

2014

# Town of Fairfield Clean Energy Action Plan



Town of Fairfield  
Fairfield Clean Energy Task Force  
UIL Holdings Corporation  
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## **I. EXECUTIVE SUMMARY**

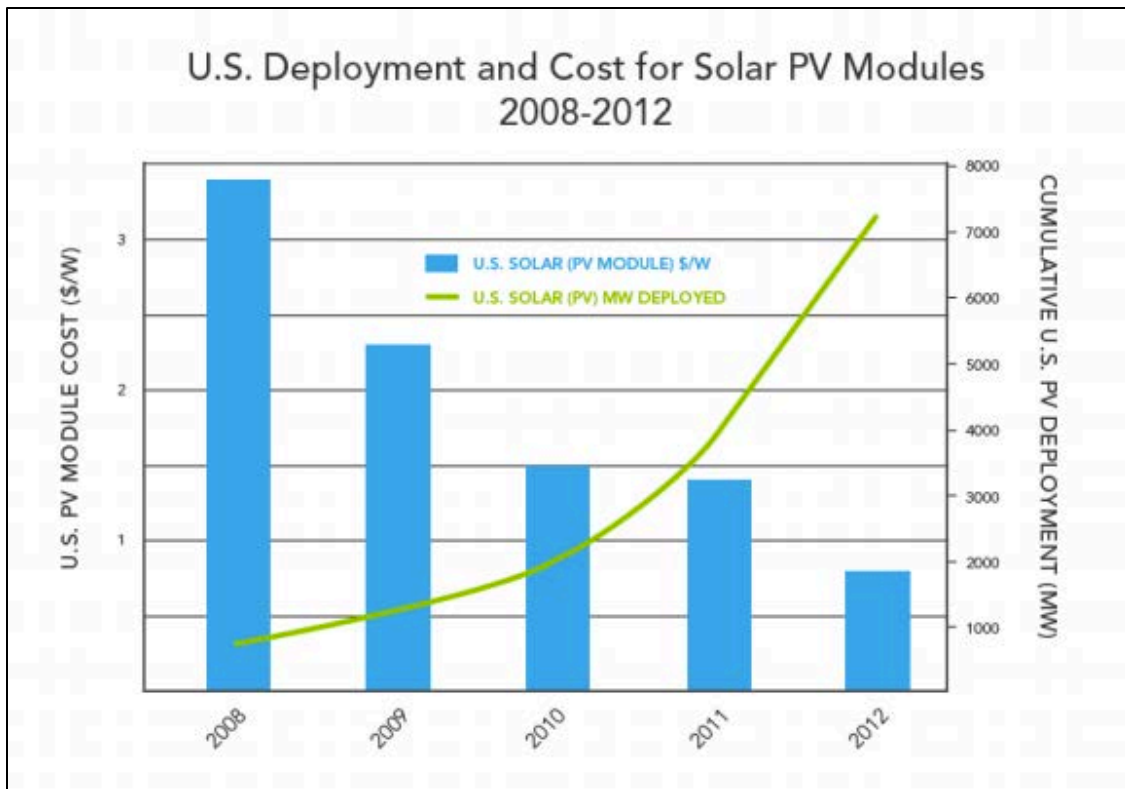
Fairfield has a history of efficiency, both financially and with its energy usage and the two are inherently linked. Fairfield is one of thirty-five (35) Connecticut municipalities participating in the Clean Energy Communities Program. As a voluntary state-wide program, the Clean Energy Communities Program encourages municipalities to improve efficiency and to choose clean, renewable electricity sources. Towns that achieve their goals can be rewarded with grants that can be used to further efficiency and clean energy projects. In December 2013, the Town of Fairfield was awarded a \$15,000 Bright Idea Grant for its progress toward these goals.

Under the Clean Energy Communities Program, Fairfield's leadership has committed to the following goals by 2018:

- Reducing energy use by Town building by 20% through conservation and efficiency improvements, as compared to a baseline year
- Using 20% renewable electricity in Town buildings.
- Promoting energy efficiency and clean, renewable technologies in the Fairfield community

In addition to monetary rewards from the Clean Energy Communities Program, through these efficiency projects, the Town will realize even greater financial gains through energy savings. In the fall of 2013, the Representative Town Meeting (RTM) and other town bodies approved six new solar photovoltaic (PV) electricity projects to be installed on Town building rooftops and parking areas. The projects were manifested as power purchase agreements, which provide the Town electricity at far below regular electricity rates with no up-front capital requirements and minimal risk to the Town. Collectively, these projects will save the Town approximately \$75,000 per year for the next 20-years.

While the economic benefits of efficiency and clean energy can stand on their own merits, the benefits to the Town go beyond financial. Lighting and climate control projects undertaken in our schools provide a better learning environment for our Town's children. On a macro scale, energy efficiency and clean energy adoption improve air quality and improve the health of our community, which should reduce society's healthcare burdens. And, taking the long view, efficiency and use of non-carbon based sources of energy such as solar can help curtail the pollution that drives the global climate change and the related storms and storm damage. While Superstorm Sandy in 2013 and Hurricane Irene had far more devastating effects in the New York City vicinity, Fairfield was also hard hit and feels the need for action.



**Figure 1.** In the US, solar panel prices have dropped by more than 80% in the past 5 years. Installed solar electricity is cheaper than conventional power sources in parts of the southwestern US, and is projected to be cheaper nationwide by 2020.

At the national and worldwide levels, the news media often presents a very bleak and pessimistic view about our energy situation and global climate change. However, there is much to be optimistic about, in particular the technological advances and associated economic benefits of clean renewable energy. A few examples which portray a very bright future for clean energy in the US and abroad include the following:

- **Overseas:** Denmark gets more than 25% of its electricity from wind power and plans to be at 50% by 2020. Portugal is already over 50%. On a sunny day, Germany makes over 20% of its electricity from solar.
- **US:** Iowa, residents now get one fourth of their electricity from wind. California is on track to far exceed their goal of 1/3 renewable electricity by 2020. In the southwest US, the cost of solar is cheaper than conventional power, and the US price has dropped dramatically in the past 5 years.
- **Connecticut:** We are home to America's first and arguably most effective "green bank", Clean Energy Finance and Investment Authority (CEFIA). In FY 2013, CEFIA attracted \$180 million of private investment in clean energy in Connecticut that deployed nearly 30 MW of new clean renewable energy. In Bridgeport, the largest fuel cell project in the world was installed. This economic success for the clean energy economy in Connecticut has dramatic social and environmental impacts – more jobs and less emissions.

- **Fairfield, CT:** We continue to be a CT leader in deploying clean energy projects. We have over a dozen public solar PV projects installed or planned, totaling about 3MW. Over 100 residents have gone solar at their homes. Our Town's adoption of C-PACE in 2013 has set the stage for our business community to reap the benefits of property assessed financing for clean energy and efficiency projects.

