaging in a competitive procurement for net metering credits as soon as possible in order to garner the

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<sup>4</sup> There are 41 municipalities in Barnstable, Plymouth, Bristol, Norfolk and parts of Middlesex Counties that meet both limitations, the largest of which are Brockton, Fall River, and Quincy.

<sup>5</sup> The 1.2-MW limits are each based on three percent of the most recently measured peak load of the Nantucket Electric Company, which was approximately 40 MW. Note that 30% of 40 MW is 1.2 MW.

maximum financial benefit from any such program while it is still in effect. The Town would also protect its position through contractual clauses (e.g., risks of a Change in Law) that ensure that the Town has no residual liability in the event the net metering program is terminated before the end of the purchase contract term.

#### An expansive view of Town involvement

Those having an expansive view of Town involvement in energy-related initiatives might argue for the Town to reserve its capability to use net metering projects for support of its own projects, or might support a preference for privately-developed projects located on Nantucket. The Town would thus forego opportunities to benefit from purchases of net metering credits from privately-developed facilities on the mainland.

#### A purely economic view of Town involvement

Those that would evaluate Town energy-related initiatives purely on their economic merits might pursue a mixed strategy to maximize the financial benefits to the Town. Under this approach, the Town would reserve a pre-determined amount of capacity of net metering credits to purchase for its own projects, and would pursue opportunities to purchase net metering credits from privately-developed mainland projects up to the limits of its annual consumption in excess of such capacity. As one example, the Town might decide to reserve sufficient capacity to support development of 2.4 MW of solar PV capacity on Nantucket, which would correspond to approximately 3,800 MWh<sup>6</sup> of electricity generation on an annual basis. The Town might then pursue purchases of up to 8,000 MWh per year of net metering credits from mainland renewables projects<sup>7</sup>, presuming that such purchases would ultimately be permissible under the applicable regulations and National Grid tariffs.

### 3.6 Should the Town require energy products and energy-related services to be purchased through competitive procurement processes?

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<sup>6</sup> 2.4 MW x 24 hours/day x 365 days/year x 18% capacity factor (conservative) = 3,800 MWh/year.

<sup>7</sup> 11,800 MWh/year electricity purchases – 3,800 MWh/year reserved = 8,000 MWh/year purchases to pursue.

Under Massachusetts law, contracts for energy and energy-related services are exempt from the competitive procurement requirements that apply to Town purchases of most other types of services<sup>8</sup>. This exemption gives the Town the option of purchasing energy-related services on a sole-source basis without advertising and without going through a competitive bidding process that might otherwise be required. Because of this exemption, which is widely recognized, the Town is often approached by vendors that propose to have the Town purchase their service or equipment on a sole source basis.

As a result, Town professional staff spend significant time and resources dealing with vendors that are proposing to provide services to the Town on a sole-source basis.

Some might argue that staff time and Town resources would be spent more efficiently if, as a matter of policy, the Town is mandated to purchase all energy products and energy-related services through appropriate competitive bidding processes only, the exemption to Chapter 30B notwithstanding, and with exceptions limited to special products or services that would be exempt from Chapter 30B due to their proprietary and unique nature even if there were no specific exemption for energy-related services. As an example, in June 2012, Town professional staff were lobbied heavily to renew the contract to purchase electricity Town-wide on a sole-source basis. Rather than accept the proposed renewal terms, the Town, through the Nantucket Energy Office, sponsored a competitive bidding process – and, as a result, procured electricity supply contracts that will result in substantial savings as compared to the sole-source arrangements that were proposed. The Nantucket Energy Office has also conducted procurements on behalf of Town Administration to sell renewable energy credits (RECs) generated by the High School Turbine, and to arrange for the Town to benefit from use of the back-up diesel generator at the Surfside Wastewater Treatment Facility to supply capacity to the Massachusetts electric grid during peak electric use times through a demand response program. This view would support a restrictive application of the exemption from Chapter 30B requirements, relying on resources from the Nantucket Energy Office to supplement the efforts of other professional staff.

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<sup>8</sup> Massachusetts General Laws, Chapter 30B, Exemption # 33, contracts for energy and energy-related services.

Others might argue that competitive bidding processes put extra demands on the Town's resources and staff time. The Town might reasonably choose to make purchasing decisions that favor service providers based on Nantucket, that allow the Town to move quickly in certain circumstances, or that account for other preferences. Finally, a policy that restricts energy-related purchases might cause the Town to miss out on special offers or unique opportunities that it would not ordinarily pursue if a competitive process were required. This view would support an expansive view of the application of the Chapter 30B exemption.

