CASE STUDY

Front Range Community College
Xcel Energy RCx Program
Westminster, Colorado

Making buildings work. Better.

The purpose of the Front Range Community College (FRCC) Recommissioning (RCx) project at the Westminster Campus is to reduce electrical energy consumption and peak demand requirements of existing electrical equipment through systematic evaluation of systems and implementation of RCx measures. The project is divided into three phases: Initial Energy Assessment, RCx Study, and RCx Measure Implementation.

EMC's services included an Initial Energy Assessment that was submitted to Xcel Energy with the RCx Application. After approval of the RCx application, EMC conducted a RCx study that included verifying proposed RCx measures, as well as identifying additional RCx measures, equipment monitoring, energy saving analysis, cost estimating, RCx report, and presentation to FRCC. Once FRCC selected measures for implementation, EMC provided customized implementation assistance which included trend data analysis, on-site consultation and post-implementation verification inspections.

The FRCC Westminster Campus is approximately 415,000 SF on two levels. The building was constructed in the late seventies and has always served as a community college facility. The campus is comprised of the main classroom building and has a three story library wing, a two story east wing, a single floor Campus Center wing, and an indoor pool.

Through the successful implementation of eight energy efficiency measures, FRCC is expecting to realize approximately **1,000,000 kWh, 260 on-peak kW,** and **7,000 mmbtu** per year in energy savings. The project costs comprised a study fee of $28,000, an estimated implementation cost of $150,000 and an implementation assistance fee of $7,800 which produces a total project fee of $185,800. FRCC is anticipating realizing $130,000 per year in energy cost savings which results in a total project anticipated simple payback of **1.4 years.**

Owner:
Front Range Community College
Contact:
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Schedule:
2 years, 8/2008
Budget:
$35,800 (Fee)

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Engineering Excellence Since 1976!

Company Overview

Making buildings work. Better.

EMC ENGINEERS, INC.

EMC is dedicated to creating sustainable facilities by optimizing performance through energy modeling and analysis, building automation systems application, advanced mechanical and electrical design, construction management, and building commissioning to achieve lower energy costs, improved comfort, and increased productivity.

Experience

Since 1976, EMC has been a leader in delivering high performance building solutions. As a multidiscipline firm, we have strong credentials in mechanical, electrical, and control systems retrofit and modernization and energy engineering and commissioning.

Where do EMC's experts work?

You'll find us in schools, colleges, hospitals, government facilities, healthcare, and all types of private sector structures from supermarkets to office towers. In fact, EMC's engineers and technicians go wherever new facilities are under construction or existing structures or systems are operating at less than peak performance.

FRONT RANGE COMMUNITY COLLEGE

Xcel Energy℠

Whether you need a retrofit or a modernization or a new high performance building, you can rely on EMC to bring engineering excellence to your project.

Imagine reducing operating costs, improving comfort, increasing productivity, and getting your building's problems fixed quickly. EMC's services are the key!

Services

BUILDING COMMISSIONING/RETRO-COMMISSIONING

The commissioning process for new buildings and major renovations, provides facility owners with assurance the facility is functioning to meet their project requirements. Commissioning is the only process that assures a quality outcome. Whether you manage a new or existing facility, it's really difficult to know unless an independent commissioning expert has evaluated your systems. EMC's retro-commissioning services provide low cost, high return operating improvements that reduce operating costs. Think of it as a building "tune-up".

SUSTAINABLE DESIGN

More organizations are considering Green building systems and renovations. But to go Green--affordably--you need integrated sustainable design. EMC provides energy simulation modeling, daylighting, and high performance systems concepts to meet LEED requirements. We're ready to advise and coordinate and show you how to make the wise choices that deliver real environmental and economic benefit.

ENERGY ENGINEERING

Energy and how it's used affects quality-of-life and the global environment. Our core business is creating energy systems that optimize energy use. Our energy-engineering services ensure that you meet today's needs while planning for tomorrow's growth. This includes audits, assessments and implementation of energy improvement projects.

FACILITY DESIGN

Integrated systems design is crucial to facility renovation and modernization, particularly in high performance facilities. EMC understands how to take cutting edge mechanical, electrical, and building automation system technology and integrate it into real world solutions. And we can do it while your facilities stay in operation.

DESIGN/BUILD

Identifying your facility's energy issues is just half the battle. You then need a retrofit strategy that maintains the building environment and minimizes system downtime through every phases of construction. EMC is skilled at engineer-led, design/build projects, including efforts funded through Energy Savings Performance Contracting.

TRAINING

Today's building systems are complex. But EMC believes any operations and maintenance team is up to the challenge--if properly trained. We offer an extensive program of live and videotaped training classes and seminars--onsite and hands-on.

OFFICE LOCATIONS

Denver, CO * Atlanta, GA * Salt Lake City, UT * Irvine, CA * Raleigh, NC * West Palm Beach, FL

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