This Clean Energy Action Plan proposes policy, actions for the 5-year period of 2014-2018, and framework for regional initiatives. The Plan covers areas that include buildings, transportation, and the community. Most actions leverage volunteer efforts, led by the Town's Clean Energy Task Force, or state programs, at no cost to the Town. Where an action has a cost, the proposed action is proposed to be paid for by re-investing savings built into efficiency gains or a reduction in energy costs, so there is no net cost annually.

Perhaps the single most important aspect of the energy Plan is to further a culture of conservation with all stakeholders in the Town. Finally, the action plan has been focused down from a very broad range of ideas so that it is realistic, measurable, and achievable.

**5 Year Budget Plan.** Attachment 3: Cost Estimate for Budgeting Purposes contains a tabular summary of all of the actions identified in the Plan. For each action, a preferred method of funding is identified along with the lead entity for the action item. Where applicable, an annual cost and annual cost savings are estimated for FY15-FY19. Based on this analysis, an annual net saving of \$40,000 - \$255,000 per year is estimated, with a total savings of \$590,000 over the 5-year budgeting period.

## II. VISION STATEMENT & GOALS

There comes a time in the affairs of society when great forces move communities to action. Now is such a time. Our notion of continuous growth in consumption is being severely challenged. While our community has fared better than many, we are hardly immune from the consequences – financial and environmental – of unchecked energy consumption that ripple through our community, our nation and our world.

In this 21st century, we are awakening to the recognition that the continuous growth of the world's use of natural resources cannot be sustained. Our economic well-being is threatened by the vagaries of world oil prices. Our nation's foreign policy options are narrowed by reliance on resources in unstable, undemocratic or hostile nations. Our continued reliance on fossil fuels is accelerating the decline of our environment, including the reality of climate change which is no longer an exercise in academic debate. Superstorm Sandy significantly impacted the NYC area's coastline in 2012 and, along with several other storms in 2011 and 2012, public awareness of the effects of climate change is on the rise.



**Figure 2** A proposed solar array at the Fairfield train station will make nearly 90% of Tomlinson Middle School's power and save the Town \$3M

At the national level, the issue of energy use planning is neither coordinated nor comprehensive. Our Fairfield community relies almost exclusively on energy sources from outside of our community. Each payment for gasoline, oil, electricity and natural gas sends dollars out of our local economy. If we leave the responsibility of a continuous and affordable supply of energy for the coming years to others outside the town, we do so at our peril.

Perhaps the single most important aspect of the energy plan is to further a culture of conservation with all stakeholders in the town. While new technologies are important, how people use buildings, lighting and vehicles are equally critical. Efficient usage of energy always results in tremendous cost savings. This plan starts with the belief that to be sustainable, everyone must own sustainability. Conservation is not something to be imposed, but a shared sense of purpose and responsibility where town leadership, employees, students, teachers and residents challenge each other to achieve common goals, encourage creativity, and hold one another accountable.

Our research of both the Town's efforts and other municipalities' reveals that a culture of conservation is best accomplished by:

- **Educating**, and soliciting ideas from, all stakeholders on the possibilities of conservation. Examples include debunking myths such as the notion that lights shouldn't be turned off once turned on to save money; fully powering down equipment and using and shutting off power strips to reduce phantom loads; removing all unnecessary equipment and appliances such as "dorm" refrigerators, and including energy efficiency curricula for schools.
- **Measuring** both cost and energy savings from conservation efforts. Savings should be made permanent through ongoing efforts and communicated to all stakeholders to

increase awareness and ownership of accomplishments. Communication of such measurements should be expressed both in cost savings and the relevant unit of energy (e.g., kilowatt-hours) so that price volatility does not obscure the result of the efforts.

- **Rewarding Success** The implementation of energy conservation efforts should continue to be non-judgmental. As stakeholders make accomplishments, they should be rewarded and acknowledged.

With the right energy choices we can achieve these goals while reducing costs, lessening our exposure to price volatility, increasing local installations of clean, renewable energy, and reducing pollution. It is with this knowledge that they have invited our citizens to join them in fashioning a plan informed by purposeful deliberation that maps a way forward to a more sustainable future. It is in this spirit that we offer this energy plan for our community. By design, this is a work in progress, to be shaped and updated continuously in response to changing circumstances. It is our hope that this document will serve as a roadmap for the implementation and delivery of town services over time in a sustainable manner. And further, it is our hope that this will serve to inspire our fellow citizens, businesses and institutions to join in partnership to fashion a sustainable future and serve as a positive example for others.

### **III. SCOPE OF CLEAN ENERGY PLAN**

On June 29, 2004, the Fairfield Representative Town Meeting passed a Sense of the Body Resolution in support of the goal of the 20% by 2010 Campaign which called for the Board of Selectmen to create the Clean Energy Task Force (CETF). The Fairfield Clean Energy Task Force was to advise the Board on energy related matters and promote clean energy to town residents. The Fairfield Clean Energy Task Force is a volunteer body with representation from the public, academia, industry, and Town facilities staff. On behalf of the First Selectman's office, this plan has been developed by the CETF in cooperation with the Town's Department of Public Works, Department of Public Schools, and the Town's Energy Engineer from The United Illuminating Company.

Fairfield has been a Clean Energy Community since 2004. In 2011, the First Selectman of Fairfield signed the Clean Energy Communities Municipal Pledge for the new version of the program, which is administered jointly by the Clean Energy Finance & Investment Authority (CEFIA) and the Connecticut Energy Efficiency Fund through its utility partners, United Illuminating and Connecticut Light & Power Company (Attachment 1: Clean Energy Communities Pledge). The pledge has the following objectives for the Town:

- Reduce municipal building energy consumption by 20% by 2018.
- Support 20% of its municipal building electricity from clean, renewable energy sources by 2018.
- Promote energy efficiency and clean, renewable technologies in its community.

While this plan focuses on municipal building energy usage and sources, it also includes chapters on transportation, community, and other sustainable actions. While at face value, the 20% goals may not seem particularly challenging or lofty. However, Fairfield has already implemented so many efficiency and conservation measures, that much of the low hanging fruit has been picked. Between 1996 and 2013, Fairfield has lowered its electricity consumption in Town buildings by 32% and nearly eliminated the use of heating oil. These efforts have resulted in significant saving to the Town – in excess of \$1M. Therefore, achieving a 20% reduction in efficiency compare to the more recent baseline of 2011 represents a significant challenge.

During the development of this plan, the authors waded through dozens more ideas, policy statements, and actions. However, what is contained in the document is the succinct list of actions that is measurable and achievable in the five year period FY15-FY19.

## **IV. POLICY STATEMENT AND ACTIONS**

### **i. Energy Efficiency in Buildings and Facilities**

This section recommends the establishment of a comprehensive process to implement all energy efficiency measures that are cost-effective across the Town's buildings, hold all new buildings and major building renovations to green standards, upgrade non-building lighting over time and increase the use of clean, renewable energy sources. It also prioritizes furthering a "culture of conservation" within students, Town employees and town building users to use the buildings in an energy conscious manner.

