

Proposal Concerning Modifications to LIPA's Tariff for Electric Service

Requested Action:

LIPA Staff proposes revisions to the Tariff for Electric Service. Specifically, Staff proposes that the tariff be revised to add a new "Service Classification No. 16 Advanced Metering Initiative (AMI) Pilot Service". The purpose of the AMI Pilot Service is to understand how new advanced metering systems can interact with time-differentiated rates for residential and non-residential customers in certain geographical areas, and impact customers' interest in and response to time-differentiated rate structures.

The requested Tariff change will include:

1. modified rating periods for residential and small commercial customers
2. tariff language to allow residential and small commercial customers to transfer between their current classification and the new AMI Pilot Service Classification No. 16.
3. a new "Statement of Advanced Metering Initiative Pilot" to describe the parameters and characteristics of the AMI Pilot Initiative.
4. extension of eligibility for commercial modified rating periods to participants in the AMI Pilot Service Classification No. 16.

Background:

LIPA is deploying and testing an Advanced Metering Initiative (AMI) that will enhance LIPA's communications with individual customers which is being promoted by LIPA on Long Island. Similar systems are being promoted by the Public Service Commission in the rest of New York State. One of the potential benefits of AMI is the ability to offer time-differentiated rates and supporting services that will better enable customers to use energy more efficiently. The potential advantages of AMI need to be investigated through experimental deployment of AMI technology in limited areas of LIPA's service territory. Also, there is a need to investigate the enhanced rate designs for customers in the hope of promoting greater energy conservation and improved customer satisfaction

LIPA Staff proposes the creation of an AMI Pilot Service that will offer experimental time-differentiated rates to customers who volunteer for the program. The experimental rates will offer shortened on-peak hours compared to LIPA's existing time-of-use rating periods. It is expected, based on studies reported elsewhere in the United States, that customers can respond better to on-peak price signals if they cover only the most expensive hours of the day.

The proposed on-peak hours for the Residential and Small Commercial Modified Time-Differentiated Pricing component of the experimental Pilot Service are weekdays for five hours between 2 PM to 7 PM. These hours tend to be the most expensive, highest

load hours of the year. For LIPA's existing Residential and Small Commercial multiple rate periods programs, the time duration is currently ten to twelve hours a day.

Modified time of use rating periods already exist for large demand-metered commercial customers, but eligibility is currently limited to customers that qualify for business development incentives or negotiated contracts (Service Classification No. 13). Under the existing modified rating periods for large commercial customers, the on-peak period begins at 3 PM and ends at 8 PM or 10 PM, depending on the rate code chosen. Relatively few customers qualify for the modified rating periods under the present Tariff, and staff proposes to extend the eligibility to customers participating in the AMI Pilot Service in order to gain greater experience with the opportunities for larger commercial customers to modify their behavior in response to greater information and shorter on-peak rating periods.

The purpose of this "proof of concept" Pilot Service experiment is to determine whether customers can respond better to shorter on-peak periods, and to a near real time utility pricing. A limited number of "proof of concept" experiments have been planned over the next several years to test the operational capabilities of the AMI technology and its ability to interact with LIPA's distribution system. Customers in the deployment zone will receive the new AMI meters and access to utility pricing signals and other information about their usage on a near real time basis.

Under this experimental Pilot Service, Staff proposes that some customers located in the deployment zones be allowed to volunteer for these experimental rates. The combination of high on-peak prices for the shorter on-peak periods and more information on consumption may promote greater levels of energy efficiency than would occur under LIPA's existing rates. Comparing the usage of customers that have AMI technology to the usage of customers without AMI technology under different pricing regimes (non-time-differentiated rates and the proposed experimental time-differentiated rates) will better allow Staff to determine the relative merits of AMI with and without the pricing options in promoting energy efficiency and improved system performance.

Staff proposes to roll out the AMI "proof of concept" experimental Pilot Service in certain geographic areas over the next several years. The first experimental sites are proposed for the former Bethpage Utility District and the Hauppauge Industrial Park. Staff would issue a Statement that specified the number and type of customers that may be eligible in each separate deployment, the locational and other requirements for eligibility to participate in the Pilot Service, and other terms and conditions that might be required for participation in that specific experiment. Participation in the Pilot Service would be limited to 3 years for any individual customer and authorization for the Pilot Service would be closed to new participants in 5 years from the initiation of the experiment (i.e., by late 2013).

