Town Energy Plan Template

# Background

* One paragraph overview Roadmap development/baseline (who, what, how, when)

*Write out background, how developed energy data, how set goals, about Energy Working Group and how towns adopted 2040 goal*

* List of long-term goals that were developed through process
  1. Reduce fossil fuel use on the Island, from a 2018 baseline (50% by 2030 and 100% by 2040) - Town Article approved
  2. (Increase the fraction of our electricity use that is renewable (to 50% by 2030 and 100% by 2040)
  3. Ensure that our energy supply is both adequate and resilient in response to the impacts of climate change

# 10-year Objectives

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| **Long-term Goal 1: Reduce fossil fuel use on the Island, from a 2018 baseline (50% by 2030 and 100% by 2040)** | | |
| **10-year SMART Objective** | **Scale** | **Mitigation/**  **Adaptation** |
| **Objective 1.1 - 50% of town buildings are better insulated and transitioned to all electric** | **Municipal** | **Mitigation** |
| **Objective 1.2 - At least 50% town vehicles and equipment (cars, trucks, landscape equipment, etc) are electric** | **Municipal** | **Mitigation** |
| **Objective 1.3 - Island-wide EV charging infrastructure is in place—WT EV charging infrastructure is in place, in coordination with island-wide EV charging?** | **Regional** | **Mitigation** |
| **Objective 1.4 – At least 50% of homes have transitioned to efficient electric heating, cooling, (delete cooling?) and hot water (50% of WT homes are using heat pumps for heating and hot water)** | **Residential** | **Mitigation** |
| **Objective 1.5 – At least 50% of vehicles are electric**  **50% of newly registered WT vehicles are EVs?** | **Residential** | **Mitigation** |
| **Objective 1.6 – At least 50% of landscaping equipment is electric (landscapers who live in WT?)** | **Residential** | **Mitigation** |
| **Long-term Goal 2: (Increase the fraction of our electricity use that is renewable (to 50% by 2030 and 100% by 2040)** | | |
| **Objective 2.1- Community solar array sites located** |  |  |
| **Objective 2.2- \_\_\_\_% buildings have solar arrays** |  |  |
| **Objective 2.3- \_\_\_\_% of people buying power from renewable sources** |  |  |
| **Long-term Goal 3: Ensure that our energy supply is both adequate and resilient in response to the impacts of climate change** | | |
| **Objective 3.1 - Town buildings are resilient in the face of climate change.** | **Municipal** | **Adaptation** |
| **Objective 3.2 - All residents have access to power and water in a prolonged power failure** | **Residential** | **Adaptation** |
| **Objective 3.3 - Town is prepared to offer needed services during emergencies** | **Residential** | **Adaptation** |

# Implementation Plan

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| **Objective 1.1 - 50% of town buildings are better insulated and transitioned to all electric** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 1.1.1  A prioritized plan is developed to determine in what order the Town buildings will be transitioned |  |  |  |  |  |  |
| Action 1.1.2  Engineering studies are conducted to determine the required scope of work for each building |  |  |  |  |  |  |
| Action 1.1.3  A long term capital improvements plan is developed to finance the work needed to make the transition to 100% electric. Grant opportunities are researched |  |  |  |  |  |  |
| Action 1.1.4  \_\_\_\_ no of buildings are done in this time period |  |  |  |  |  |  |

\*key for funding estimates

$ = less than 1K

$$ = greater than 1K, less than 10K

$$$ = greater than 10K, less than 50K

$$$$ = greater than 50K

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| **Objective 1.2 - At least 50% town vehicles and equipment (cars, trucks, landscape equipment, etc) are electric** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 1.2.1  An inventory of town vehicles is done and a prioritized plan is in place for transitioning them to all electric as technology allows |  |  |  |  |  |  |
| Action 1.2.2  An inventory of town equipment is done and a prioritized plan is in place for transitioning them to all electric as technology allows |  |  |  |  |  |  |
| Action 1.2.3  A long term financial plan is developed to allocate funds for the transition of vehicles and equipment |  |  |  |  |  |  |
| Action 1.2.4  \_\_\_ no of vehicles are transitioned in this time period |  |  |  |  |  |  |
| Action 1.2.5  \_\_\_ no of equipment is transitioned in this time period |  |  |  |  |  |  |

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| **Objective 1.3 - Island-wide EV charging infrastructure is implemented** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 1.3.1  An island-wide plan is developed as to where charging stations are needed and prioritizes when they should be installed, including mapping where they are already in place |  |  |  |  |  |  |
| Action 1.3.2  Town makes their plan to implement their portion of the charging stations including determining funding sources |  |  |  |  |  |  |
| Action 1.3.3  Town funds and grants are used to finance the installation of the charging stations |  |  |  |  |  |  |
| Action 1.3.4  \_\_\_\_ no of charging stations are in place in this time period |  |  |  |  |  |  |

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| **Objective 1.4 - At least 50% of homes have transitioned to efficient electric heating, cooling, and hot water** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 1.4.1  **Town Dissemination of information:**  Town website, Building Department have information explaining and promoting air source heat pump technology for heat, cool, hot water |  |  |  |  |  |  |
| Action 1.4.2  Handouts are prepared and are in place for island-wide dissemination of information about heat pump technology |  |  |  |  |  |  |
| Action 1.4.3  Advisory service is in place to advise homeowners about steps, technology, costs, rebates to make the transition  (Vineyard Power?) |  |  |  |  |  |  |
| Action 1.4.4  Home rule petition requiring use of all-electric equipment in new construction and major renovations is prepared and voted on at Town Meeting |  |  |  |  |  |  |
| Action 1.4.5  Assessors and Building Dept have system in place to track the installation of heat pumps for heat and hot water (both new and replacements) |  |  |  |  |  |  |

