

Kansas Contractor Turns \$2.3m Revenue on Energy Services in 2010

McElroy's Case Study

by the Building Advisor™



McElroy's Inc., an HVAC provider based in Northeastern Kansas, has added \$2.3 million in revenue to its bottom line since 2010 by adding energy services. In Topeka, Manhattan and Lawrence, Kansas, a great company strategy turned McElroy's use of the industry-leading BuildingAdvice™ energy platform into a revenue-generating tool driving significant growth in its energy services business in the first year of its use. By simply leveraging its base of preventative maintenance customers, McElroy's skillfully "rightsized" its energy services offerings for the midwestern market it serves.

In today's competitive marketplace, contractors in large and small communities all over the U.S. are finding new ways to differentiate their services by adding value to their current offerings. Energy reduction is no longer a progressive idea, but one that has gained increasing acceptance. Measurable cost savings using accurate, reliable data proves that energy services incorporated into an HVAC's preventative maintenance program pays for itself.

"Energy conservation has been part of the McElroy's business plan from inception," remarks Kristi Hubbard, McElroy's Certified Energy Manager and Account Executive.

"However, it hasn't been marketed as such; it was just something that we did." For example, while equipment maintenance is an expected part of a preventative maintenance agreement, it also ensures that equipment is running at optimum efficiency, conserving energy. For McElroy's, offering energy services was more of a cultural shift in highlighting and amplifying their attention to efficiency.



The Jackson County Courthouse in Holton, Kansas.

The talents of McElroy's Building and Energy Solutions Team were tapped to deliver these services to the Jackson County Courthouse in Holton, Kansas.

By achieving the EPA's prestigious ENERGY STAR label for the Courthouse, Hubbard and team cinched McElroy's positioning as the preferred contractor for green HVAC-system design in government buildings.

Jackson County Courthouse

Square footage: 34,390

Year built: 1921

ENERGY STAR score before: under 50

HVAC project work proposed: \$498,750

ENERGY STAR score after: 99

ENERGY STAR Certification: March, 2011

Lifetime energy savings predicted: \$102,319

The Jackson County Courthouse's energy usage was no different from a lot of buildings in Kansas: its ENERGY STAR score was under 50, meaning that it was less efficient than over 50% of peer buildings with similar use, climate and other considerations. The 34,390 square foot building was constructed in 1921.

But it was tenant comfort, rather than energy savings potential, that drove the issue. Tenants in the 82-year old building

used window air conditioning units, as well as Courthouse custodian Teresa Scheidegger's services to address discomfort issues, which were frequent given the building's original, steam boiler heating system and single paned windows. With the state's notorious temperature swings the building was unable to keep up with occupancy demands. The building's control system consisted of on or off, which didn't allow for consistency with temperature set-points. Three-foot walls of stone sealed in temperature for better or worse: the steam radiator and window unit ac system only afforded the basics of heating and cooling comfort.

Jackson County, as owner, worked with McElroy's on conceiving and following a detailed Energy Conservation Plan which would allow it to operate the building's mechanical systems at peak performance, while lowering operating costs and increasing comfort. The key challenge was maintaining compliance with the National Register of Historic Places. Historic buildings cannot implement upgrades that will change the appearance of the building, such as removal of radiators. It not only limits retrofit options, but drives their cost up. The McElroy's team worked with Courthouse facilities staff to arrive at compliant solutions.

The original boiler was replaced with a Thermal Solutions high efficiency boiler. The window units were replaced with a chiller system and added control flexibility with a four pipe delivery system. Project total was \$498,750, with an estimated lifetime savings of \$102,319. Stage two was a window replacement to reduce air infiltration and capture the improvements from the HVAC upgrades. McElroy's leveraged their investment in BuildingAdvice to receive automated sensor data collection, energy performance analysis, custom reporting and expert support. BuildingAdvice uses technology and human resources to deliver ENERGY STAR Benchmarks, Energy Assessments that identify immediate utility savings from low- and no-cost operational recommendations, and Energy Audits that leverage automated energy modeling to forecast retrofit measures' ROI and payback generated by energy savings.

