

RENEWABLE ENERGY & ENERGY EFFICIENCY INITIATIVE



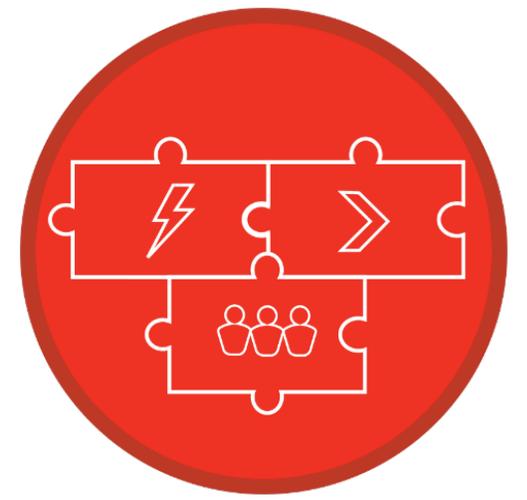
Solar Initiatives



Biofuel Utilization



Streetlight Replacement



Xcel Partners in Energy



RENEWABLE ENERGY & EFFICIENCY INITIATIVE

The City of St. Cloud recognizes its responsibility to be a leader in innovative, cost-effective and sustainability practices. The City strives to reduce the amount of nonrenewable electricity purchased, implement energy efficiency projects and expand the use of renewable energy.

The City's Renewable Energy and Efficiency Initiatives helps meet City goals and objectives. This program includes the Solar Initiative, the Wastewater Energy Efficiency & Biofuel (E2B) Project, the Street Light Improvement Project and the development of a community-wide Energy Action Plan through Xcel Energy's Partners in Energy Program.

SOLAR INITIATIVE (PAGE 4)



In 2015, the St. Cloud City Council adopted a resolution authorizing the implementation of renewable energy from solar generation facilities. Since the resolution was adopted the City has subscribed to 20 million kilowatt-hours of solar energy that will be generated from community solar gardens, one that is a city-hosted site; this will supply 70% of the City's electrical demand. Four solar arrays were installed and became operational in 2016. Three additional solar arrays are in final design and will become operational in 2017.

WASTEWATER ENERGY EFFICIENCY & BIOFUEL PROJECT (PAGE 5)



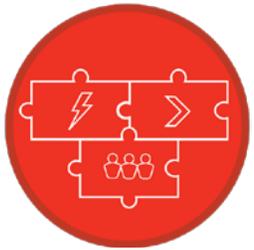
The project included specific City Council adopted energy reduction goals. The goals established include; 25% reduction in energy purchased by 2019, 50% reduction by 2024 and 75% reduction in 2034. The Wastewater Energy Efficiency & Biofuel Project will result in an estimated 80% reduction in energy purchased for the Wastewater Utility, exceeding the adopted 2034 goal in under 4 years. The project includes energy efficiency improvements to reduce energy use by 1.3 million kilowatts-hours annually and the generation of approximately 5 million kilowatts-hours of electricity each year.

STREET LIGHT IMPROVEMENT PROJECT (PAGE 6)



Over 2 million kilowatt-hours of energy will be saved annually upon project completion. The project consists of more than 2,000 LED light installations, a new smart light system in the Central Business District, 48 new/replaced electrical services, and replacement of 3,715 traffic indicators and walk/don't walk indicators. Work also includes energy efficiency improvements at citywide facilities including all parking facilities, the River's Edge Convention Center, city owned parks and the Water Treatment Facility.

XCEL ENERGY'S PARTNERS IN ENERGY ACTION PLAN (PAGE 7)



The purpose of the program is to provide the tools and resources necessary to develop and implement an energy action plan that reflects the community's current and future vision for energy use. This is an additional opportunity for the City to partner with local stakeholders to improve community health and sustainability.

City of St. Cloud • 400 Second Street South

INITIATIVE BACKGROUND

In 2015, the St. Cloud City Council adopted a resolution authorizing the implementation of renewable energy from solar generation facilities.

