

The Missouri Energy Efficiency Investment Act

Encouraging customers to use less electricity, reducing the need to build more power plants

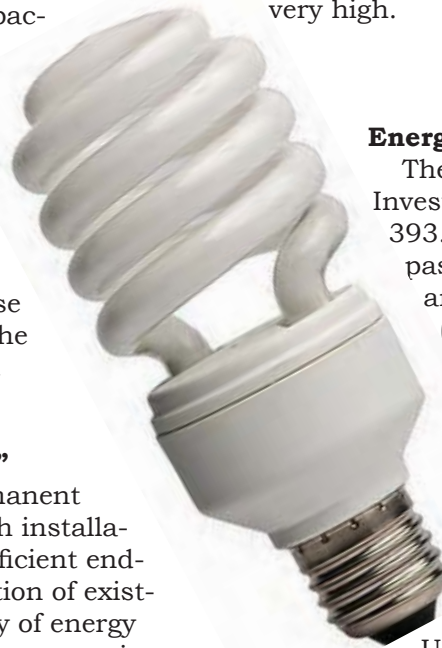
By Martha Wankum and John Rogers

Historically, Missouri's electricity has come from numerous resources including electricity generating plants powered by a variety of primary energy sources - supply-side resources - to meet the annual electricity requirements of customers - demand. Missouri has relied upon coal powered generating plants to meet most of its annual electricity requirements and upon coal and natural gas powered generating plants to meet its peak electricity capacity needs (times when electricity is in high demand). Due to the uncertainty of future annual electricity requirements and peak electricity capacity needs and the uncertainty of future environmental regulations, future fuel prices and the cost of building and operating new generating plants, it is important that Missouri consider all available supply-side and demand-side resources -- energy efficiency and demand response -- when planning for and meeting the future electricity needs of the state.

What are "Utility Demand-Side Resources?"

Energy Efficiency refers to permanent changes to electricity usage through installation of or replacement with more efficient end-use devices or more effective operation of existing devices that reduce the quantity of energy needed to perform a desired function or service. Energy efficiency programs are designed to primarily reduce energy (kWh). Examples of energy efficiency programs may include encouraging customers to use more efficient light bulbs or to purchase a new refrigerator by offering various incentives such as monetary rebates.

Demand Response refers to changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized. Demand response programs are designed to primarily reduce peak demand (kW). Examples of demand response programs include providing incentive payments to customers to reduce their consumption of energy during periods of peak demand or when market prices for energy are very high.



What is the Missouri Energy Efficiency Investment Act?

The Missouri Energy Efficiency Investment Act (MEEIA), section 393.1075 RSMo Supp. 2010, was passed by the Missouri legislature and signed by Governor Jeremiah (Jay) Nixon in 2009. MEEIA is designed to encourage investor-owned electric utilities to develop and implement demand-side resources with a goal of achieving all cost-effective demand-side savings (savings in annual electricity requirements and peak electricity capacity needs).

Under MEEIA, the Missouri Public Service Commission (Commission) is required to permit electric utilities to implement and recover costs related to Commission-approved demand-side programs if the programs are expected to - over time - achieve all cost-effective energy savings and lower customers' bills.

The Commission's Role in Implementing MEEIA

During 2009 and 2010, the Commission's Staff organized a stakeholder process, including a series of three workshops, facilitated by the Regulatory Assistance Project, to obtain broad input from investor-owned electric utilities, the Office of Public Counsel, the Missouri Department of Natural Resources, customers, consumer advocates and various other groups concerning MEEIA and to draft administrative rules to implement MEEIA (File No. EW-2010-0265). The Commission crafted four rules designed to implement MEEIA and allow electric utilities to recover costs and to provide financial incentives and timely earnings opportunities associated with cost-effective demand-side savings. (File No. EX-2010-0368). The MEEIA rules became effective May 30, 2011.

Two of the administrative rules (4 CSR 240-20.094 and 4 CSR 240-3.164) address demand-side programs under MEEIA, and set forth the requirements and procedures for filing and processing applications for approval, modification,

and discontinuance of electric utility demand-side programs. The rules also set forth the information that an electric utility must provide to the Commission when it seeks approval, modification or discontinuance of demand-side programs.

An electric utility may file an application with the Commission for approval of individual demand-side programs or for an entire plan. The Commission is required to make a determination regarding applications within a specified timeframe after providing the opportunity for a hearing.

Electric utilities are required to file applications to modify demand-side programs when there is a 20 percent or more variance in the total program budget or if the program design is significantly modified. An electric utility may also file an application with the Commission to discontinue demand-side programs. Once again, the Commission is required to make a determination within a set time period after providing the opportunity for a hearing.

Examples of Residential Energy Efficiency Programs

Program	Description
Lighting	Incentives paid to retail partners to discount the price on high efficiency lighting products
Energy Efficiency Products	High efficiency water heaters, window air conditioners and smart strips will be promoted through rebates and incentives
Heating, Ventilation and Air Conditioning	Diagnostics/tune-up, retrofit, and replacement upgrades for air conditioners, heat pumps and cooling systems
Refrigerator Recycling	Incentives paid to remove inefficient refrigerator or freezer, pick up and recycling and disposal of old units
Home Energy Performance	Energy assessment, direct install measures and cost effective follow up measures
ENERGY STAR New Homes	Targets builders and energy raters with incentives for construction of ENERGY STAR homes
Low-Income	Delivers energy savings to low income qualifying customers through direct install measures and appliances

How Do You Measure the Cost-Effectiveness of Demand-Side Programs?

