



## MEMORANDUM

**TO:** Chairman Phillip Schmandt, Electric Utility Commission  
Chairman Leo Dielmann, Resource Management Commission

**FROM:** Karl R. Rábago, VP of Distributed Energy Services

**DATE:** November 14, 2011

**SUBJECT:** Update on Strategy to Reach 800 MW of Peak Demand Savings by 2020, per Resolution No. 20111006-060

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On October 6, 2011, City Council approved a resolution directing staff to provide a report by December 2, 2011 on the current strategy to reach the adopted goal of 800 MW of peak demand savings by 2020.

The Resolution directed Austin Energy to report on the following energy efficiency project initiatives:

- Status of the energy efficiency technical potential study, and any related analysis on revising the stated energy efficiency goals,
- Progress made on exploring an auction-based system for large commercial energy efficiency projects,
- Status of reviewing the limit for funding energy efficiency projects,
- Current and future budget levels needed to achieve the goals adopted by prior City Council action, specifically considering the proposed rate redesign currently underway and how its passage may affect progress, and
- Any other initiatives being considered by the utility.

The following is the current status to fulfill the City Council direction stated in the resolution.

# **Preliminary Report on Austin Energy's Strategy to Reach 800 MW of Energy Efficiency per Resolution No. 20111006-060**

## **Overarching Principles**

- Energy efficiency will be the first priority in meeting new load growth.
- Increase the energy efficiency goal from 800 MW to 1,000 MW, if viable and cost-effective.
- Maximize the investment in energy efficiency that Austin Energy is willing to make and increase or eliminate the cap for AE investment in individual customer improvements that both reduce peak and total demand for energy.

## **Status of Energy Efficiency Potential Study**

On March 24, 2011, the City Council authorized Austin Energy to enter into contracts with three nationally recognized demand side management (DSM) consulting firms: KEMA, Inc., GDS Associates, Inc., and ICF International. The service contracts with these consultants will provide expertise in DSM technical analyses and evaluations of specific energy efficiency project initiatives to assist the utility achieve the goals initiated in the Austin Energy Resource, Generation and Climate Protection Plan to 2020.

Project No. 6 of these DSM service contracts entails conducting an energy efficiency potential study to determine the technical potential, economic potential and achievable program potential in Austin. Understanding the achievable market potential for energy efficiency will provide the foundation for Austin Energy to tackle the critical tasks in developing an integrated roadmap for implementation of a comprehensive, cost-effective energy efficiency program. The results of this study will be used by AE to identify where the greatest potential energy and demand savings remain and which technologies offer the most cost-effective opportunities for energy efficiency and demand savings. Based on the findings of the potential study, AE can determine if the current Climate Protection Plan goal of 800 MW of demand savings by 2020 can be increased to 1,000 MW.

On November 2, 2011 a "Scope of Work for Energy Efficiency Potential Study" was issued to the three DSM consulting firms. Proposals for this work are due on December 2, 2011 and one firm will be selected to complete the potential study. A pre-proposal conference was held on November 10, 2011 to answer any questions by the three consulting firms. It is estimated that the potential study will take 4 – 6 months to complete. Other energy efficiency projects currently underway as part of the DSM consulting services contracts includes the following:

1. Power Factor Automation Tool
2. Demand Response Solutions for Commercial and Industrial Sector
3. Cost-effective Measure for Multi-family Properties
4. a. Evaluation of ARRA Low-income Weatherization Program  
b. Evaluation of Home Performance with Energy Star
5. Demand Response for Residential Customers
6. Energy Efficiency Technical Potential Study