As Staff gains more experience with modified time of use pricing and the capabilities of customers to use the increased information available through AMI to modify their behavior, it is expected that additional pricing options may be requested

from the Authority. Two additional features that are under consideration are real time pricing (RTP) and increased price differentials between on-peak and off-peak rates. Real time pricing will allow customers to pay the market price established for the Long Island service territory (Zone K). Customers that can respond to changing energy prices on a daily or hourly basis can capture significant benefits by redirecting their consumption to the least expensive times of the year. Similarly, greater price differentials between the on-peak and off-peak hours will provide additional benefits and motivation to customers that can shift their discretionary consumption between weekdays and weekends, and between peak hours and off-peak hours. On-peak prices are approximately 2 ½ times greater than off-peak prices under the current residential rate, and increasing the on-peak price to 3 or 4 times the off-peak price in the future will provide even greater incentives to shift discretionary consumption away from LIPA's peak hours of the year.

Staff is not requesting these changes now because significant modifications to LIPA's billing and data management systems will be required before these alternatives can be offered to customers. Additionally, Staff desires to gather more experience with customer behavior and expectations, based on the current proposal, before experimenting with these more advanced forms of time-differentiated pricing.

Proposed Tariff Changes:

Add a new "Service Classification No. 16 – Advanced Metering Initiative (AMI) Pilot Service"

Affected Tariff Leaves: 6, 100,279G, 279H, 279I, 279J, 316 and proposed "Statement of Advanced Metering Initiative Pilot" (LIPA Statement No. 1-AMIP)

Reason for Tariff Change

LIPA Staff recommends that the tariff revision be made to allow the implementation of an AMI Pilot Service that will offer experimental Time-Differentiated rates to customers who volunteer for the program.

Financial Impacts:

LIPA Staff's proposal is intended to mitigate the financial impacts of the Time-Differentiated rates because participation will be limited to no more than 2,000 customers, and because any reduction in usage is expected to produce corresponding savings in LIPA's fuel and purchased power expense.

Two experimental rates are proposed for the AMI Pilot Service:

- Residential and Small Commercial Modified Time-Differentiated Rate Periods (M188 and M288)
- Large Commercial Modified Time-Differentiated Rate Periods (M282, M284 and M285)

In each case, the only difference between the modified and unmodified time-differentiated rates is fewer on-peak hours under the modified rates.

Staff is in the process of enrolling approximately 200 participants in the operational aspect of the experiment in the first year to test whether the AMI hardware and software perform as expected: 100 residential participants and 100 commercial participants split approximately equally among the Small Commercial, Large Commercial and Mandatory TOU rate classes. The annual bill savings that might be experienced by these 200 participants based on current usage patterns has been estimated to be approximately \$110,000, which represents lost revenue to LIPA. Since this new rate design is largely experimental, significant attention will be paid to the bill impacts among participants under the initial experiment, and Staff will incorporate these initial impacts in future enrollment decisions and proposed design changes to the experimental program for future years. Notwithstanding these anticipated improvements to the program design and more focused participation criteria, expanding the experiment to the maximum level of 2,000 participants could result in a maximum annual revenue impact of \$1.1 million.”

To encourage customers to volunteer for the program and because individual customer usage varies from the typical customer, LIPA will ensure that participants in the Pilot Service do not ultimately pay more than they would have been charged in connection with the application of their standard rates. Accordingly, at the end of each year, the participating customers’ bills will be calculated under their former rates for the actual amount of energy they consumed, and a credit will be issued if the amount they actually were billed, exceeds what they would have been billed under their former rate. These customer bills will have no financial impact on LIPA, since they will be paying the standard rates.

It is anticipated that customers will use less energy as a result of participation in this experiment, and shift their usage to less expensive times of the day and week. As a result, it is also anticipated that LIPA’s fuel and purchased power costs will also be reduced. This beneficial offset to the revenue loss will also contribute to minimizing the financial impact of the experiment on LIPA and its ratepayers. Presently, it is not exactly known how customers would respond to the experimental price signals, and, therefore, no estimate of the reduction in revenues or fuel and purchased power costs have been included.

Because of the potential revenue loss to LIPA from the modified rating periods, the proposed tariff modifications include limitations on the number of customers that can participate in the experimental Pilot Service. By limiting the number of participants in the Pilot Service at any one time, the overall financial impact is limited. As more experience is gained with the AMI Pilot Service and as customer reaction to the experimental time of use rates is more fully understood and quantified, Staff will be able to better gauge the financial impact from this Pilot Service and reflect those impacts in its revenue forecasting and annual budgeting process.

Summary of Proposed Changes:

In summary, the proposed changes to LIPA's Tariffs for Electric Service will add a new Service Classification No. 16 – AMI, add a new Statement of Advanced Metering Initiative Pilot and add tariff language to allow customers to transfer between their current classification and the new Service Classification No. 16 –AMI. The proposed revised Tariff Leaf Nos. 6, 100, 279G, 279H, 279I, 279J, 316, and LIPA Statement No. 1 - AMIP are attached.