

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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