***Policy Statement:** Collect building energy use to create a baseline to enable the development of a comprehensive building upgrade strategy and compare the efficiency of our buildings to each other and others in the state and region. Without a baseline it is impossible to measure progress.*

#### **a. Energy Assessment: Create a Baseline and Track Energy Usage**

##### ***Current Status and Progress to Date***

Fairfield has completed an energy benchmarking evaluation of Town buildings, which includes electrical, gas, and fuel usage. This evaluation was performed using US EPA ENERGY STAR Portfolio Manager software. The benchmarking report was completed by University of New Haven interns, in cooperation with UI, the Town, and the CETF.

The Benchmarking Report was completed with support from United Illuminating and the University of New Haven. The Benchmarking Report contains energy data from FY2009 to FY2012. Building efficiency scores were developed for each building, with a score of 70 or higher being desirable, qualifying for Energy Star status. Key findings of the Benchmarking Report are as follows:



- Total of 32 buildings were benchmarked
  - 16 Town buildings
  - 16 BOE buildings
- Overall percent reductions and selecting baseline year

<b>Fiscal Year</b>	<b>Total Energy Usage (kBtu)</b>	<b>Benchmark Year % Reduction to June 2012</b>	<b>20% Target Energy Usage kBtu</b>
July 2009 - June 2010	178,448,86	1.65	142,759,089
July 2010 - June 2011	191,316,923	8.2	153,053,538
July 2011 - June 2012	175,502,50		

**Table 1** Percent reductions in Town energy use from benchmarking study completed 2013

- Compares all buildings with same building type nationwide from National Median Source energy per square foot (percent difference). Multiple buildings reported higher than the median nationwide
- Several buildings have improved ENERGY STAR ratings since 2009-2010 (7 schools)
- Top 5 users of energy: (1) Fairfield Ward HS, (2) Fairfield Ludlow HS, (3) Fairfield Woods MS, (4) Roger Ludlow MS and (5) Water Pollution Control Facility.

### **Actions**

- (1) **Maintain the ENERGY STAR Portfolio Manager tool by entering new data on an annual basis.** Track performance toward meeting the 2018 goals.
- (2) **Apply for ENERGY STAR certification for Town buildings that have achieved the required efficiency score and erect ENERGY STAR placards.**

### **b. Aggressively Pursue Energy Efficiency Measures for Town Buildings**

***Policy Statement:** Use the Benchmarking Report as a basis to set priorities for future efficiency projects. Maximize the use of State programs as described in [www.energizect.com](http://www.energizect.com), including CPACE and Efficiency Performance Contracting.*

### **Current Status and Progress to Date**

Fairfield has undertaken a number of efficiency and clean energy upgrades for town buildings on a project by project basis but does not have an overall plan for town facilities and equipment. A detailed list of projects completed to date is included at Attachment 2. Projects completed to date include:

- Energy audits of most Town buildings (note, these are audits were performed in the mid-90s and are due to be updated);
- Lighting retrofits;
- HVAC upgrades;
- Retro-commissioning projects.

### **Actions**

- (1) **For new building construction (or renovations in excess of \$2 million), encourage building committees to strive to meet LEED Gold green building standards if economically feasible:** The Town should commission buildings to ensure that all efficiency systems work properly and achieve the promised efficiencies and savings. LEED Silver is the minimum required by state law, and Fairfield as a community can and should go beyond the legal minimum to achieve significantly more environmentally sound buildings with significantly lower energy use. Building to LEED Gold standards should cost the Town less on an annual basis and this should be demonstrated through life-cycle cost analysis. Additional funding from United Illuminating (UI) is available for projects that exceed CT High Performance Standards by 10%.
- (2) **Perform more rigorous building energy audits for all Town buildings:** The audits should include an assessment for heating, cooling and electricity, and must assess the payback period for building upgrades. The purpose of creating an inventory is to enable prioritization of building upgrades and enable the town to identify the cost-effectiveness of different approaches.
- (3) **Implement building-by-building upgrade plans by December 1, 2018** based on the results of the energy audits in (2). Between now and 2018 the town should implement all energy efficiency measures that are cost-effective and save the Town money over the lifetime of the investment. The scope of efficiency measures should include heating, cooling, electricity and water. In addition to prioritizing measures which maximize savings to the Town, building upgrades should be prioritized that offer important co-benefits such as improving indoor air quality, protecting the health of building occupants, and improving productivity.

Specific efficiency projects that have been identified by the Town are contained in Attachment 2: Completed and Planned Project Inventories.

### **c. Non-Building Lighting (street lights and traffic signals)**

*Policy Statement: Increase the energy efficiency of town lighting.*

#### **Current Status and Progress to Date**

The Town has replaced a significant number of traffic signals to efficient solid-state LEDs (light emitting diodes). There are several new LED street lights in use in Town center.

## Actions

- (1) **Assess the status of exterior building, parking lot, and street lighting:** The Town should determine whether certain lights can be removed or powered down during certain hours without compromising safety.
- (2) **Phase out conventional lighting over time:** The Town should replace traditional lighting fixtures with alternatives that do not contain heavy metals and are more energy efficient, such as LEDs (light emitting diodes). The Town should work with UI for street lighting upgrades.



**Figure 3** Exterior LED lighting can significantly reduce Fairfield’s energy usage

## d. Culture of Conservation

***Policy Statement:** Develop culture of conservation by educating end-users on strategies to reduce energy consumption.*

### **Current Status and Progress to Date**

Fairfield has a strong culture of conservation. In 2010, a single stream recycling program was implemented. Recycling containers are located and used in all Town buildings. Green cleaning products are used in town buildings and public schools. The list goes on, but there is always more to be done.

## Actions

- (1) **Encourage the creation of a “green team” in each town-owned building:** Small teams of employees and users of each building will engage in a collaborative process where building users help recommend and implement measures to improve their buildings. Green teams will create and disseminate energy surveys for building users and raise awareness for energy related matters.
- (2) **Create department energy guidelines to eliminate wasteful energy consumption:** The guidelines should address wasteful energy activities including, but not limited to, the use of personal electric space heaters, inefficient coffee pots, and

leaving lights (interior and exterior) and computers left on when not in use. Phase out inefficient dorm-sized refrigerators in public buildings.

