




## MEMORANDUM

**TO:** Mayor and Council Members

**CC:** Marc A. Ott, City Manager

**FROM:** Mark Dombroski, Interim General Manager 

**DATE:** April 7, 2016

**SUBJECT:** Residential Pilot Programs for FY 2016

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Austin Energy introduced three small pilot programs for small groups of residential customers in FY2016: Time-of-Use, Prepayment, and Plug-In Electric Vehicle Charging. Tariff language was modified to accommodate these pilot programs in the FY2016 Budget process and, prior to approval of the budget on September 10, 2015, staff discussed the three pilot programs with Council.

The purpose of the residential pilot programs is to offer new or alternative rate options to groups of residential customers, gauge customer response, and evaluate technical impacts. All three pilots are on an opt-in, first-come, first-served basis for a limited period of time. The limited, temporary nature of each pilot program allows Austin Energy to evaluate each proposal and determine if the programs are effective and provide benefit to customers. Additionally, these programs will allow Austin Energy to use data analytics to gain insight into customer behavior and use of the electrical grid to help improve efficiencies within the system.

### Background

The deployment of advanced metering across Austin Energy's network created an opportunity to consider alternative utility service rate structures. The objectives below will be the main criteria for evaluating the pilot rates deployed during the studies:

1. Determine if one of the piloted rate structures more effectively promotes energy conservation than the current seasonal, tiered-rate structure.
2. Determine if one of the piloted rate structures more efficiently utilizes existing generation resources by encouraging customers to reduce their daily demand during peak hours and more evenly utilize electricity throughout the day than the current seasonal, tiered-rate structure.
3. Determine if customers have a preference for one of the piloted rate structures over the current seasonal, tiered-rate structure.
4. Ensure adequate revenues are equitably collected through the piloted rate structures to meet the revenue requirements for the residential customer class.
5. Investigate the effects of pricing signals within the residential sector and their ability to change customer behavior.

6. Determine the metering, telecommunication equipment, and integration costs involved along with possible benefits such as reduced fuel or regulatory costs, or other gains.

These residential pilot programs are necessary to evaluate possible future rate choices for Austin Energy's customers. The Time-of-Use and Plug-In Electric Vehicle pilot programs are limited to a participation of 100 individual accounts, while the Prepayment pilot is available to a maximum of 300 participants. All the pilots are offered on a first-come, first-served basis, unless stated otherwise on their applicable rate schedule. Each pilot is set to expire prior to next fiscal year. The three rate structures to be studied during the pilot projects are summarized below.

***Time-of-Use:*** Time-of-Use (TOU) rates send price signals to customers encouraging conservation at peak, high cost periods and shift consumption to less critical, lower cost periods.

The pilot TOU leaves base rates constant and charges a higher PSA when electricity is in higher demand; this is referred to as the "on-peak" period. These periods of higher demand are primarily attributable to cooling loads in the summer and heating loads in the winter; therefore, the tariff rate increases when electricity is in higher demand to reflect the higher costs of generating electricity during those peak periods. As such, the price signal of the TOU rate more accurately represents the cost of providing electric service than does a tiered-rate. The TOU pilot started January 1, 2016, and currently has no participants.

***Prepayment:*** The Prepayment project consists of a five-month pilot to test the feasibility of providing a prepay option for our customers in the future. The purpose of the pilot is to determine the processes, rules, and systems required to implement a prepayment program. The pilot is scheduled to start on May 2, 2016, and conclude on September 30, 2016. The voluntary program is limited to Austin Energy customers that do not receive water/wastewater service from Austin Water. Customers receiving benefits through the Customer Assistance Program may not participate in the Prepayment pilot program due to complexities with billing.

During the pilot, volunteer customers will actively manage their account by keeping a positive balance. Pilot participants will have access to daily consumption information and daily charges via a web portal and phone application. Participants will manage their accounts by making payments via existing payment channels. Participants will also determine the way and type of communication they want to receive about their prepay balance. They will continue to receive a monthly bill, which will remain the primary source for account information. Austin Energy's research from other Prepayment programs reports a decrease in average consumption and an increase in customer satisfaction. Austin Energy will measure a variety of factors during the pilot to determine if participants received similar benefits.

***Plug-In Electric Vehicle Charging:*** The U.S. Department of Energy expects a substantial increase in electricity usage and peak demand from high adoption areas with Plug-In Electric Vehicles (PEV); Austin is ranked 6th based on the number of PEVs on the road. Travis County's PEV registrations have increased over 5,900 percent in the last year and this trend looks to accelerate in the coming years as more models come to the market and prices continue to fall. Therefore, Austin Energy needed to get out in front of this wave of demand on the electrical grid by providing the right price signals to charge during non-peak periods, especially at night when inexpensive wind energy is available. Thus, Austin Energy set two PEV delivery charges; one is below 10 kW, which is based on the average energy used by the Nissan Leaf and similar models. The second PEV charge is above 10 kW, based on the average energy used by Tesla and Porsche, which have greater charging capacity.

The PEV pilot offers a flat monthly fee of \$30 or \$50 based on PEV charging demand. The PEV charging pilot started January 1, 2016, and while Austin Energy received many inquiries about the program, there are currently no participants. Austin Energy is still in the process of setting up the operational and administrative processes to support this pilot.

**Approval**

Austin Energy included the residential pilot programs in its FY2016 budget documents under the City of Austin Electric Tariff, Residential Service Pilot Programs. The document presented the application, character of service, terms and conditions, and the applicable rate schedule for each pilot program. Austin Energy discussed the residential pilot programs with City Council on September 10, 2015, during the budget reading. They were adopted as a part of the FY2016 budget as Ordinance No. 20150908-003.

**Summary**

Trends in the electric utility industry include customer choice in rate structures that meet different needs. These pilot programs are supported by rate design principles, provide incentives for energy conservation, promote the efficient use of resources, and encourage consumer investment in energy efficiency. Austin Energy plans to collect data throughout the pilots and, if the programs warrant, Austin Energy will develop a business case for review and approval by Council.

Please let me know if you have any questions.