



## GROUNDBREAKING EFFICIENCY PROJECT GIVES MAHOMET IGA AN EDGE

As he planned to expand his grocery store from 24,000 to 39,000 square feet in 2009, Mahomet IGA President Brooks Marsh saw an opportunity to shrink his energy budget. And he tapped into some “groundbreaking” technology to do so.

Marsh made plans to install a cutting-edge heating and cooling system powered by geothermal heat pump technology — one of several energy efficiency recommendations made by the Smart Energy Design Assistance Center at the University of Illinois. He turned to the Ameren Illinois Energy Efficiency Program for help and received more than \$25,500 in grants.

“We needed to take greater control of our energy usage. The incentive payment made this project affordable,” says Marsh. In fact, the funding paid for nearly 17% of project costs and took a bite out of the project payback period.

“Geothermal is by far the best heating and cooling technology available,” says Jason Breede, Energy Engineer for the Ameren Illinois Energy Efficiency Program. “Geothermal systems take heat energy from one place and put it somewhere else — it’s the same principle as your central air conditioning system, but you’re using the ground instead of outside air and it works to both cool and heat your building.”

Geothermal technology relies on the relatively constant temperature beneath the earth’s surface, so there is no need to use combustion as the heating method. In the



**Mahomet IGA President Brooks Marsh shows reporters the store’s new geothermal unit at a media event held March 30, 2010.**

### SEDAC Helps Organizations Use Energy Wisely

The Smart Energy Design Assistance Center, or SEDAC, provides free advice and analyses to improve the economic viability of private and public facilities in Illinois through the efficient use of energy resources. SEDAC is sponsored by the Illinois Department of Commerce and Economic Opportunity, in partnership with Ameren Illinois and Commonwealth Edison. SEDAC is managed by the School of Architecture at the University of Illinois at Urbana-Champaign and the 360 Energy Group.

For more information, visit:  
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## Did you know?

ENERGY STAR®-qualified geothermal heat pumps use about 30% less energy than a standard heat pump.



## Energy Efficiency. It's Good Business.

Since 2008, Ameren Illinois has granted more than \$85 million in incentive payments to business customers. As a result, these businesses are saving over \$350 million in annual energy costs. Incentives are available for a variety of energy-saving projects, including:

- Lighting
- Heating and cooling
- Water heaters
- Specialty equipment
- Steam traps
- Variable frequency drives (VFDs)
- Retro commissioning

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winter, a geothermal heat pump pulls heat from the ground to warm a building and in the summer, it takes heat from the building and deposits it into the ground.

The new geothermal system at the Mahomet IGA is especially unique in the way it leverages the store's location near the Sangamon River. Rather than drawing heat directly from the earth, the new heat pump will use groundwater beneath the store for heating and cooling. In addition, the new system taps groundwater to cool compressors used for the store's refrigeration units.

"This specific application of the technology is extremely unique," says Breede, who says it's the first project of its kind in Ameren Illinois territory. The unusually innovative project has piqued the interest of larger national grocery chains and even garnered the Mahomet IGA a Green Grocer Award from Progressive Grocer magazine.

Beyond the industry recognition, Marsh will find validation of his decision to embrace geothermal technology every month on the store's power bill. The new system is expected to reduce the store's electric consumption by 877,500 kWh annually — enough energy to power 80 homes for an entire year! Those kilowatt-hours saved will benefit the environment, as well as the shoppers who visit the Mahomet IGA.

As Marsh says, "This geothermal system is directly benefiting our customers because we have been able to lower prices. That is especially important for a small business like our IGA."

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## A Note About Geothermal System Incentives

Some state restrictions may impact eligibility for incentives for geothermal heat pump projects that involve fuel switching (i.e., gas to electric). Even if your project does not qualify for an incentive, we encourage you to explore federal grants for geothermal systems. For example, the Mahomet IGA project received a sizeable grant from the U.S. Department of Agriculture, in addition to the incentives.

*"Mahomet IGA president Brooks Marsh and his team are proving that when applied wisely, energy efficiency not only can help businesses survive but thrive in the face of intense competition."*

— Cheryl A. Miller, Business Program Manager

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