

Commonwealth Energy Management and Control System

Background Information

The Commonwealth Energy Management and Control System (CEMCS) has not been authorized in a state executive budget, however, the Finance Cabinet requested the project in its 2020-2026 capital plan. The project was requested in each biennium at \$2 million per biennium.

The 2014-2016 budget authorized the Install Energy Management System Controls project. This project installed controls on various state-owned buildings to allow for the monitoring, measurement, and reporting of energy consumption. The data will be used in conjunction with CEMCS to create energy savings.

Brief Description/Justification:

This project will continue statewide implementation of CEMCS across all general funded agencies. CEMCS gives Kentucky a more global ability to monitor, measure, report and ultimately conserve energy consumption throughout all implemented facilities. CEMCS also gives the Finance Cabinet greater oversight and influence on capital project needs in other agencies and provides a means to verify results of construction projects. CEMCS implementation to date accounts for nearly 1300 buildings (22.3 M Sq. Ft.) and for FY 18 shows a weather normalized savings of over \$5,630,000 and a total annual utility cost of approximately \$38,222,500, while cumulative savings is up to \$24,871,500 over the life of the project. ***(This data was provided to the board in April 2019. The figures may have changed since then.)***

Additional Description/Justification

A federally funded pilot project and continuous implementation has already proven the cost savings benefits of this program. Currently, CEMCS accounts for nearly 1300 buildings (22.3 M Sq. Ft.) and for FY 18 is showing a weather normalized savings of over \$5,630,000 and a total annual utility cost of approximately \$38,222,500, while cumulative savings is up to \$24,871,500 over the life of the project. A portion of this savings is due to ESPC measures as well as CEMCS remediation efforts, with CEMCS acting as a secondary measurement and verification tool for performance contracting.

Kentucky's facility organizations are challenged by two goals: KRS 56.782, which is the requirement to track all utility usage and spending; and the goal to reduce energy consumption 25% by 2025. In 2012, Kentucky launched the Commonwealth Energy Management and Control System, a system which provides the knowledge and tools to improve building operation and meet these goals through consolidation of all billing, metering, and building automation data.

There are four major components to CEMCS: Utility Monitoring and Analysis; Building Automation Integration and Diagnostics; Centralized, Automated Utility Bill Paying; and Work Order Generation and Tracking. Once complete, the statewide rollout will include approximately 5,000 facilities from multiple agencies. The central monitoring will take place at the agency level. During the project the data that is collected and analyzed will become more diverse and more effective for each facility and each facility manager. This process has the potential to reduce the energy use in some facilities by as much as 30% when corrective measures are applied. The data and processes will be duplicated in masse and made available to all facilities managers in all participating agencies.

Current information gathered from industry forecasts and various other energy sector data, as well as current and upcoming EPA regulations along with rate increase requests now pending with the KY PSC point to cost increases to Kentucky utility companies in the billions of dollars. Industry trends anticipate a 20% to 25% rate increase in electrical rates over the next 6 years. These rate increases will impact the utility budgets of every state agency. Energy conservation measures such as CEMCS are the state's best defense against these inevitable rising costs. Over the next 6 years the Commonwealth will pay spend an additional 30 million dollars annually on energy, with proactive measures taken now the increased cost can be avoided not only once but avoided each ensuing year.