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| **Objective 1.5 – At least 50% of vehicles are electric** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 1.5.1  **Town dissemination of information:**  Information is posted and readily accessible on town website about electric vehicles and where to learn more about costs, rebates  Excise tax mailings used to provide information about electric vehicles |  |  |  |  |  |  |
| Action 1.5.2  Handouts are prepared and are in place for island-wide dissemination of information about electric vehicle technology |  |  |  |  |  |  |
| Action 1.5.3  Annual dissemination of information via an electric vehicle event  Regional..? |  |  |  |  |  |  |
| Action 1.5.4  System is in place for Town Treasurer to track number of electric vehicles registered in Town (new or total?) |  |  |  |  |  |  |

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| **Objective 1.6 - 50% of landscaping equipment is electric** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 1.6.1  Town website, Building Department have information explaining and promoting electric landscaping equipment |  |  |  |  |  |  |
| Action 1.6.2  Town (island-wide?) bylaw is developed and voted on at Town Meeting requiring transition by \_\_\_\_\_ date |  |  |  |  |  |  |
| Action 1.6.3  Way to track how much equipment there is and how much has been transitioned |  |  |  |  |  |  |
| Action 1.6.4 |  |  |  |  |  |  |

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| **Objective 2.1- Community solar array sites located** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 2.1.1  A prioritized plan is developed to determine where community solar arrays could be located |  |  |  |  |  |  |
| Action 2.1.2 |  |  |  |  |  |  |
| Action 2.1.3 |  |  |  |  |  |  |
| Action 2.1.4 |  |  |  |  |  |  |

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| **Objective 2.2- \_\_\_\_% buildings have solar arrays** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 2.2.1  An inventory is done to determine how many solar arrays there are in the town. (is this possible?) |  |  |  |  |  |  |
| Action 2.2.2  Building Dept sets up a tracking system to keep track of installation of new solar arrays and if they have battery storage systems |  |  |  |  |  |  |
| Action 2.2.3  Advisory service is in place to advise homeowners about steps, technology, costs, rebates to install solar  (Vineyard Power?) |  |  |  |  |  |  |
| Action 2.2.4 |  |  |  |  |  |  |

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| **Objective 2.3- \_\_\_\_% of people buying power from renewable sources** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 2.3.1  An inventory is done to know where people are getting their power?  (available via Cape Light Compact?) |  |  |  |  |  |  |
| Action 2.3.2  Tracking system is in place to know how many electrical accounts are getting power from renewable sources |  |  |  |  |  |  |
| Action 2.3.3  Handout prepared and information on Town website about how to get power from renewable sources |  |  |  |  |  |  |
| Action 2.3.4  Advisory service is in place to advise homeowners about where can buy power from renewable sources |  |  |  |  |  |  |

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| **Objective 3.1 - Town buildings are resilient in the face of climate change.** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 3.1.1  Emergency generators are tested and are backing up correct critical loads at each building and are right-sized  Dealing with right-sized could be a challenge… |  |  |  |  |  |  |
| Action 3.1.2  A prioritized plan is developed to determine the order in which the Town buildings will receive solar and back up battery systems and where to have microgrids |  |  |  |  |  |  |
| Action 3.1.3  Engineering studies are conducted to determine the required scope of work for each building |  |  |  |  |  |  |
| Action 3.1.4  A long-term financing plan is in place to add solar and batteries at each town building (with possibility of grant or other support) |  |  |  |  |  |  |
| Action 3.1.5  \_\_\_ no of buildings are made resilient in this time period |  |  |  |  |  |  |

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| **Objective 3.2 - All residents have access to power and water in a prolonged power failure** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 3.2.1  A plan is developed as to where to provide emergency water and power across the town—both at Town sites and in specific neighborhoods |  |  |  |  |  |  |
| Action 3.2.2  Town public water access sites are in place with signage and information on town website about their locations |  |  |  |  |  |  |
| Action 3.2.3  Locations are researched for possible neighborhood power and water hubs  (existing generators) |  |  |  |  |  |  |
| Action 3.2.4  Locations are researched for possible community solar arrays that could also provide emergency power and water |  |  |  |  |  |  |
| Action 3.2.5  Map is created and is available on paper and on town website of available sites |  |  |  |  |  |  |

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| **Objective 3.3 - Town is prepared to offer needed services during emergencies** | | | | | | |
| **Objective/ Actions** | **Lead & Support** | **Estimated Funding needed\*** | **Date of Completion** | **Indicator of Progress/ Success** | **Who will Track?** | **When do you Track?** |
| Action 3.3.1  CERT Training is offered in Town. Goal of being sure there are CERT volunteers in each area of the town. |  |  |  |  |  |  |
| Action 3.3.2  Town is broken up into areas with a system in place that coordinates efforts of CERT volunteers in each area of the town |  |  |  |  |  |  |
| Action 3.3.3  Coordination with Council on Aging and Police Dept for emergencies is in place |  |  |  |  |  |  |
| Action 3.3.4  Shelter options are in place for those who need more assistance during prolonged power failures/emergencies |  |  |  |  |  |  |