## ii. Clean Energy Generation

***Policy Statement:** Maximize use and application of Clean Energy Projects on buildings, parking areas, and underutilized land by leveraging federal and state incentives and power purchase agreements.*

### **Current Status and Progress to Date**

Fairfield has completed several clean energy projects and several more are in the planning & design stages (see Attachment 2: Completed and Planned Project Inventories). Solar PV systems have been installed at the WPCA Composting facility and Tomlinson, Fairfield Woods, and Fairfield Ludlowe Middle Schools. Several more projects are in various stages of planning and some examples of these planned projects include:

- Solar PV system at the former Town landfill
- Solar PV system at the Senior Center and Operation Hope
- Solar PV system at the Fairfield Train Station parking area
- Wind Turbine at Town DPW facilities
- Fuel cell at Fairfield Ludlowe High School
- Fairfield Recreation Center



**Figure 4** Fairfield has installed roof-top solar panels at several schools in Town, saving on energy costs

Fairfield currently does not have any centralized generation systems to provide heating, cooling and electricity for Town buildings. Local generation can be significantly more energy efficient and cost-effective than utilizing building air conditioners, furnaces and purchasing electricity from the grid.

### **Actions**

- (1) **Submit applications for Renewable Energy systems. Submit at least 3 applications per year between 2014 - 2018.** United Illuminating and Connecticut Light & Power Company administer the Zero Emission Renewable Energy Credit (ZREC) and Low Emission Renewable Energy Credit (LREC) program and will accept bids for the next 15 years. (Note: RECs are tradable, non-tangible energy commodities that

represent proof that 1 MWh of electricity was generated from a renewable energy resource.) Power Purchase Agreements, solar PV and other technologies can be very affordable and projects can be implemented with no capital outlay. Competition is high for state rebates, so projects may need to be submitted several times. In selecting locations for renewable energy projects, consider town buildings and parking areas, but also traffic corridors, overpasses, etc.

- (2) **Prioritize central Combined Heat and Power (CHP) systems when undertaking major renovations or new construction:** Cogeneration systems operate by utilizing a fuel like natural gas to produce electricity while using the excess waste heat to make steam and hot water. By harnessing the excess heat, cogeneration systems operate at approximately 80 percent efficiency as opposed to 30 percent efficiency typical in grid power. CHP may also be used as emergency backup power. We recommend the Town assess the potential for district heating and cooling to cut town energy costs if major renovations or expansions are undertaken for Town buildings. CEFIA has a program to support CHP projects and applications will be accepted on a rolling basis through February 2015. Pursuant to a new legislative change, a municipality that installs CHP at a “critical facility” may be able to utilize virtual net metering at up to 10 other municipal facilities.
- (3) **Evaluate installation of microgrids for critical Town Facilities.** A microgrid is a localized grid that is connected to the larger utility grid, but during times of power outages can be switched to “island mode”, allowing the connected facilities to be powered from the connected sources. This technology has many benefits for resiliency to storms that may cause outages, as well as compatibility with clean energy technologies. Backup power is then more reliant on clean energy, and possibly natural gas, which is more affordable than diesel backup generation.

### iii. Energy: Vehicles, Transportation, Outdoor Engines

This section recommends strategies regarding reducing the amount of fuel consumed by all aspects of the Town fleet. Energy use by the Town includes the fuel used to power vehicles and outdoor equipment. The Town owns hundreds of vehicles of various types, i.e. sedans, light duty trucks, heavy duty trucks. The Town also contracts with third parties for the use of other vehicles, i.e. school buses, garbage and recycling trucks.

#### a. Fuel Efficiency

***Policy Statement:** Increase fleet fuel efficiency to reduce costs, mitigate fuel price volatility, and reduce carbon emissions.*

#### **Current Status and Progress to Date**

Major accomplishments to date include:

- Installation of natural gas fuel station and purchase of natural gas vehicles
- Installation of diesel particulate filters for town fleet and school bus fleet

- Installation of electric charging stations at Sherman Green and Fairfield Train station
- Preparation of town-wide bike/walk plan and installation of bike lanes on Old Field Rd. and Mill Plain Rd.

### Actions

- (1) **Establish protocol to promote replacement of town vehicles, when scheduled/needed, with the highest fuel efficient vehicle in that class.**

### b. Cleaner Fuel Options

*Policy Statement: Reduce the carbon dioxide emissions from the town's fleet while increasing fuel efficiency and reducing fuel costs. Promote the use of clean fuels by Town residents.*

### Current Status and Progress to Date

In most cases, the Town uses commercially available fuels in all its vehicles. These fuel options currently do not include biodiesel blends, although the fuel does include ethanol blends for gasoline (which is a component of the gasoline sold at retail stations). The Town also uses natural gas for some vehicles.

### Actions

- (1) **Promote the use of alternative fuels for Town-owned and contracted vehicles:** While upfront vehicle costs are significant for CNG/LNG or propane vehicles, there can be significant fuel savings compared to diesel equipment. The Town should develop a plan to make CNG/LNG available for Town vehicles and should require Town and contracted vehicle to shift toward these fuels.
- (2) **Install Level 1 EV charging stations at Town buildings.** Up to five Level 1 charging stations should be installed at each Town building. Level 1 charging stations are simple 110V outlets that can be accessed by Town employees who want to use EVs when commuting from out of Town.



**Figure 5** Fairfield has four Level 2 electric vehicle charging stations in Town. Visible charging infrastructure is important to the mind-set of the potential EV consumer.

### c. Culture of conservation

***Policy Statement:** Create a culture of conservation to reduce pollution and increase fuel efficiency.*

#### **Current Status and Progress to Date**

Town vehicles serve two primary purposes: (1) for equipment in performing tasks (police patrol cars, fire trucks, dump trucks, etc.); and (2) for transportation. Also, the Town currently has anti-idling policies, but these policies are not consistent across town departments. In addition, some schools post DEP anti-idling signs.

#### **Actions**

- (1) **Adopt CT Department of Environmental Protection (DEP) 3 minute anti-idling requirement for all town departments** (excluding the police department which is requested to minimize unnecessary idling). Post anti-idling signs provided by CTDEEP at all Fairfield schools and other Town buildings.

## iv. Energy-Efficient Product Purchasing and Procurement

***Policy Statement:** Purchase products and institute consistent practices across all town departments that conserve energy and water, reduce greenhouse gas emissions and minimize the town's consumption of resources and costs over time and by doing so, be a leader in the state in creating a more energy efficient government and serve as a model to town residents. The Town will consider Life Cycle Costs as a primary element in cost-based decision-making.*

This section addresses how the Town can save energy costs by requiring that the purchase of energy-using products, such as appliances, meet energy efficiency criteria. Energy efficient products, which operate as effectively as conventional products, can reduce Town facility energy costs by approximately 5% to 10%. Relative to conventional products, ENERGY STAR-qualified products typically use 25% to 50% less energy and can offer consumer energy cost savings of as much as 90%.

In addition to reducing energy costs, energy-efficient product procurement can lower maintenance costs (as some energy-efficient products require less-frequent replacement), reduce greenhouse gas emissions, and enhance pollution prevention and resource conservation activities. Energy-efficient products can also reduce energy costs indirectly, since they do not generate as much unwanted heat as conventional products, thus lowering cooling energy loads. Because energy-efficient product procurement helps reduce energy loads, it can also increase the cost-effectiveness of other energy efficiency activities, such as facility upgrades.<sup>1</sup>

This section provides strategies that the town can implement to achieve these benefits.

