

Northwest Municipal Conference Irwin A. Bock Award Application – 2015

Municipality: City of Evanston

Name of Project: Green Energy Program

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Project Overview

Is your application for a:

program, policy or ordinance?

infrastructure project or new building?

Please provide a brief description (500 words) of the project:

The City of Evanston's Green Energy Program is designed to incorporate clean energy in municipal operations, capital projects and within the wider Evanston community. Evanston's Climate Action Plan (ECAP) serves as the foundation for this program and was initially developed in 2008 through a collaborative community process with over 150 volunteers and City staff. This plan illustrated six topic areas and over 220 strategies to reduce greenhouse gas emissions in four years. Green Energy is one of the key topic areas of ECAP which included many recommendations for projects and programs to reduce greenhouse gas (GHG) emissions. In 2014, thanks in large part to Evanston's Green Energy Program, the City announced it successfully achieved the ECAP goal of reducing city-wide emissions by 13%. Evanston further demonstrated its commitment to climate action work by adopting a new GHG emissions reduction goal with the Evanston Livability Plan that aims to decrease GHG emissions 20% by 2016.

The City's dedication to sustainability through energy has been heavily incorporated into the City's processes and programs. Solar energy is currently being generated at the Evanston Water Plant after the installation of a 25kw solar photovoltaic system on the roof of the plant, a project completed in 2010. Solar and wind energy are also being used in running the City's facilities, and much of the residential and commercial properties as well. The City, as of 2014, transitioned to purchasing 100% green power for City facilities with that power purchased from MC Squared Energy services. The City has received national recognition for transitioning to 100% green power to support the 23 million kilowatt hours necessary to run City facilities.

Residents and small businesses are also receiving green energy through the Community Choice Electricity Aggregation (CCA) program. In this program, the City selected an electricity supply company to provide 100% green energy to residents and small, commercial retail businesses. This program was approved through a referendum by Evanston residents, and there is community support for the program to grow to include larger commercial users. Residents were automatically switched to the City's supplier, Homefield Energy, with the option to opt out. The City's program also allows residents or small businesses to join or leave the program at any time.

Evanston's Green Energy Program has been tremendously successful and the City is actively building upon this success with plans for even more solar photovoltaic system and green fleet enhancements.

Project Impact

Please describe the qualitative benefits and outcomes of the project:

Improvements in local and regional air quality and reduction in climate impacts are the two primary benefits to using green energy to power the City and community's buildings, operations and vehicles. Green energy for vehicles has the most direct impact on the Evanston community because those emissions are generated locally every time a vehicle is driven or piece of equipment is used. The use of biodiesel results in less GHG emissions that impact the larger climate conditions and locally there is an improvement in air quality. Biodiesel contains virtually no sulfur or aromatics, and the use of biodiesel in a conventional diesel engine results in substantial reduction of unburned hydrocarbons, carbon monoxide and particulate matter released into the atmosphere. The use of electric vehicles goes a step further to completely eliminate any local release of air pollution.

On-site generation of renewable energy is the most efficient way to obtain green energy for buildings. The City's solar photovoltaic system at the Water Treatment Plant has generated 122 megawatt hours since 2010 and that energy is being used immediately by this facility. There is very little loss with the system because it is located on top of the Water Pumping Station and the emissions associated with other fuel sources are immediately avoided. Purchasing green energy for the City's buildings and for residents and small businesses signals to the marketplace a demand for cleaner, greener energy and in the long term will lead to investment in more clean energy projects.

In addition to environmental benefits to Evanston and the wider region, Evanston's Green Energy Program has brought education, awareness and pride to the City through various recognitions the City has received. In 2014, the City of Evanston was recognized on the U.S. EPA's list of top 30 users of green power among local governments as a result of the City's conversion to green energy and the creation of the CCA program. The City's Fleet was recognized in February 2015 by the American Lung Association and the Illinois Soybean Association for converting to biodiesel run fleets. The City's fleets were also recognized as an honorable mention by the 100 Best Fleets organization in 2015.

These awards have created opportunities to educate the Evanston community on the benefits of Green Energy and how residents and businesses can help. The City has posted significant information in the City's website relating to these programs and leveraged the awards to facilitate important community conversation around them.

Please provide any quantifiable environmental impacts of the project (i.e. emissions reductions, energy savings, increase in recycled materials):

From the projects initiated under the Green Energy efforts, both the Evanston community and the City municipal government operations have seen a significant decrease in greenhouse gases between 2005 and 2014 and realized cost savings at the same time. The City of Evanston's municipal GHG emissions have decreased by 36%, or 8,789 MTCO₂E. Evanston's Community greenhouse gas emissions have decreased by approximately 14%, or 139,679.00 MTCO₂E. The

combined total community wide reduction in greenhouse gas emissions is 14%, or 148,760 MTCO₂E. This is the equivalent to removing 31,318 passenger vehicles from the road each year.

