

YARMOUTH ENERGY COMMITTEE



July 2020

ANNUAL OPERATING PLAN – FY 2021

Yarmouth Energy Committee’s Annual Operating Plan Fiscal Year 2021

Overview of the Yarmouth Energy Committee’s Five-Year Vision

Yarmouth Energy Committee’s Vision		
A strong and prosperous Town that is powered by clean, affordable, and secure energy		
Yarmouth Energy Committee’s Mission		
To inspire energy sustainability throughout the Town of Yarmouth—municipal buildings, schools, commercial businesses, residential homes and transportation vehicles		
Aspirations	Strategies	Success Indicators
1: Reduce Energy Consumption within Yarmouth by 20% by 2025	<ul style="list-style-type: none"> • Ensure Energy Efficiency Remains Consumer’s First Choice • Continue Implementation of the Green Communities Act 	<ul style="list-style-type: none"> • Reduction of overall MMBTU consumption
2: Increase the Use of Renewable Energy within Yarmouth by 20% by 2025	<ul style="list-style-type: none"> • Focus on Market Barriers • Streamline Financing for Renewable Power Systems • Streamline Regulatory and Permitting Processes at the Local Level • Execute 2020 Solarize Mass Plus Yarmouth 	<ul style="list-style-type: none"> • % of overall MMBTU consumed provided by renewable sources
3: Achieve 1,000 Zero Emission Vehicles in Yarmouth by 2025	<ul style="list-style-type: none"> • Promote Acceptance of Electric-Drive Vehicles • Provide Objective Data and Informational Materials to Potential End-Users 	<ul style="list-style-type: none"> • # of zero emission vehicles in Yarmouth
Yarmouth Energy Committee’s Activities Are Guided by 3 Core Principles		
Affordability	Reduced Environmental Impact	Consumer Choice

Annual Operating Plan Fiscal Year 2021

The Energy Committee—being aware of and working to support the Board of Selectmen's annual goals—advises them on energy-related issues and recommends specific initiatives. Furthermore, the Energy Committee recognizes the need to monitor advancements and incentives within the energy industry *to inspire energy sustainability throughout the Town of Yarmouth*—municipal buildings, schools, commercial businesses, residential homes and transportation vehicles. The Committee's role is advisory, without the resources and authority to implement changes, but it does have the ability to educate and motivate municipal employees, small business owners, and the general public with respect to energy improvements.

Thus, this Annual Operating Plan for FY 2021 focuses on the kind of tasks that can be undertaken by the Energy Committee in motivating and educating the Yarmouth community in energy savings available through conservation, efficiency, renewable generation and electric vehicle acceptance. These tasks are consistent with the aspirations put forth in the Energy Committees' Five-Year Vision (above) and the Board of Selectmen's goals (see Table 1 at the end). A three-phase approach will be followed: (1) assemble energy use data, (2) develop outreach materials, and (3) educate and motivate the community.

Task 1. Assemble energy usage baseline. An effective plan is based on an understanding of the town-level data related to energy use and availability. This is especially true of the energy use within the private (i.e., non-governmental) sector, as well as energy supplies that are not regulated by state government, including most heating and transportation fuels. The energy inventory is not an end in itself – it will be used to inform Yarmouth energy policies and implementation programs and to measure performance over time. Inventories of energy use will be organized by the following sectors to provide a framework for collecting and organizing data, recommending sector-based policies, and measuring progress:

- Buildings
 - Municipal
 - Schools
 - Commercial
 - Residential homes
- Vehicles
 - Municipal
 - Schools
 - Commercial
 - Private

Task 2. Develop energy efficiency outreach materials. Energy efficiency improvements have been very successful over the past few years. As a result “easy” savings no longer exist. Nevertheless, since energy efficiency continues to play an important role in reducing customer demand, the Committee will continue to look forward and analyze technologies, energy efficiency programs and the marketplace for ways to mine energy savings from new technologies for each of the users identified in Task 1. As a part of this task, the Committee will maintain its liaison with the Cape Light Compact (CLC) and the Cape and Vineyard Cooperative (CVEC) to obtain outreach materials that will be useful in providing businesses and consumers with compelling new energy efficiency options, including products that perform at higher efficiency and with improved performance, new ways to design homes and buildings, and new approaches to improve the energy efficiency of the vast stock of existing buildings. We will ensure that every Yarmouth business and resident is aware of the available free energy audits.

With regard to improving vehicle fuel efficiency, the Committee will develop a database of existing vehicle-efficiency performance standards and how those standards compare with other available technologies to identify opportunities for improvement. This database will be made available to all vehicle owners, both municipal and private, for the purpose of encouraging the replacement of poor fuel-efficient vehicles.

Task 3. Develop energy conservation outreach materials. Whereas, energy efficiency is using technology that requires less energy to perform the same function (e.g., replacing an incandescent light bulb with an LED light bulb), energy conservation is any behavior that results in the use of less energy (e.g., turning the lights off when leaving the room). This task will investigate conservation programs that have been successful in reducing energy use for both buildings and transportation vehicles and compile a list of the most promising behavioral modifications. The Committee will then prepare outreach materials that can be used to promote town-wide conservation of energy by educating and motivating employees (both government and private) and residents on the benefits of implementing these behavioral modifications.

Task 4. Develop renewable energy outreach materials. Recent improvements in renewable energy technology, state and federal incentives for renewable energy generation, and growing public awareness of the economic and environmental benefits of renewable energy have combined to make the development of renewable energy generation much more viable than in recent decades. While the opportunities and benefits associated with renewable power are clear, significant challenges still remain to unlocking its full potential. For one, the cost of renewable power technologies continues to be a barrier for low-income residents, though wind and solar power costs have been dramatically reduced in recent years. Financing renewable power systems can also be difficult because of their comparative novelty, relative lack of regulatory clarity, and in some cases higher upfront capital costs compared to fossil fuel technologies.

