



## Project Highlight

# City of Pendleton, OR



## Multiphase Energy Infrastructure Project Boosts Resiliency and Advances City's Ambitious Net Zero Goals

### Technology Type:

Energy-as-a-Service (EaaS) | Energy Savings  
Performance Contract (ESPC) | LED Streetlighting |  
Solar PV

### LED Streetlights Replaced

1,005

### Annual Solar Energy Generation

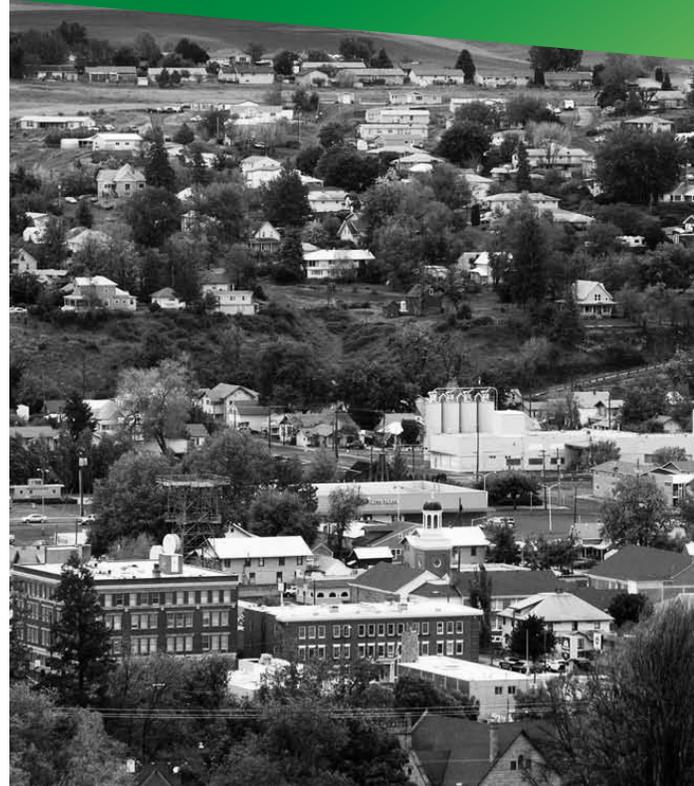
~325,000 kWh

### Project Size

\$2.3+ million

### Annual Carbon Emissions Reduction

~460 metric tons



### Summary

Looking to enhance the sustainability of its infrastructure and advance net zero goals, the City of Pendleton partnered with Ameresco on a multiphase infrastructure and renewable energy project. In phase one, Ameresco replaced 1,005 existing streetlights with light-emitting diode (LED) technology to reduce energy costs and carbon emissions. In a second phase of work, Ameresco is installing a solar PV canopy system for the City's Wastewater Treatment and Resource Recovery Facility to enhance the efficiency of its wastewater treatment process.



## Solution - Phase One: LED Streetlight Replacement

The City of Pendleton chose Ameresco to deliver a multiphase energy infrastructure and renewable energy project to reduce costs, maintenance, and carbon emissions. In the first phase of project, Ameresco worked with the City's utility, Pacific Power & Light, Ameresco helped to develop a new standard for warm-white color temperature LED fixtures as part of an LED replacement project. The LED lights may appear brighter and more white or blue in color compared to the existing yellow, high pressure sodium lights, while producing less than half the lumens. The project included:

- 1,005 LED lighting fixtures
- Fixtures rated 3,000 Kelvin correlated color temperature (CCT)
- EaaS financing structure, where Ameresco owns and maintains the lighting fixtures



**Our citizens are very happy with the new streetlights. The new LEDs have a slightly different color appearing more white than yellow, and direct light differently, enhancing visibility for drivers. The projected energy and maintenance savings will fully fund the project resulting in no cost to taxpayers and no up-front capital.**

*Bob Patterson  
Public Works Director, City of Pendleton, OR*



## Benefits

This LED replacement project advances the City's goal of reducing Pendleton's energy costs, maintenance, and carbon emissions while seeking out more sustainable infrastructure funding for buildings, roads, and utilities. Additional benefits of the project include:

- Reduced streetlight infrastructure energy consumption by more than 50%
- Annual total energy savings of nearly 500,000 kWh
- Carbon emissions reduced by 310 metric tons per year
- Lower maintenance costs as LED fixtures do not have disposable components requiring regular replacement
- Improved illumination and enhanced peripheral vision for drivers to improve detection of obstacles in the road
- Budget-neutral financing requiring no upfront capital by the City



## Solution - Phase Two: Solar Canopy Installation

To extend its journey toward sustainability and energy resilience, the City of Pendleton collaborated with Ameresco in a second phase of work to install an innovative 240 kW solar (PV) canopy system at its Wastewater Treatment and Resource Recovery Facility (WWTRRF). Through an ESPC, the project is funded by a combination of state grants, Federal and utility incentives, and city resources. The state-of-the-art canopy system, the first of its kind in the region, is designed to generate 325,000 kWh of electricity annually while reducing the facility's reliance on non-renewable energy sources. The project is part of a broader initiative at the Pendleton WWTRRF, aimed at implementing renewable energy and efficiency upgrades to lower the facility's carbon footprint and operational costs. In addition to the solar canopy, future plans include integrating a battery energy storage system (BESS) to further enhance the facility's energy management capabilities.



“ This has been an idea for about 10 years, so it feels awesome to be here. We really try to focus on recovering as many resources as we can, and this project will cut about 30 percent off our power bill annually. I can’t wait to move forward.”

Kyle Willman  
Technician and Lead Plant Operator  
Wastewater Treatment Resource Recovery Facility



## Benefits

The solar canopy demonstrates a novel application of solar technology - the integration of renewable energy with a wastewater treatment process - and demonstrates the City of Pendleton’s commitment to innovative environmental solutions. The project is also designed to deliver the following benefits:

- **Environmental:**
  - Provides 325,000 kWh of onsite renewable energy generation
  - Shades the Chlorine Contact Chamber to enhance the water treatment processes and protect local water quality
  - Reduces effluent temperature to the receiving stream, benefiting aquatic life by maintaining a more stable ecosystem
  - Decreases contaminants, contributing to overall environmental health
- **Sustainability:**
  - Offsets energy consumption by approximately 30% annually
  - Advances net zero goals
- **Financial:**
  - Designed to reduce utility costs by over 50%
  - Long-term ROI of less than 15 years
  - ESPC guarantees price and performance of the project
- **Leadership in the Community:**
  - Demonstrates leadership in sustainable practices
  - Showcases commitment to supplier diversity



Ameresco’s team of energy experts can assist you in identifying the solution that fits your needs.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please call **1-866-AMERESCO** or visit **ameresco.com**.