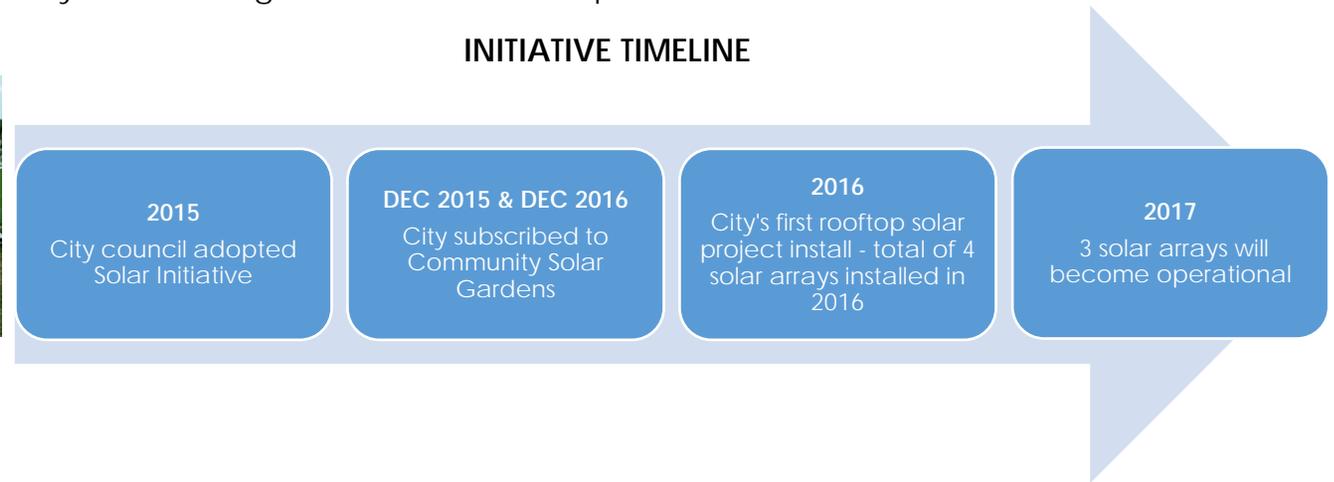
INITIATIVE SUMMARY

- City is subscribed to approximately 20 million kilowatt-hours of renewable energy from community solar gardens.
- City's first rooftop solar project installed at the City's Wastewater Treatment Facility. Three additional solar arrays became operational in 2016.
- 3 additional solar arrays are currently in final design and will become operational in 2017.

WASTEWATER 220 KW SOLAR ARRAY



INITIATIVE TIMELINE



SUSTAINABILITY BENEFITS

In 2015, the City's electrical demand was nearly 30 million kilowatt-hours of electricity. By 2018, the City will be subscribed to or generating over 20 million kilowatt-hours from solar power generation. Over 70% of the City's electrical demand will come from renewable solar energy.

2018 - 20,000,000 kWh's from renewable solar energy annually

2,076 home's electricity use for 1 year

14,998,578 pounds of coal

33,686,242 miles driven by a passenger vehicle

City of St. Cloud • 525 60th Street South

PROJECT BACKGROUND

City Council adopted goals established in 2014 include; 25% reduction in energy purchased by 2019, 50% reduction by 2024 and 75% reduction in 2034. The project will result in an estimated 80% reduction in energy purchased within the Wastewater Utility, exceeding the adopted 2034 goal in under 4 years.

PROJECT SUMMARY

- The project includes energy efficiency improvements to reduce energy use by 1.3 million kilowatt-hours annually.
- Renewable energy production of approximately 5 million kilowatt-hours annually with the installation of gas conditioning equipment and a generator that will convert biofuel into electricity.

ENERGY EFFICIENCY & BIOFUEL PROJECT



PROJECT SCHEDULE



SUSTAINABILITY BENEFITS

In 2015, the City's electrical demand was nearly 30 million kilowatt-hours of electricity. At project completion, the Wastewater Energy Efficiency & Biofuel Project will reduce the City's demand from non-renewable energy by nearly 21%.

6,300,000 kWh's annual reduction in non-renewable energy demand

468 home's electricity use for 1 year

4,724,552 pounds of coal

10,611,166 miles driven by a passenger vehicle

City of St. Cloud • 400 2nd Street South

PROJECT BACKGROUND

The City's street light and traffic signal system is a significant user of electricity. The advancement of LED street light systems have created the opportunity to reduce operation, maintenance costs and energy expenditures. They also improve system reliability and light quality. The project is funded by a guaranteed energy savings contract or performance contracting.

PROJECT SUMMARY

- 2010 LED light fixtures, 3,190 Traffic Signals, 525 Walk/Don't Walk Signals.
- Lighting efficiency improvements at 9 City Buildings.

SMART LED SYSTEM



PROJECT SCHEDULE



SUSTAINABILITY BENEFITS

In 2015, the City's electrical demand was nearly 30 million kilowatt-hours of electricity. At project completion, the Street Light Replacement Project will reduce the City's overall demand by nearly 10%.

2,873,000 kWh's annual reduction in energy demand

258 home's electricity use for 1 year

2,130,760 pounds of coal

4,737,971 miles driven by a passenger vehicle

St. Cloud Community Energy Action Plan

PROGRAM OVERVIEW

The program provides tools and resources necessary to develop and implement an energy action plan that reflects the community's current and future vision for energy use. This is an additional opportunity for the City to partner with local stakeholders to improve community health and sustainability.

ENERGY ACTION TEAM

- City of St. Cloud
- Beaver Island Brewing Company
- Central Minnesota Builders Association
- St. Cloud State University
- CentraCare
- St. Cloud Neighborhood Coalition
- Xcel Energy
- St. Cloud School District

ENERGY ACTION PLAN DEVELOPMENT SCHEDULE



ST. CLOUD COMMUNITY VISION STATEMENT: We are energy leaders through voluntary, inclusive, and sustainable approaches that result in measurable environmental and economic benefits.