## Policy Details

- (1) **Standardize purchases and procurement:** The town should encourage standardization in purchases to reduce staff training needed to operate the equipment and increase the likelihood that equipment will be used correctly. Building energy management systems should be prioritized for standardization.
- (2) **Purchase energy saving appliances:** Town departments should contact town facilities staff before purchasing any significant appliances using more than \$10 electricity per month for assistance choosing an efficient model.
- (3) **Give preference to electricity from clean, renewable sources:** We recommend that when the town purchases energy, it give preference to options that maximize the use of new clean, renewable energy sources. Fairfield has committed to purchase 25% renewable energy in 2014.
- (4) **Require that new and replacement equipment for lighting, heating, ventilation, refrigeration and air conditioning systems, water consuming fixtures and process equipment and all such components shall meet or exceed Federal Energy Management Program (FEMP) recommended levels, whenever practical:** For example, recommend that all future purchases achieve U.S. EPA Energy Star standards.
- (5) **Give preference to third party contractors who use California Air Resources Board or EPA certified diesel emissions controls on their on and off road equipment.**

## v. Energy Planning, Implementation and Financing

This section deals with the staff resource needs for the establishment and implementation of a comprehensive 10 year process to implement energy efficiency and clean energy measures described in Energy Efficiency in Buildings and Facilities. It also establishes a mechanism for prioritizing how these measures will be funded and what happens with energy savings from the implementation of this plan.

### a. Planning and Implementation

***Policy Statement:** Reduce town energy expenditures by centralizing and increasing staffing devoted to energy planning and implementation.*

### Current Status and Progress to Date

Fairfield Public Works and Public Schools staff charge of building energy use, facilities and maintenance staff, as well as energy procurement and planning. Since 2011, Fairfield has also had an energy manager provided by United Illuminating. In addition, as needs have arisen, Fairfield has contracted with energy brokers and consultants to assist with energy planning and assessment.



The current energy planning and assessment arrangements have resulted in a number of notable successes that have reduced the town operating budget, including (1) securing competitively priced contracts for electric and natural gas service; (2) increasing building efficiency, such as retrofitting lighting; and installation of a tri-generation system in the Police Station.

Furthermore, the benchmarking study completed in 2013 identifies the buildings that can be targeted for greatest potential improvements.

The energy situation we find ourselves in is also rapidly changing. State and federal global warming limits will require us to reduce the carbon dioxide impact of our energy choices. State and regional electricity policy is moving towards real-time pricing where bills are not only based on the total amount of electricity consumed, but also the time at which it was used. The energy manager can help Fairfield prepare and prosper in these times of change.

### **Actions**

- (1) **Dedicate resources for expert consultants:** Based on past experience, the Town has benefitted from the services of outside professionals. We recommend the Town continue to utilize these services, where appropriate, to facilitate further energy savings.
- (2) **Join ICLEI (International Council for Local Environmental Initiatives)** for training, technical assistance and other resources: For an annual membership fee of \$1200, ICLEI provides technical resources to assist towns in the formation and implementation of climate and energy plans as well as explicit guidance including how to design and develop a self-financing energy office.

### **b. Energy Financing**

***Policy Statement:** Implement energy efficiency upgrades and maximize the use of clean, renewable energy at the least cost to taxpayers by utilizing creative financing mechanisms.*

Fairfield currently has used a variety of techniques to finance energy efficiency improvement projects including power purchase agreements and bonding. In addition, over the year, Fairfield has done an outstanding job at applying for and receiving grants to support the implementation of such projects.

### **Policy Details**

Adopt the following funding hierarchy for energy efficiency and clean energy upgrades:

- (1) **On-Bill Financing:** We recommend that the Town maximize the use of on-bill financing to fund efficiency upgrades. With support from the CT Energy Efficiency Fund, and the United Illuminating Company, the Town can implement energy efficiency upgrades that save natural gas or electricity with no upfront capital cost. The Town pays for the cost (at no interest) of the upgrade from the savings generated on the Town's utility bills. After the utility provider recoups the cost, the Town retains the future savings from the reduced energy use. For projects with significant energy savings, there

is a potential to be cash positive during repayment of the loan. This mechanism, provides up to 50% of the project capital as grants and loans up to \$100,000.



**Figure 6** Energize CT is a clearing house for many of Connecticut's progressive programs and financing opportunities for businesses, towns and their residents. For more information, visit [www.energizect.com](http://www.energizect.com)

- (2) **Capital Improvement Plan (bonding):** We recommend that the Town prioritize energy efficiency and renewable energy upgrades in the capital projects budget, as these projects will reduce operating costs and volatility of future town budgets. The Town should create a separate capital project category for energy related investments in the Capital Improvement Plan and create an energy subgroup in each existing capital project category. Because Fairfield has a AAA bond rating, the Town can pay for major upgrades at a lower total cost to taxpayers. Accordingly, the Town can bond for measures that stabilize and reduce energy costs which can pay for debt service on the bonds and reduce pressure on the town budget. However, current uncertainty in the financial markets makes bonding more difficult and current budget problems may reduce the ability to pay for projects with longer-term savings.
- (3) **Town Operating Budget:** We recommend that the Town dedicate at least 50% of the energy surplus account and future conservation savings to a "clean energy trust" to support the implementation of the energy master plan and achieve additional energy savings to the town while also reducing the operating budget.

Fairfield can pay for energy improvements within its annual budget via the capital non-recurring expenses account. The town can exert downward pressure on the town budget by prioritizing energy efficiency projects. This mechanism is ideal for smaller projects since the total funds available likely are too limited for major improvements.

- (4) **Performance Contracting with third parties** (Energy Service Companies or ESCOs): The Town can consider hiring performance contractors to make efficiency upgrades only when funding through other sources is not available.

The Town can utilize outside companies to finance and implement efficiency upgrades and guarantee a fixed level of energy savings. Fairfield can pay for the upgrades via the savings generated on the town's utility bills, less a commission for the third party. Similar to on-bill financing, there are no up-front costs with this mechanism. However, unlike on-bill financing, the town must share a portion of its energy savings with the third party. Additionally, the town must be aware of potential disputes over actual versus promised energy savings.

## vi. Promoting Energy Efficiency and Renewable Technologies

The third objective of the Clean Energy Communities pledge is to promote energy efficiency and clean renewable technologies in the Fairfield community. This section focuses on opportunities for the Town and its volunteers to promote, encourage, and assist residents to make clean and efficient choices for energy and transportation. It also extends to ways that the Town can promote a more sustainable community for its residents.