All of the City's Green Energy Program efforts have contributed to tremendous reduction in GHG emissions. To highlight the contribution of one of the Program components, the switch of the City's Fleet to biodiesel across 145 vehicles has reduced the GHG emissions per gallon of fuel by 57% in comparison to petroleum diesel. This equates to a reduction in that the amount of particulate matter released into the atmosphere by 362 pounds per. The installation of the 25kW solar photovoltaic system generated over 122 megawatt hours of energy, which is equivalent to the carbon sequestered by approximately 65 acres of forest each year.

The City's Community Choice Electricity Aggregation program also provided cost savings to residents and small businesses while providing 100% green energy. It is estimated that the first two years of the program saved the Evanston community over \$2.5 million dollars. The program also has provided price certainty in a time of changing marketing conditions.

Project Development and Implementation

Did/does your project involve intergovernmental cooperation? If so, please describe:

The programs implemented under green energy efforts have provided good opportunities for collaboration across City departments including the following: Public Works, Utilities, City Manager's Office, Parks, Recreation and Community Services, and Law. The solar photovoltaic project was funded through two grants (Energy Efficiency Block Grant and Illinois Clean Energy Community Foundation) which required collaboration with the US Department of Energy and a private foundation. Funding for the plug-in electric vehicle charging station and solar canopy was provided in part by the Illinois Department of Commerce and Economic Opportunity. The City also collaborated with many other local communities during the development of the City's Community Choice Electricity Aggregation program

Did/does your project impact the public, your municipal employees, or both?:

Evanston's Green Energy Program benefits both municipal employees and the larger Evanston community, including residents and small businesses. Green energy is provided to all City facilities through the City's contract with MC Squared and the Community Choice Electricity Aggregation program provides green energy to the majority of households and small businesses. The City's fleet running on biofuels has also impacted the public and city employees through better local air quality. Electric Vehicle Charging Stations are available to anyone in the general public and 13 out of the 15 stations in Evanston offer free charging thanks to the contributions of the City and Autobarn of Evanston, a local car dealer.

Who was involved in decision-making or implementation of the project? (staff, citizens, business, elected officials, etc.):

Evanston's Green Energy Program included a wide variety of stakeholders in the decision-making process and implementation of the program elements. The planning components of the Climate Action Plan and Livability Plan involved a partnership between the City staff, City Council and community volunteers. Implementation of the program elements also included subsets of these groups. For the Community Choice Electricity Aggregation program, authorization for the City to

negotiate for electricity supply required a public referendum, which was approved with over 75% of the voters being in favor of the program. Mayor Tisdah has several citizen advisory boards, including the Environment Board and the Utilities Commission, which were involved in the plan development and recommendations around the green energy contracts and aggregation program. City staff took the lead on the implementation of the solar photovoltaic project and the plug-in electric vehicle installation. Business have also contributed input on the Community Choice Electricity Aggregation program and the electric vehicle project.

How long did the project take, from initiation to implementation or the end of construction?:

Evanston's Green Energy Program was formally launched in 2008 with the Evanston City Council adopting the Evanston Climate Action Plan. Since that time, numerous projects have been initiated and successfully completed. The majority of the components under the Green Energy Program also represent on-going efforts that are still benefiting the community. The City is committed to continuing to support these programs and is in the process of adding more local solar photovoltaic systems and electric vehicle charging stations. With all of these programs in place, the GHG reduction goal in the Evanston Climate Plan was fully met by mid-summer 2013.

Please describe how your project could be used by other municipalities or units of government?:

Projects implemented for Evanston's Green Energy Program can be adapted or leveraged by other local communities who have interest in similar efforts. The City of Evanston can share bid documents, industry contacts, copies of the Climate Action Plan and insight into successful processes that supported the program. There were many lessons learned with incorporating solar, wind, and other forms of renewable energy into the City's processes that can be shared with other communities. The City often conducts presentations and panels to share information about installing solar panels and including solar energy in facilities, to assist other local governments in Illinois that want to pursue solar energy.

The programs currently in place in the City of Evanston can not only be used to lower GHG emissions but restructure how communities use energy and transition to green sources of energy. Evanston's Green Energy Program can also illustrate how governments can approach sustainability issues, by outlining reduction goals or areas of improvement, and proposing projects that target different sectors of public life that can be improved. The City is also a vocal supporter for electricity aggregation and green energy, using a social media presence to reach out to other organizations or units of government, which can be beneficial for governments that want to strengthen their support base.

Appendices:

City of Evanston Electricity Aggregation Program

<http://cityofevanston.org/sustainability/community-choice-aggregation/>

<http://www.cityofevanston.org/sustainability/Community%20Choice%20Aggregation%20Presentation.pdf>

City of Evanston Renewable Energy Projects

<http://www.cityofevanston.org/sustainability/renewable-energy/>

City of Evanston Fleet Recognized

<http://www.cityofevanston.org/news/2015/02/city-of-evanston-fleet-recognized-by-american-lung-association-illinois-soybean-association-for-biod/>

City of Evanston Recognized as Top Green Power User

<http://www.cityofevanston.org/news/2014/07/city-of-evanston-recognized-as-one-of-top-30-local-government-users-of-green-power-nationwide/>