## **Progress made on Auction-based System for Large Commercial Energy Efficiency Projects**

AE is currently conducting informational data gathering to study the capabilities to increasing the investment offerings for customer-related energy efficiency improvements. One innovative method for enhancing cost-effective energy efficiency is an auction based system that offers more opportunity to deliver greater energy savings for large electric use customers. Auction based systems are designed for commercial and industrial projects that do not fit cleanly within the standard prescriptive menu of rebates and incentive programs. Efficiency auctions are designed to fill this gap, allowing customers to participate in a competitive bid process where they can propose to save a specific amount of energy in exchange for a specific utility incentive. Customers can propose efficiency projects for existing or new facilities. The auction based program encourages customers to take a performance-based systems approach to energy efficiency through improvements such as more accurate process controls, better integration of process equipment, better use of plant utilities, and greater use of energy recovery opportunities. Increasing the maximum investment per kW or kWh of savings for customer related improvements can also include increasing or eliminating the cap for AE investment so long as such investment is financially sound and not unduly risky. Efficiency auctions are designed to encourage vendors and customers to go beyond the prescriptive upgrades, seek savings from other viable technologies, and mitigate competition from other existing commercial efficiency programs.

Two electric utilities that have auction based efficiency programs are Mid American Energy in Iowa and San Diego Gas & Electric. Mid American issues requests for proposals (RFP) twice a year. Eligible projects must produce electric energy savings of at least 200MWH; savings must be achieved through an increase in energy efficiency (behavior change initiatives, reduced plug loads not eligible). Energy efficiency improvements must have a useful life of 10 years. A total of 57 Mid American customers were eligible to participate in the 2004-2005 efficiency bid program.

San Diego Gas & Electric established their auction/bid program in 2004 and targets electric projects that will result in electricity savings of at least 500,000 kWh and natural gas savings of 25,000 annual therms. All commercial customers are required to benchmark their facility in order to participate in the program. Participants can aggregate projects/facilities. New construction projects, co-generation, and fuel-switching projects are not eligible.

Other auction based energy efficiency big programs reviewed include:

- Missouri State Energy Office
- WPPI Energy – Wisconsin
- Xcel Energy – Minnesota.

Once the research into how other utilities are conducting auction systems, the next steps are to develop a framework from which AE auction based system will be established; seek internal and external stakeholder input; and develop a process for implementation including testing out the auction system.

### **Status of Reviewing the Limit of Funding Energy Efficiency Projects**

Austin Energy regularly reviews the investments and incentives offered for energy efficiency to make any necessary adjustments as appropriate to encourage customer participation, greater energy and demand savings, while ensuring fiscal responsibility. On an annual basis, Austin Energy conducts an end-of-year performance assessment of its energy efficiency programs to determine the cost-effectiveness of the utility's investment in energy efficiency.

The Demand Side Management (DSM) Performance Measures Report is prepared each year following the end of the fiscal year (September 30<sup>th</sup>) and is published in the first quarter of the next year. On a program by program basis, performance measures reported include: annual customer participation, annual peak demand reduction (MW), annual energy savings (MWH), avoided costs (\$/kW saved), benefit-cost analysis, and emissions reductions.

Austin Energy is also studying the capability of increasing the maximum investment per kW or kWh savings that the utility is willing to make in energy efficiency and demand response program offerings. Current evaluation studies underway include:

1. Demand Response Solutions for Commercial and Industrial Sector
2. Cost-effective Measure for Multi-family Properties
3. a. Evaluation of ARRA Low-income Weatherization Program  
b. Evaluation of Home Performance with Energy Star
4. Demand Response for Residential Customers
5. Energy Efficiency Technical Potential Study

### **Status of Reviewing the budget levels considering the proposed rate design currently underway and how its passage may affect progress.**

Austin Energy is exploring innovative rate design changes to encourage and promote further investments in energy efficiency by electric customers. AE's rate review process is proposing and energy efficiency community benefits charge that will establish a foundation for additional investments in energy efficiency. The energy efficiency charge is proposed as a fixed recovery fee and will be collected on a \$ per kWh basis. Funds recovered will support Energy Efficiency Services and Green Building rebates and incentive programs. This energy efficiency charge removes any related costs from the current base rate calculations and using the test year 2009, the energy efficiency charge could recover up to \$28 million for rebates and incentives. A formalized annual reconciliation process will determine any required fee changes which will be requested through the City's annual budget process. Another community benefit charge under the Customer Assistance Program (CAPs) will support free home weatherization services for low-income customers.