***Policy Statement:** Promote energy efficient and clean and renewable technologies through by leading by example, communicating and promoting, and leveraging the Town's volunteers.*

### **Current Status and Progress to Date**

In 2004, the Town established the Clean Energy Task Force. The Task Force has taken on a number of successful initiatives, which have been supported by Town bodies. These include:

- Promotion of clean energy options for residents' electric supplier. To date, more than 800 Fairfield residents have signed on for CTCleanEnergyOptions<sup>SM</sup>.
- Promotion of Home Energy Solutions (HES) audits. To date more than about 2000 (about 10% of homes) Fairfield residents have completed HES audits.
- Promotion of residential solar photovoltaic systems. Through Solarize Fairfield and prior programs, more than 100 residents in have chosen to put solar panels on their homes.
- Assisting the Town with its efforts to meet the commitment of 20% of the electricity for municipal facilities coming from clean, renewable sources.
- Administering a Community Innovation Grant from CEFIA, including awarding microgrants for various projects.
- Developing numerous community workshops and events on various issues including renewable energy, energy efficiency and climate change.
- Through these programs, the Town has earned solar PV systems from CEFIA through the Clean Energy Communities program for each of the Town's middle schools.



**Figure 7** Representatives from Fairfield Clean Energy Task Force promoted the Solarize Fairfield project which helped over 70 residents go solar

## Actions

- (1) **Continue the promotion of energy efficiency and renewable energy measures** through dedicated outreach campaigns. Under the Clean Energy Communities program, a municipality can earn points for residential or commercial customers' participation in programs offered by the Connecticut Energy Efficiency Fund (EEF) and CEFIA. Through these efforts, local homeowners, businesses and institutions can save significant money on their energy bills and the Town can earn Bright Idea Grants for energy savings projects from EEF and renewable energy systems from CEFIA.
- (2) **Provide resources for residents evaluating the option of installing solar photovoltaic systems**, through an established program.
- (3) **Encourage the Town to take action steps to support clean energy.** Because Fairfield has opted into the Commercial Property Assessed Clean Energy (C-PACE) program and engaged in the Solarize Connecticut campaign, the Town may substitute certain percentages towards its goal of supporting 20% clean energy by 2018 under the Clean Energy Communities pledge. Other potential actions include adopting best practices for solar PV permitting, stretch building codes and Energy Savings Performance Contracts. The Town can also satisfy the pledge by installing renewable energy systems, purchasing Green-E certified Renewable Energy Credits or any combination of action steps and purchases.
- (4) **Install Level 2 EV charging stations in shopping areas throughout town.** The Town should coordinate with business owners to install two level 2 EV charging stations in shopping areas. Enabling EV adoption in Town will help resident make wise choices for efficient transportation, arguably one of their most important choices.
- (5) **Continue to coordinate and provide resources for projects to install bike lanes, paths, and racks.** The actions will encourage Town employees and residents to commute by bicycle, which is the most efficient form of transportation available.
- (6) **Promote a school energy conservation challenge**, similar to what was done in West Hartford, CT.



**Figure 8** Promotion of energy efficient transportation such as electric vehicles is a cornerstone of the outreach plan, as transportation accounts for 40% of energy usage.

## **V. BUDGETING**

Attachment 3: Cost Estimate for Budgeting Purposes contains a tabular summary of all of the actions identified in POLICY STATEMENT AND ACTIONS. For each action, a preferred method of funding is identified along with the lead entity for the action item. Where applicable, an annual cost and annual cost savings are estimated for FY15-FY19. Based on this analysis, an annual net saving of \$40,000 - \$255,000 per year is estimated, with a total savings of \$590,000 over the 5-year budgeting period.

## **VI. PROPOSED REGIONAL OR POLICY INITIATIVES**

For some actions, to scope of the issue requires action beyond what an individual municipality can perform. In these cases, Town initiatives are detailed out with the concept that these initiatives would also be suitable as regional initiatives.

### **i. Building Standards – Designing to LEED Gold Equivalent**

Current practices for many renovation and building projects design to the CT High Performance Building standard. These state standards are focused on energy efficiency and set the minimum standards to receive state funding for projects. Leadership in Energy & Environmental Design, or LEED, is a comprehensive and flexible building system that addresses the entire building lifecycle recognizing best-in-class building strategies. The formal LEED program offers Certified, Silver, Gold, and Platinum status.

The buildings that meet the CT state standards are equivalent to LEED Silver. Typically, LEED Gold buildings will have a lower aggregate annual cost (including the sum of bond payments and operating costs) than will less efficient buildings. Fairfield desires to be a leader in building efficiency and energy cost savings. To achieve this objective and maximize savings for the Town, new building projects, or renovations that exceed a minimum threshold (e.g., \$5M in capital cost), should strive to encourage building committees to design to and budget for the equivalent of LEED Gold. Renovations should be supported by Life-Cycle cost analysis (see ii, below).

### **ii. Building Project Cost Analysis – Life Cycle Analysis**

Current practices for building design and renovation go through conceptual design and then detailed design phases. Budgets are established following the conceptual design, and then bond resolutions are made at this stage. During detailed design (following budgeting and bond resolutions), Life Cycle Costs are analyzed. Investments in efficiency and cost savings, which

may have a slightly higher capital cost, but a much lower aggregate annual cost (which can be used to calculate the Life Cycle Cost) can then be problematic because the budget has already been established.

In the future, Fairfield's building projects should perform Life Cycle Cost analysis during the conceptual design phase, which occurs ***prior to establishing the final budget***. A return period on investment should be calculated for efficiency and clean energy options. Options that provide a payback in investment in less than 10 years should almost always be included in the project or should provide a detailed rationale to explain why that option is not included in the project.

### **iii. Use of CNG/LNG or Propane Construction and Hauling Vehicles in Town**

Construction, waste hauling, and other heavy duty vehicles operate in Fairfield to provide a wide variety of services and functions. Most of these vehicles use diesel fuel, which is very expensive (compare the natural gas) and, when combusted, releases dangerous pollutants into the air. Fairfield should transition toward cost-effective natural gas vehicles. Similar programs have been successfully implemented in Long Island communities. Specifically, the Town should perform outreach to the contracting community to encourage the adoption of alternative fuel vehicles. If possible, contract specifications should be modified to favor alternative fuel vehicles. Such an action by the Town will help provide the necessary impetus for the investment in natural gas vehicles by private industry.

