ENERGY PERFORMANCE CONTRACT CASE STUDY

City of Boulder, CO
November 2023

ENERGY SERVICES COALITION
A Public Private Partnership

AT A GLANCE

Energy Conservation Measures

- Solar Photovoltaic
- Electrification
- Sustainable Deconstruction
- Interior and Exterior LED Lighting
- Renewable Energy
- Building Automation Systems
- HVAC

Project Stats (8 Phases):

Project Cost: $37.2 Million

Project Size: 1,800,000 sq ft

PV System: 1,555 kWdc

Landfill Diversion: Over 75%

CITY OF BOULDER

AMERESCO

"To meet our climate goals and lower our total carbon impact, it is essential to incorporate all opportunities for reuse, especially of elements like steel and concrete that take a large amount of energy to make.

Michele Crane
Chief Architect and Facilities Capital Projects Manager
City of Boulder, CO

PROJECT OVERVIEW

Ameresco has been working with the City of Boulder since 2016 supporting their energy efficiency and sustainability goals, with numerous projects impacting over 300,000 square feet of building space.

Projects include the Boulder Community Hospital sustainable deconstruction, Brenton Building remodel and electrification, Dushanbe Teahouse HVAC upgrades, library Building Automation replacement, and city-wide exterior and interior lighting projects.

EPC PROJECT HIGHLIGHTS

Ameresco is nearing completion of a sustainable deconstruction project with the City of Boulder at the municipality's former Boulder Community Health Hospital. The deconstructed building materials will be used for a new fire station and other city projects. These efforts are part of the City of Boulder's overall goal to divert 85% of its waste from landfills by 2025.

Brenton Building Remodel

This project entailed a deep energy retrofit targeted to perform at a level that was at least 30% better than current energy efficiency standards. The major benefit to the city was guaranteeing building performance at the end of construction and closeout. An old medical office building was converted to a fully electrified modern office building. Efficiency upgrades included a VRF HVAC system, LED lighting, water efficiency, HVAC and lighting controls, and substantial envelope improvements.

Solar PV Project at 63rd Street Wastewater Treatment Plant

Ameresco was commissioned to construct a 1.6MWdc ground mount solar PV system at the City of Boulder's 63rd Street Wastewater Treatment Plant. This project presented numerous challenges such as relocating established wildlife on the property, future-proofing the solar development to account for upcoming expansions of the plant itself, working with Xcel Energy to secure solar incentives which improved the ROI of the project, and working within a short construction timeline – the project was completed in less than two months. To date, the project is exceeding expectations, has withstood extreme weather, and resulted in the water treatment plant reducing its annual energy consumption by roughly half of its original utility baseline.

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