Using BuildingAdvice, the McElroy's team compared the building's pre-project utility bill data to post. Since the changes, the Courthouse uses 35 percent less energy, produces 35 percent less greenhouse gases and consumes 65 percent less energy than the national average for courthouse facility type. Most impressive, the building's

“Quantifying the energy savings made the project even more valuable. A task made easier by using the BuildingAdvice software.”

ENERGY STAR score had gone up to 99, roughly doubling the buildings efficiency and making it more efficient than 99 percent of its peer buildings.

“Quantifying the energy savings made the project even more valuable. A task made easier by using the BuildingAdvice software,” Hubbard said.

BuildingAdvice product manager Lucas Klesch encouraged Hubbard to apply for the ENERGY STAR Label, a distinction requiring the building to be in the 75th percentile of performance nationally.

But in order for a building to earn the ENERGY STAR Label, the EPA requires the building’s energy information to be accessible through Portfolio Manager, ENERGY STAR’s industry standard software for energy efficiency measurement. Hubbard took advantage of the integration of the BuildingAdvice software with Portfolio Manager to automatically transfer the utility and building data to the ENERGY STAR system.



Air separator and automatic air vent.

After converting data into Portfolio Manager, Hubbard and team completed the required ENERGY STAR Certification paperwork and submitted it to the ENERGY STAR office in Washington, DC. In March 2011, the building received its official letter of ENERGY STAR Certification for the year 2010, making Jackson County, as the owner of the courthouse, also an ENERGY STAR Partner. A plaque and certificate were presented to Jackson County Commissioners and Scheidegger at a county commissioner meeting with press coverage.

While utility rates have risen since the completion of product work, the building has still seen a significant decrease in energy costs, due to the substantial reduction in utility usage. As a result of McElroy’s project work, the Courthouse is enjoying a natural gas consumption savings of 58% and an annual cost savings of 26%.

AirAdvice, through its BuildingAdvice energy services delivery platform, has helped McElroy’s to shift its approach to energy services, first by identifying it as a value-add proposition to the company’s preventative maintenance agreements, then by educating its client base about the value of energy services. Demonstrated excellence in high profile, challenging buildings within the communities it serves helps set McElroy’s apart.

“We will continue to offer services through our Building & Energy Solutions Division, and it will be a core component of our five-year business plan. The market is ripe in Kansas for improving facility energy efficiency and saving our clients dollars.”



New chiller unit .

“Energy efficiency can be rather complex in scope but for most agencies it needs to be simplified down to dollars and cents so they can make capital improvement decisions. BuildingAdvice reports, automated and customizable to McElroy’s individual clients’ needs, provide an easy to read and understandable explanation of measurable cost savings, setting McElroy’s apart from the competition,” Hubbard said.

Hubbard and the McElroy’s Building and Energy Solutions team look to repeating the success at Jackson County with other commercial facilities in

Kansas. Hubbard continues to meet with various building owners around the state.

McElroy’s is a 60-year-old, family owned company for three generations. The McElroy’s Building and Energy Solutions Team provides a detailed Energy Conservation Plan allowing companies to operate their mechanical systems at peak performance, while lowering operating costs. The team consists of three licensed professional engineers, two automated controls technicians, service department manager / HVAC technicians, and a number of seasoned sales professionals. McElroy’s serves business and residential customers. To learn more about McElroy’s, go to [McElroy’s Energy Solutions web page](#).

About AirAdvice and BuildingAdvice™

AirAdvice is a Portland, OR company that is an acknowledged leader in developing cutting edge technology and programs for improving buildings’ energy efficiency and performance. The BuildingAdvice™ energy services program enables commercial HVAC professionals, energy consultants, and engineers to use automated benchmarks, assessments, and audits to deliver cost savings and greener buildings for their clients through energy efficiency.

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