## ATTACHMENTS

**Attachment 1: Clean Energy Communities Pledge**



## CLEAN ENERGY COMMUNITIES MUNICIPAL PLEDGE

The Clean Energy Communities program is an initiative funded by both the Clean Energy Finance and Investment Authority (CEFIA-formerly known as the Connecticut Clean Energy Fund) and the Connecticut Energy Efficiency Fund. CEFIA and the Energy Efficiency Fund develop programs which collectively seek to have Connecticut cities and towns both reduce energy use and increase support for clean, renewable energy for municipal facilities. The Energy Efficiency Fund programs are administered by The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, The Southern Connecticut Gas Company, and/or Connecticut Natural Gas Corporation (collectively, "the Companies")

By applying currently available energy efficiency and clean, renewable energy technologies the Town of Fairfield can save money, create a healthier environment and strengthen local economies; and **accordingly, the Town of Fairfield makes the following Clean Energy Communities Municipal Pledge:**

1. The Town of Fairfield pledges to reduce its municipal building energy consumption by 20% by 2018. Building energy consumption shall be determined by benchmarking municipal building energy consumption to a baseline fiscal year. The Town of Fairfield can elect from the following fiscal years to determine its energy baseline year: 2008-2009, 2009-2010, 2010-2011, or 2011-2012.
  - a. The Town of Fairfield will seek to reduce its municipal building energy consumption for municipal facilities by at least 20% by 2018. The schedule follows:
    - i. Fiscal Year 2012-2013: 5% Reduction
    - ii. Fiscal Year 2013-2014: 8% Reduction
    - iii. Fiscal Year 2014-2015: 11% Reduction
    - iv. Fiscal Year 2015-2016: 14% Reduction
    - v. Fiscal Year 2016-2017: 17% Reduction
    - vi. Fiscal Year 2017-2018: 20% Reduction
  - b. The Town of Fairfield will work with the Companies, contractors or other entities to benchmark all of its municipal buildings (including board of education buildings) to determine all municipal building energy usage.
  - c. Beginning July 1, 2015, the Town of Fairfield agrees to provide documentation of its municipal building energy consumption on an annual basis by the end of the first quarter of the following fiscal year.
  - d. The Town of Fairfield pledges to create its own Municipal Action Plan (MAP) to determine its path in reducing its energy consumption. The Town of Fairfield may satisfy this requirement by submitting a pre-existing municipal energy plan, sustainability plan, climate change action plan or similar document.
  - e. There is no penalty if the Town of Fairfield fails to meet the reduction amounts set forth in the schedule above. However if these reduction targets are not met starting July 1, 2015, the Town of Fairfield will not be eligible to receive Bright Ideas Grants from the Connecticut Energy Efficiency Fund and Companies under the Clean Energy Communities program.
2. The Town of Fairfield pledges to purchase 20% of its municipal building electricity from clean, renewable energy sources by 2018.
  - a. The Town of Fairfield will seek to make a voluntary purchase of at least 20% of the electricity for municipal facilities from clean, renewable energy sources by annual CEC program requirements. The schedule follows:
    - i. Fiscal Year 2012-2013: 15% Purchase
    - ii. Fiscal Year 2013-2014: 16% Purchase
    - iii. Fiscal Year 2014-2015: 17% Purchase
    - iv. Fiscal Year 2015-2016: 18% Purchase

- v. Fiscal Year 2016-2017: 19% Purchase
- vi. Fiscal Year 2017-2018: 20% Purchase

b. The Town of Fairfield agrees to provide CEFIA documentation of its municipal clean energy purchases on an annual basis by the end of the first quarter of the following fiscal year. CEFIA intends to request documentation of municipal clean energy purchases for FY2011-2012 in July 2012.

c. The Town of Fairfield acknowledges that clean, renewable sources are those defined in section 16-1 of the general statutes as Connecticut Class I renewable energy sources or meeting Green-e® Energy certification standards.

d. The Town of Fairfield may satisfy the voluntary purchase requirement by purchasing Green-e® Energy certified Renewable Energy Credits (RECs), enrolling one or more municipal facilities in the CTCleanEnergyOptions<sup>SM</sup> program, installing renewable energy systems (provided that the RECs associated with such system(s) are quantifiable and not held by a third-party) or any combination thereof.

e. There is no penalty if the Town of Fairfield fails to meet the items set forth in the schedule above; however, the Town of Fairfield will not be eligible to receive incentive rewards from CEFIA under the Clean Energy Communities program.

3. The Town of Fairfield agrees to promote energy efficiency and clean, renewable technologies in its community. The Town of Fairfield is encouraged to establish a Clean Energy Task Force, or comparable body. This entity will assist the municipality in meeting the Clean Energy Communities Municipal Pledge and to perform education and outreach among residents, businesses and institutions within the community concerning energy efficiency and clean, renewable energy programs.

By taking the pledge and meeting the Clean Energy Community Program requirements outlined by CEFIA and the Connecticut Energy Efficiency Fund, the Town of Fairfield may qualify, subject to the terms of separate formal contracts, for the following grants:

- a. CEFIA. For every 100 points, the Town of Fairfield may earn a 1 kilowatt (or equivalent) clean energy system.
- b. Energy Efficiency Fund. For every 100 points, the Town of Fairfield may earn a Bright Idea Grant that can be used for energy-saving projects. The Town of Fairfield is eligible for two Bright Idea Grants per fiscal year.



Michael Tetreau\*

First Selectman

Town of Fairfield

\* The Town of Fairfield understands that the Clean Energy Communities Municipal Pledge is not a contract, and that CEFIA, the Energy Efficiency Fund, and the Companies have not contracted, committed, agreed or promised, to perform or incur any obligations, in any manner, hereunder.

**Attachment 2: Completed and Planned Project Inventories**

**Attachment 2a: Efficiency Projects**

MUNICIPAL ENERGY ACTION PLAN - TOWN OF FAIRFIELD, CT  
PROJECT DATA

**List and Status of Fairfield Energy Efficiency Projects**

Location	Project Description	Project Type	Status
<b>Completed Projects</b>			
Fairfield Woods Middle	New Construction (AC Units)	Efficiency	Completed
Various Schools (seven total)	Security System Upgrades	Efficiency	Completed
Mill Hill Elementary	Lighting Retrofit	Efficiency	Completed
Holland Hill Elementary	Lighting Retrofit	Efficiency	Completed
Train Stations	Lighting & HVAC Controls	Efficiency	Completed
Post Road	Outdoor Decorative Pole Lights (LED)	Efficiency	Completed
Dwight Elementary	Boiler Replacement	Efficiency	Completed
Dwight Elementary	Roof Insulation	Efficiency	Completed
Transfer Station	Lighting Retrofit & Daylighting Controls	Efficiency	Completed
WPCA	Controls & Interior Lightitng	Efficiency	Completed
WPCA	Blower Motor & Exterior Lighting	Efficiency	Completed
Police Station	Trigeneration System	Efficiency	Completed
Town-Wide	Hired Energy Manager	Efficiency	Completed
FWHS	Irrigation System VFD	Efficiency	In Progress
Various Schools (six total)	Retrocommissioning	Efficiency	In Progress
<b>Future Projects</b>			
Independence Hall	Interior Lighting Retrofit	Efficiency	Planning
Riverfield Elementary	New Construction & Renovation	Efficiency	Planning
Fire Department	Lighting Retrofit, Boiler Replacement	Efficiency	Planning
Police Department	Retrocommissioning	Efficiency	Planning
Town Garage	Lighting Retrofit and Controls	Efficiency	Review
Tennis Courts	Lighting Retrofit & Controls	Efficiency	Planning