3.7 What other policies might the Town follow to achieve energy-related goals and objectives?

There are many policy paths the Town might take to achieve energy-related goals and objectives. The Town might choose to maintain an Energy Policy Leadership Group (see Section 4.0 below) to provide technical support and outside perspective on various energy-related policies and initiatives. Those with a restrictive view of Town involvement in energy-related initiatives might suggest adoption of specific limitations on Town actions. Those with an expansive view of Town involvement in energy-related initiatives might suggest adoption of additional incentives to support energy efficiency or renewable energy development. In either event, the Town would benefit from close examination of suggestions in either direction.

#### **4.0 Policy Review Process**

Appendix A provides one set of recommended policy guidelines that set a moderate course between a restrictive view and an expansive view of Town involvement in energy-related activities. These guidelines were developed as an initial recommendation that might be revised to reflect suggested revisions and additions.

In this context, CRMC recommends that Town Administration proceed to solicit comments on the recommended draft policy guidelines from the Board of Selectmen and from interested stake-holders. The comments would be incorporated into a revised version of Appendix A to be presented to the Board of Selectmen. The Selectmen could then vote to adopt or reject specific energy policy guidelines at its discretion.



## **Appendix A Recommended Policy Guidelines**

### A-1 Town involvement in energy-related activities.

View Town involvement in energy-related activities on the same basis as all other Town activities. Evaluate initiatives to reduce Town energy costs on their economic merits on the same basis as initiatives to reduce other types of Town operating costs. Evaluate capital projects to reduce Town energy costs on their economic merits in competition with other Town capital projects for available funding. Focus on projects that involve attractive returns at a minimum of risk or potential adverse impact. Provide services to support local residents and businesses in their efforts to reduce energy consumption and costs, and to take advantage of available state and federal incentive programs, on a basis comparable to other economic development programs provided to local residents and businesses.

### A-2 Specific goals for energy conservation or reductions in consumption.

Do not adopt numeric goals to reduce Town-wide energy consumption at this time. Rather, require energy consumption to be considered as a factor in all planning and facilities construction decisions that have a significant impact on energy use, and implement energy efficiency measures that make sense for Nantucket on a case-by-case basis. As an example, ensure that the implications for energy consumption are incorporated into and considered as part of the scope of the ongoing comprehensive wastewater management plan. Similarly, require energy consumption to be considered as a factor in all efforts to identify municipal space needs and in all infrastructure planning and regulation initiatives.

Allow energy reduction targets to be used as an administrative tool to provide incentives for municipal staff to reduce energy use at municipal facilities in the same way that other budget-reduction goals are used to motivate cost savings. Encourage Town staff to pursue energy conservation and efficiency in their workplaces and in the facilities under their control or jurisdiction through measures and policies to minimize printing; encouraging central break rooms; limiting the number of personal appliances; installing devices to reduce water consumption; and similar measures to be suggested by the staff themselves.

A-3 Criteria for designation as a “Green Community.”

Do not pursue designation as a Green Community for its own sake at this time. Pursue only those requirements for designation as a Green Community that make sense for Nantucket.

In this context:

- Continue to implement cost-effective plans to reduce energy consumption from the baseline that has been established.
- Develop and enforce policies to encourage efficient use of existing vehicles and purchases of fuel-efficient new vehicles. In particular:
  - Maintain an inventory of all vehicles that identifies vehicle make and model year, approved functions that determine the type of vehicle needed, requirements for the drive system (e.g., two-, four- or all-wheel drive) and other features; mile-per-gallon rating; and qualification as a heavy-duty vehicle, police cruiser, transport van, or other specialty vehicle, as and if applicable.
  - Monitor miles driven and fuel consumed for each vehicle in each department (which will be facilitated by the new fuel dispensing system).
  - Purchase energy-efficient regular and specialty vehicles whenever feasible and as models become commercially available. Require a demonstration that the specific model (e.g., pick-up truck or utility vehicle rather than a sedan) is required by the proposed function.
- Do not pursue passage of the Stretch Code. Rather,
  - Encourage energy efficiency in existing buildings by promoting energy audits and assessments, and supporting the implementation of recommended energy efficiency improvements.
  - Encourage energy efficiency in new construction through education and promotion of the LEED program and comparable initiatives for energy efficiency.
  - Identify policies of Town boards that act as barriers to energy efficiency for renovations and new construction (e.g., strict requirements of the Historic District Commission or of the zoning code that conflict with energy-efficient construction), and find ways to surmount those barriers.