Energy efficiency programs must be cost-effective, unless the programs are targeted to low-income customers, are for general education campaigns or if the programs are funded by the customers participating in the programs or through tax or other governmental credits.

The Commission has established incremental annual energy and demand savings goals to serve as a guideline to review progress toward the expectation that the electric utility's energy efficiency programs will provide all cost-effective demand-side savings. The goals are not mandatory and there are no penalties assessed to a utility that is unable to achieve those goals.

Who Provides Input into Planning for Supply-Side and Demand-Side Resources?

The MEEIA rules establish both utility-specific collaborative groups and a state-wide collaborative group. Each electric utility is required to form an advisory collaborative that includes members of the Commission Staff, the Office of Public Counsel, the Missouri Department of Natural Resources, consumer advocates and various other groups (stakeholders) for input on the design, implementation, and review of energy efficiency programs. Utility specific collaborative meetings are encouraged to occur at least once each calendar quarter.

All electric utilities, the Commission Staff and stakeholders are also required to form a state-wide advisory collaborative to provide the opportunity for the sharing of lessons learned from energy efficiency program planning and implementation and to create a forum for discussing statewide policy issues. Statewide collaborative meetings are encouraged to occur at least once each calendar year.

Finally, each electric utility is also required to comply with the Commission's Chapter 22 Electric Utility Resource Planning rules regarding long-term planning. The rules require planning

for both supply-side resources and demand-side resources on an equivalent basis to meet future needs for annual electricity requirements and peak electricity capacity at the lowest cost to customers. Chapter 22 calls for active collaboration of each electric utility with the Commission Staff and other stakeholders during the planning process and during review of each utility's long term resource plan.

Who Evaluates and Verifies Electric Utility MEEIA Performance?

Each electric utility is required to hire an independent contractor to perform an evaluation on each Commission-approved demand-side program. The Commission is also required to hire an independent contractor to review and report on the work of each utility's contractor.

Who Pays for MEEIA?

The Commission promulgated two additional administrative rules (4 CSR 240-20.093 and 4 CSR 240-3.163) which allow for the establishment and operation of an electric utility's demand-side program investment recovery mechanism (Mechanism). The Mechanism may allow for periodic rate adjustments related to recovery of program costs as well as the recovery of lost revenues related to the programs and a utility performance incentive for investments in demand-side programs. The rules also set forth requirements related to MEEIA rate adjustment filings and annual reporting requirements.

Disclaimer: *This article has been written for the purposes of communicating timely concepts to the public and is not a position statement by the Missouri Public Service Commission or its Staff. Much of the technical terminology has been removed for ease of reading.*

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MEEIA Programs in Missouri:

What Has My Utility Done?

KCP&L-Greater Missouri Operations (GMO) (Case No. EO-2012-0009) -- On December 22, 2011, GMO filed a MEEIA case with the Public Service Commission seeking approval of programs (including both energy efficiency and demand response programs), and a cost recovery mechanism that would include cost recovery of program costs, a portion of the net shared benefits, lost revenues and a performance incentive mechanism. Under this proposal, GMO states it would incur approximately \$38.8 million in program costs over the next three years.

GMO anticipates that programs will result in \$105.1 million in total customer benefits (net of program costs) and have a cumulative annual energy savings of approximately 155,000 MWh and cumulative annual capacity savings of approximately 73 MW during the third program year. Various parties in this case have reached an agreement; that agreement has been filed with the Commission for its consideration.



Ameren Missouri (Case No. EO-2012-0142) -- On January 20, 2012, Ameren Missouri (Ameren) filed a MEEIA case with the Public Service Commission seeking approval of a broad portfolio of energy efficiency programs, a technical resource manual, and a cost recovery mechanism.

The proposed mechanism included cost recovery for program costs, lost revenues and performance incentives. The Commission approved an agreement on August 1, 2012, which included approximately \$147 million in energy efficiency program costs over the next three years.

The new energy efficiency programs are expected to be implemented on January 2, 2013. The programs are anticipated to result in \$336.6 million in total customer benefits (net of program costs) and have a cumulative annual energy savings of approximately 793,000 MWh during the third program year.

Power Generators Are Aging:

How old are U.S. power plants?

The nation's current fleet of electric power generators has a wide range of ages.

Most coal-fired plants were built before 1980. There was a wave of nuclear plant construction from the late 1960s to about 1990.

The most recent waves of generating capacity additions include natural gas-fired units in the 2000s and renewable units, primarily wind, coming online in the late 2000s.

The nation's oldest power plants tend to be hydropower generators. For example, the first U.S. hydroelectric power plant opened on the Fox River near Appleton, Wisconsin, on September 30, 1882.

(Source: U.S. Energy Information Administration)