**Attachment 2b: Clean Energy Projects**

MUNICIPAL ENERGY ACTION PLAN - TOWN OF FAIRFIELD, CT  
PROJECT DATA

**List and Status of Fairfield Clean Energy Projects**

Location	Project	Project Type	Status
<b>Completed Projects</b>			
Wastewater Plant	Digester Gas Caputure	Alternative Energy	completed
Fairfield Woods MS	Solar PV	Alternative Energy	completed
Tomlinson MS	Solar PV	Alternative Energy	completed
Wastewater Plant	Fuel Cell	Alternative Energy	completed
<b>Future Projects</b>			
Ludlowe HS	Fuel Cell	Alternative Energy	pending
Fairfield Theater Co. Bldg.	Solar PV	Alternative Energy	approved
Fire Station # 1	Solar PV	Alternative Energy	approved
Train Station/Tomlinson	Solar PV	Alternative Energy	pending
Ludlowe MS	Fuel Cell	Alternative Energy	pending
Public Works Yard	Wind Turbine	Alternative Energy	pending
South Pine Creek Landfill	Solar PV	Alternative Energy	pending
Fairfield Recreation Center	Solar PV	Alternative Energy	approved
Fairfield Senior Center	Solar PV	Alternative Energy	approved
DPW Garage	Solar PV	Alternative Energy	approved
Operation Hope	Solar PV	Alternative Energy	approved
Main Library	Solar PV	Alternative Energy	pending
Fairfield Woods Library	Solar PV	Alternative Energy	pending
Canine Center	Solar PV	Alternative Energy	pending
Jennings Rd. Firehouse	Solar PV	Alternative Energy	pending
DPW Transfer Station	Solar PV	Alternative Energy	pending
Town Marina	Solar PV	Alternative Energy	pending
Jennings Beach Pavilion	Solar PV	Alternative Energy	pending
Par 3 Golf Course Building	Solar PV	Alternative Energy	pending
Kiwanus Field Building	Solar PV	Alternative Energy	pending
Tennis Center Building	Solar PV	Alternative Energy	pending

**Attachment 3: Cost Estimate for Budgeting Purposes**



Town of Fairfield - Clean Energy Action Plan  
Attachment 3 - Summary of Action Items, Responsibility, Budget

Category	Action	Detail	Lead Entity	Financing Mechanism
Energy Efficiency	Maintain energy data in EPA portfolio manager	Update Annually	CETF	Volunteer
	Apply for Energy Star Certification	1 Building per Year	DPW	Staff
	LEED Gold for New Buildings or Large Renovations	As planned	Building Committees	Capital
	Detailed Building Audits	All Buildings	DPW or BOE	Expense
	Implement Audit Recommendations	All Buildings	DPW or BOE	Expense
	Assess Status of Exterior Lighting	Town Wide	DPW	Staff
	Implement Exterior Lighting Recommendations	Gradual	DPW	Expense
	Create Energy Guidelines	All Buildings	CETF	Volunteer
	Create Green Teams for Each Building	All Buildings	All agencies	Volunteer
Clean Energy Generation	Submit ZREC and LREC System Applications	Two / year	DPW or BOE	PPA
	Prioritize Combine Heat & Power	As planned	Building Committees	On-bill financing
	Enroll in clean energy options for electricity	One time event	DPW	O&M
	Evaluate Microgrids	One microgrid	DPW	Grant
Vehicles, Transportation	Establish protocol to replace Town vehicles	One time event	Purchasing	O&M
	Promote use of CNG / LNG	Annual Outreach Events	DPW/CETF	Volunteer
	Install Level I charging stations	2 buildings / year	DPW/CETF	Expense
	Adopt anti-idling requirements	One time event	Green Teams	Volunteer
Promotion for Residents & Businesses	Clean Energy Options & HES Audits Program	Event & outreach driven	CETF	Volunteer
	Solar PV Program	Solarize type program	CETF	Volunteer
	Promote C-PACE program for businesses	Event & outreach driven	CETF	Volunteer
	Level II EV Charging in shopping areas	2 stations per year	DPW/CETF	Expense
	Support Fairfield Bike / Walk coalition	1 section per year	DPW/CETF	Expense
	Promote a school energy conservation challenge	Multiyear event	CETF	Volunteer
<b>SUBTOTAL COSTS</b>				
Estimated Savings from Clean Energy Projects	Building Efficiency Upgrades			N/A
	Exterior Lighting Upgrades			N/A
	Solar Power Purchase Agreements			N/A
<b>SUBTOTAL SAVINGS</b>				

Town of Fairfield - Clean Energy Action Plan  
Attachment 3 - Summary of Action Items, Responsibility, Budget

Category	Action	FY15 Amount \$000s	FY16 Amount \$000s	FY17 Amount \$000s	FY18 Amount \$000s	FY19 Amount \$000s	5-year Amount \$000s
Energy Efficiency	Maintain energy data in EPA portfolio manager						
	Apply for Energy Star Certification						
	LEED Gold for New Buildings or Large Renovations						
	Detailed Building Audits	10	10	10	10	10	50
	Implement Audit Recommendations			100	150	100	350
	Assess Status of Exterior Lighting						
	Implement Exterior Lighting Recommendations	25	25	25	25	25	125
	Create Energy Guidelines						
	Create Green Teams for Each Building						
Clean Energy Generation	Submit ZREC and LREC System Applications						-
	Prioritize Combine Heat & Power						
	Enroll in clean energy options for electricity						
	Evaluate Microgrids						
Vehicles, Transportation	Establish protocol to replace Town vehicles						
	Promote use of CNG / LNG						
	Install Level I charging stations	10	10	10	10	10	50
	Adopt anti-idling requirements						
Promotion for Residents & Businesses	Clean Energy Options & HES Audits Program						
	Solar PV Program						
	Promote C-PACE program for businesses						
	Level II EV Charging in shopping areas	20	20	20	20	20	100
	Support Fairfield Bike / Walk coalition	20	20	20	20	20	100
	Promote a school energy conservation challenge						
<b>SUBTOTAL COSTS</b>		<b>85</b>	<b>85</b>	<b>185</b>	<b>235</b>	<b>185</b>	<b>775</b>
Estimated Savings from Clean Energy Projects	Building Efficiency Upgrades			65	130	195	390
	Exterior Lighting Upgrades		5	10	15	20	50
	Solar Power Purchase Agreements	125	175	175	225	225	925
	<b>SUBTOTAL SAVINGS</b>		<b>125</b>	<b>180</b>	<b>250</b>	<b>370</b>	<b>440</b>
<b>TOTAL SAVINGS</b>		<b>40</b>	<b>95</b>	<b>65</b>	<b>135</b>	<b>255</b>	<b>590</b>