- Facilitate efforts of local businesses and residents to implement energy efficiency measures by helping local contractors to get certified to perform energy efficiency services through state- and utility-sponsored programs.
- Do not sponsor a warrant article to provide as-of-right siting in designated locations for renewable/alternative generation, research and development, or manufacturing facilities.
- Do not provide exemptions from the policies of existing Town boards (e.g., the Historic District Commission, the Planning Board and the Conservation Commission) for review and approval of applications to construct energy facilities. Rather, identify Town board policies that act as barriers to development of low-impact renewable/alternative generation, research and development, or manufacturing facilities, and find ways to surmount those barriers.

A-4 Involvement in the development of electric generating facilities from renewable sources

Evaluate Town participation in the development of electric generating facilities from renewable sources on a case-by-case basis subject to the following policy guidelines:

- Cooperate with and participate in feasibility studies related to renewable resource development that are funded or conducted by others. Advocate for such studies to address at an early stage the potential adverse environmental and nuisance impacts of development, especially those of particular concern on Nantucket.
- Have the Town own and develop only those facilities that would be so small or so integrated into existing facilities (e.g., solar PV panels integrated into a roof replacement project, or waste heat recovery as part of a facility ventilation system upgrade) that it would be infeasible for such facilities to be developed or owned by a private entity.

- For all other potential development opportunities for renewable electric generation on Town-owned land, procure a private developer through a competitive process that maximizes benefits to the Town. Avoid participation in facility ownership or financing unless the Town would (a) receive compelling economic benefits; (b) would be exposed to minimal risks; and (c) would experience minimal adverse impacts.
- Before procuring a private developer for a renewable electric generation opportunity on Town-owned land, pre-screen the site to identify potential fatal flaws and significant development permitting barriers. Defer the procurement process until site issues are understood regarding potential visual impacts (i.e., requirements for HDC approval), potential impacts on protected species (i.e., requirements for state- or federally-mandated conservation and management plans), potential impacts on wetlands (via consultation with the Conservation Commission) and constraints regarding property ownership and leasing.
- Conduct a systematic inventory of Town-owned facilities and land to identify opportunities for development of solar PV facilities and geothermal ground-source heat pumps consistent with the principles stated above.
- Defer Town sponsorship of large wind turbine generating facilities until the potential adverse environmental and nuisance impacts of development, especially those of particular concern on Nantucket, are addressed satisfactorily.
- Be receptive to proposals to develop privately-owned gasification or other facilities that might utilize waste residuals received at the landfill as a feedstock. Ensure that such studies address at an early stage (a) integration and consistency with other activities for solid waste management; and (b) potential adverse environmental and nuisance impacts of development, especially those of particular concern on Nantucket.

#### A-5 Capacity to participate in the net metering program

Seek to procure and purchase up to 8,000 MWh per year of net metering credits from all available and permissible sources in a way that maximizes the financial benefits to the Town, without regard to ownership of such capacity. Reserve capacity to purchase in excess of 8,000 MWh per year as needed to support

development of 2.4 MW of solar PV capacity on Nantucket, which would correspond to approximately 3,800 MWh per year of electricity generation.

A-6 Requirement to purchase energy products and energy-related services through competitive procurement processes

Institute a requirement that the Town purchase all energy products and energy-related services through competitive bidding processes only, notwithstanding the specific exemption set forth in the state procurement law (Chapter 30B) for energy products and energy-related services. In particular, as a matter of policy, the Town would procure purchases of electricity from third-party competitive suppliers, and net metering credits from project developers, through competitive processes. As part of the policy, the Town would encourage or, as appropriate, provide a preference for procurement that involves local trade workers, businesses and suppliers.

Exceptions would be limited to special products or services that would be exempt from the requirements of Chapter 30B due to their proprietary and unique nature even if there were no specific exemption for energy-related services, and that are projected to pay for themselves through reductions in operating costs over a short payback period. An example of the latter is installation of energy efficiency measures that are available only through National Grid Direct Install Program or other municipal incentive programs and that are the subject of state-level regulatory scrutiny. In this context, proceed to implement energy efficiency measures that can be financed through electric bill payments such that the projected savings exceed the projected annual costs (that is, the overall impact is a reduction in electricity costs) and that have paybacks of less than two years.

A-7 Other policies to achieve energy-related goals and objectives

Provide Town funding for professional staff and technical support resources directed to implement cost-effective measures to reduce the Town's energy consumption and energy purchase costs. Such staff resources would be available to provide technical support for Town department heads and facility managers on energy-related issues, and to facilitate procurement and implementation of services to implement energy efficiency measures in Town buildings. Such staff resources would also be available to advise Town residents and businesses how to

control their own energy consumption and costs, and to provide guidance and technical assistance on Town-level energy-related policy issues. No additional Town-level incentives to support energy efficiency or renewables development, or to preclude specific actions by the Town or its residents, are recommended at this time beyond those indicated previously herein.