Once a technology achieves initial market adoption, technologies that are cost effective may still face challenges to high volume adoption due to “Soft” or “Perceived Costs”, such as permitting, financing, installation, regulation, training, or certification. The

Committee will focus on developing outreach materials that can be used to help overcome these market barriers by providing key information to consumers, regulators, financiers and other participants. In addition, the Committee will continue to investigate whether the installation of a solar PV farm on the Links golf course is feasible.

Task 5. Develop electric and hybrid-electric vehicles outreach materials. To help Yarmouth do its part of the MasseEvolves Program (<https://www.massevolves.org>), the Committee will develop outreach materials that can be used to help promote the adoption of electric and hybrid-electric vehicles that meet consumer requirements for performance, convenience, and safety. Electric cars require no gas, release no tailpipe emissions, and cost less money to drive. However, a significant obstacle for electric vehicle acceptance has been that consumers lack awareness of EVs and don't yet see them as a viable option. During this task, the Committee will contact Drive Green (https://www.greenenergyconsumers.org/drivegreen?_ga=2.107039490.120118308.1593200687-1570440398.1591202534) to assemble and prepare detailed fact sheets for a public outreach campaign addressing charging stations, purchase and operating costs for both EVs and hybrids, financial incentives, and the additional benefits of integrating these vehicles with personal solar PV installations.

Task 6. Engage with Yarmouth community. Potential end users can be reluctant to adopt new technologies—no matter how economical or useful—unless they are convinced that the benefits and reduced risks are real, based on unbiased, trusted, and relevant information. To help accelerate the adoption of sustainable energy improvements, the Committee will advise the Board of Selectmen, as requested, on energy efficiency options and ways to reach the State's goals for Renewable Energy. In addition, the Committee will implement an outreach program, using the information prepared in Tasks 2 – 5, to educate and inspire the community on the benefits of energy conservation, energy efficiency, renewable energy and sustainable transportation. Motivating and inspiring as broad-based a segment of community members as possible will be essential, suggesting the use of common outreach efforts such as the following:

- Support for the Y-Climate Action Network that will develop and utilize a comprehensive email list and work with the Town Administrator to develop bylaws and/or town resolutions.
- Enhancement of the Energy Committee's webpage, with links to various resources that would be helpful to local residents.
- Press releases in local newspapers.
- Energy Fair to highlight energy sustainability opportunities.

The Committee will also build on its existing weekly, face-to-face, utility bill information sessions at the Yarmouth Senior Center by adding the following topics:

- Energy efficiency and conservation
- Renewable energy including solar photovoltaic and Air Source Heat Pumps (ASHP)

- Electric and hybrid-electric vehicles
- Financing options and incentives.

Task applicability. The following table contains a cross-reference of the preceding tasks with the “Action Plans” pertaining to the Board of Selectmen’s current “Support Sustainability” goal and the three “Aspiration Statements” proposed in the Committee’s “Five-Year Vision”.

Table 1. Cross Reference of Energy Committee Tasks with the Board of Selectmen’s Goals and the Energy Committee’s “Five-Year Vision” Aspiration Statements

Board of Selectmen Goal			FY 2021 AOP Tasks					
Goal	Focus Area	Action Plan	1	2	3	4	5	6
Support Sustainability	Solar Installations	Links course, Town parking lots				✓		
	Energy Conservation	Green Communities	✓	✓	✓	✓	✓	✓
		Evaluation of Solarize Yarmouth Residential Program Utility bill		✓				✓
		Behavior-based Energy Reduction Program		✓	✓	✓	✓	✓
		Electric vehicle requisition					✓	
		Energy monitoring applications	✓	✓	✓			
Energy Committee Aspiration Statements			1	2	3	4	5	6
1: Reduce Energy Consumption within Yarmouth by 20% by 2025			✓	✓	✓			✓
2: Increase the Use of Renewable Energy within Yarmouth by 20% by 2025						✓		✓
3: Achieve 1,000 Zero Emission Vehicles in Yarmouth by 2025							✓	✓

Table 2. FY 2021 Energy Committee Member Responsibilities

Task	Specific Actions	Responsibility
Task 1. Assemble energy usage baseline.	Building energy usage	Mike Duffy
	Vehicle energy usage	Mike Duffy
	Current # of EVs in Yarmouth	Barry Margolin
Task 2. Develop energy efficiency outreach materials.	Cape Light Compact interaction (including energy audits)	Joyce Flynn
	Cape and Vineyard Cooperative interaction	Steve Gavin
	Database of existing vehicle-efficiency performance standards	Mike Duffy
Task 3. Develop energy conservation outreach materials.	Cape Light Compact interaction	Joyce Flynn
	Cape and Vineyard Cooperative (CVEC)	Steve Gavin
	Conserving vehicle fuel	Barry Margolin
Task 4. Develop renewable energy outreach materials.	Cost of renewable energy	Mike Duffy
	Financing purchase of renewable energy systems	Barry Margolin
	Addressing "Soft" costs	Joyce Flynn
	Links golf course	Steve Gavin
Task 5. Develop electric and hybrid-electric vehicles outreach materials.	Fact sheets for EVs	Mike Duffy
	Fact sheets for charging stations	Steve Gavin
	Integration with PV systems	Barry Margolin
Task 6. Engage with Yarmouth community.	Advise Select Board	Joyce Flynn
	Senior Center information sessions	Bob Palmeri
	Energy Committee webpage	Sandra Cashen
	Support Y-CAN	TBD
	Community outreach	All EC Members