



CASE STUDY FOR A HVAC System Replacement Rebate



As a federal agency we cannot accept actual incentive dollars. But OG&E helped us design a program where we could benefit from the upgrades with credits to meet our renewable energy goals. This kind of flexibility makes OG&E a true energy partner.



DAVE MASIAS

Energy Manager

FAA MIKE MONRONEY AERONAUTICAL CENTER

PROGRAM OVERVIEW

OG&E's Commercial Energy Efficiency Program (CEEP) provides financial rebates to assist those commercial/ industrial clients who install new, high-efficiency mechanical systems (including chillers, conventional HVAC and geothermal) and technologies that not only reduce electrical costs but manage their energy use more wisely.

The CEEP is a true 'win-win' scenario, as participants realize higher efficiencies and lower energy bills, and OG&E experiences both reduced peak energy demand and overall demand reduction. Together, these help to achieve the '2020 Goal' of no new incremental fossil-fueled power generation required in Oklahoma before year 2020.

ELIGIBILITY: Rebates and financial incentives are available to qualifying commercial and industrial operations in the OG&E service areas in Oklahoma only.

PROJECT SUMMARY

The FAA Center's Energy Goals

- Reduce energy consumption
- Lower total energy costs
- Decrease HVAC equipment maintenance
- Decrease emissions and lessen environmental concerns
- Fulfill federal mandate that 7.5 percent of annual energy usage come from renewable energy sources

Equipment Installed

- Installed a new, state-of-the-art 310-ton capacity chiller to replace an outdated, inefficient 360-ton unit.
- The new chiller is smaller, much more energy efficient, and gives the FAA the ability to take two pump units offline at any given time to lower operational costs.
- The McQuay® Turbocore Chiller was selected, which effectively allows the FAA to precisely meet the demand need required at any time.

Cooling Mode

Energy Efficiency Ratio (EER): This is a variable staging chiller ranging from 18.0 to 20.2 EER, depending on the output requirements of the system.

Financial Analysis

Measured kW (kilowatt) Reduction: **139.429 kW**

Annual kWh (kilowatt hours) Savings: **1,221,399 kWh**

Projected Energy Cost Savings \$97,711 per year*

* Savings computed at an average cost of .08 cents per kWh and based on annual energy savings of 1,221,399 kWh.

The FAA Had High Hopes That New Energy Efficiencies Would Yield Big Rewards, But it Took a Big, New Idea From **OG&E** to Make it Fly.

The Situation

For the past several years, the Aviation Records Building – a massive building at the heart of the sprawling, 160-acre FAA Mike Monroney Aeronautical Center campus – has been dealing with an outdated HVAC system that not only drained energy resources but delivered inadequate cooling and heating output. The daily delivery of climate-controlled heat and air throughout the enormous 145,000-square foot facility is a tall task in itself. But the aging, power-hungry HVAC system made energy and maintenance costs rise dramatically as indoor comfort and air quality levels plummeted.

The Dilemma

The FAA knew that a HVAC system change was necessary, and that such a change should earn them a substantial cash rebate from OG&E. Problem was, as a government entity, the FAA was not eligible to receive monetary compensation from a public utility, even though the Center's previous energy upgrades of several HVAC, lighting and other electrical systems easily qualified them to do so. Could some form of non-monetary compensation be found to credit the FAA for their use of more energy efficient systems?

The Solution

The OG&E team believed they had a solution. Knowing that federal mandates require government agencies to have 7.5 percent of their annual usage come from renewable energy sources, OG&E recommended that the FAA submit their improvements to the OG&E Commercial Energy Efficiency Program (CEEP). By replacing their aging chiller with a much more energy efficient system, the FAA earned a CEEP rebate of \$34,000, which they converted into 9,959 Renewable Energy Credits (RECs) in order to meet their federal renewable energy mandate.

The Result

The FAA campus is using less energy because of these equipment and system upgrades and now the majority of the energy used is clean, renewable Oklahoma-based Wind Power. This approach has helped the FAA campus meet government mandates to use less energy and utilize renewable energy – a unique solution that allowed them to achieve both goals in a much more affordable way. In fact, the FAA also used this method in 2012, trading OG&E's energy efficiency rebate for RECs to help meet growing green requirements.



To learn how you can take advantage of OG&E's Commercial Energy Efficiency Program and qualify for a rebate, please contact **GREG SPENDER**.

OFFICE 405-553-3672
CELL 405-323-2662
EMAIL Spendegj@oge.com