Reducing Communications Energy **Costs** and **Consumption**

Franklin Energy's Telecommunications Services support US Cellular's initiatives to reduce costs by minimizing energy usage.

137,181 kWh
ESTIMATED ANNUAL ENERGY SAVINGS

$10,974
ESTIMATED ANNUAL COST SAVINGS*

THEIR STORY

Headquartered in Chicago, US Cellular connects communities, businesses and government operations across the country. As a nationwide service provider, their switch locations consume a lot of energy. They turned to their Chicago-based utility for a solution.

THEIR GOAL

US Cellular wanted to explore ways to reduce their energy costs through participation in their utility's telecommunications-focused energy efficiency program. Their energy auditor began by evaluating the power demand from one of the company's wireless switch locations, as well as the operations of the electrical and HVAC equipment. The team also performed an energy analysis to help identify additional energy efficiency opportunities.

THE SOLUTION AND RESULTS

While evaluating the facility's HVAC equipment, the team identified several opportunities. The first solution selected for implementation involved the optimization of US Cellular's computer room air conditioners (CRACs), responsible for supporting critical equipment space. The team determined that operating three of the four CRAC units was not necessary and an additional unit could be placed into standby mode, making the facility more efficient while maintaining the uptime requirements for the equipment. They decided on a configuration of two CRAC units working continually with two remaining on standby in case of equipment failure. The team also found that lowering the fan speeds of the working CRACs would continue to deliver the necessary cooling requirements for the switch while cutting energy usage. These operational savings measures were implemented with minor HVAC controls changes, resulting in an immediate payback. By implementing this recommendation, US Cellular has realized savings through the reduced maintenance costs of an additional CRAC unit being placed on standby. The annual energy savings is calculated to be:

- **137,181 kWh savings / $10,974 annual cost savings***

ABOUT THE PROGRAM

The telecommunications-focused energy efficiency program implemented by Franklin Energy offers incentives on a variety of energy savings measures, which in some programs can cover up to 100% of the project cost. Our expert energy advisors also provide free recommendations for energy-saving improvements, empowering your customers to make informed decisions to best support their needs.

*Estimated annual cost savings are based on an electricity rate of 7.99 cents per kWh.

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FranklinEnergy.com / FranklinBD@FranklinEnergy.com / 866-862-7449

Engaging the **Next Generation** in **Energy Savings**

Classroom-implemented energy education isn't a new concept, but when combined with workforce development and career exploration, education delivers next-level savings.

> **This hands-on approach to saving energy benefitted my students and their families immensely. Students engaged in real-world experiences that will lead to success now and in the future.** *—Participating Teacher*

903,130 kWh
ANNUAL ELECTRICITY SAVINGS

31,549 Therms
ANNUAL GAS SAVINGS

12,766,672 Gallons
ANNUAL GAS SAVINGS

THEIR STORY

Serving 1.2 million electric and natural gas customers across eight different states, this large Midwest utility is known for exemplary service. Their award-winning program portfolio delivers energy savings to a diverse range of both homes and businesses.

THEIR GOAL

Already well-known for a variety of energy efficiency programs, the utility was looking for a new, cost-effective solution that would deliver residential energy savings and drive customer satisfaction. In addition, they were looking to reinforce their commitment to the communities they serve.

THE SOLUTION AND RESULTS

Franklin Energy proposed a new, innovative program solution that educates high school students on the benefits of energy efficiency. It provides real-world knowledge that guides students along their journey to becoming informed consumers. In addition to energy education, students are provided with a take-home kit of energy efficiency measures that deliver immediate savings to participating households. The education even goes a step further by introducing students to STEM-based careers through in-depth workforce development and career exploration. The program was piloted in select high schools in the utility's Pueblo, Colorado service territory and exceeded both savings and participation goals. The energy-saving measures, coupled with in-class and online education, delivered:

- **903,130 kWh savings**
- **31,549 therm savings**
- **12,766,672 gallon savings**

The non-energy benefits proved impactful as well. 3,312 high school students enrolled in the program were inspired to pursue a STEM-based career in the green sector economy, benefiting both the utility and the communities in which they serve.

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