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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE INVESTIGATION TIME-OF-USE PRICING FOR IDAHO POWER RESIDENTIAL CUSTOMERS.	))))	CASE NO. IPC-E-02-12

Comments of the Demand Response and Advanced Metering Coalition (DRAM)

The Demand Response and Advanced Metering Coalition (DRAM)[1] is a policy organization comprised of utilities, public interest groups, metering and communications companies and demand response providers. DRAM's interest is in providing input and information to parties that are examining or implementing demand response programs, particularly those focused on the mass market customer. We appreciate the opportunity to provide comments to the Commission and other interested parties in Idaho and hope that they will be of assistance relative to the subject proceeding.

Introduction

Given the potential benefits from demand response that have been demonstrated and estimated by many experts, and in particular those stemming from the option of dynamic pricing, it is prudent at the present time for all state regulators to be examining the level of benefits, as well as how to capture them, in their specific state. Therefore, DRAM believes the Commission is acting appropriately at this time to explore time-based pricing

[1] DRAM members participating in these comments include: eMeter, SchlumbergerSema, Landis + Gyr, MeterSmart, DCSI/TWACS, Echelon, Puget Sound Energy and the Alliance to Save Energy. More information on DRAM can be found at www.dramcoalition.org.

in the present proceeding. DRAM also concurs, however, with the statement of Idaho Power Company (IPC), as expressed in their motion of October 4, 2002[2], that there are a "myriad" of issues to be considered in moving forward with such pricing programs. In its review of the Commission's order and IPC's report pursuant to such, DRAM finds that many of the necessary issues have been raised but that in some cases insufficient or possible inaccurate information is provided on them. DRAM also finds that some issues may not have been introduced at all in this proceeding to date. DRAM therefore respectfully submits its comments in an attempt to highlight these issues and provide an additional viewpoint for the Commission and other affected parties in Idaho to consider as they move forward in this proceeding.

Background

It is assumed that there is agreement among the Commission and the parties that a valid objective for utilities and providers is for customers to better understand their electricity usage so as to take steps to manage their usage and reduce their bill. The present system of rates and tariffs runs counter to such an objective in that customers are unable to see any link between the cost they pay for electricity and the time-dependent cost to produce and deliver that electricity. It is further assumed that the parties would agree that providing customers with choices in the way they buy electricity is something that customers would like to have, but would also agree that such choices come not only from deregulation and introduction of a choice of competitive supplier but by providing different options from the existing provider. Yet another point of agreement would be on

[2] Idaho Power Company's Motion For Additional Time to File Reply Comments, Page 2

the fact that, as is pointed out in the IPC/Christensen Report, customers have repeatedly shown a willingness to respond to price signals.[3]

Providing customers with time-based pricing options addresses each of the above objectives and areas of agreement. It can also address a number of other mutual and respective objectives of customers, regulators and utilities, including control of market power, optimization of system planning and expansion and reduction in utility operational costs.

Therefore the question is not whether dynamic pricing is a good idea; there appears to be agreement that it is. The question is instead whether the costs and benefits from it allow the initiation of such pricing in a particular situation or case. To properly address this question in a specific instance, it is necessary to not deal only with the cost and benefits directly attributable to customers and UPC from the pricing program being in place and in operation. It is also necessary to identify and factor in any additional benefits and costs which may be indirect or which accrue from the deployment of enabling technology put in place to allow the pricing program.

Indeed, an evaluation of dynamic pricing and other mass market demand response options becomes necessarily intertwined with an evaluation of the necessary enabling technology, with in most cases each becoming a driver for the other in synergistic fashion. It is also important to conduct the evaluation, as the Christensen report implies,

[3] Overview of Residential Time-of-Use Pricing – Problems and Potential, Christensen Associates, July 15, 2002, Pages 11-12

so as to not to focus only on Time-of-Use Rates but on dynamic pricing as an area of DR which provides several different options ranging from Real Time Pricing to Critical Peak Day Pricing. In this regard, the Commission needs to consider whether the right question has been asked in the proceeding to date, i.e. should TOU rates be initiated or whether the question should be focused on all dynamic pricing options.

Types of Meters

The IPC Viability Study filed with the commission states that IPC does not presently have metering equipment in place to record usage by time period for residential customers and then proceeds to describe two options which could be utilized: "standard" time-of-use meters or an automated meter reading system.[4]

DRAM would submit that the key to addressing metering choices is understanding the objectives being pursued and also the benefits, particularly indirect benefits, that each choice provides.

Standard time-of-use meters, as described, provide only one new specific new benefit. They enable time-of-use rates due to their ability to record usage in a specific pre-set period for billing purposes. Depending on the meter, however, this may simply be an accumulation of data in several time-based registers and not include data collection in hourly intervals. Under this scenario, the utility is provided with no new data, no new

[4] Residential Time-of-Use Pricing Viability Study – Report to the Idaho Public Utilities Commission, Idaho Power Company, September 12, 2002, page 32.

meter reading capabilities, and no new operational abilities. The customer receives no new benefit in terms of more frequent data access or presentation. Neither the customer nor the utility can benefit from changes to the TOU period because to change the periods would be a manual action. Also, this means that among the dynamic pricing options under the heading of demand response, only simple TOU rates can be implemented. Other options such as Critical Peak Day Pricing cannot be.

An automated meter reading (AMR) metering system, per say, does not enable TOU pricing/rates. The functional objective of AMR is to automate and streamline the meter reading operation so as to reduce meter reading costs. An AMR system does not necessarily provide the interval measurement necessary for dynamic pricing and, in most cases, a basic AMR system does not increase the frequency of data access and presentation to the utility or the customer. Monthly reads is still the norm. Communication with these basic systems is typically one-way to a mobile receiver (a van).

Important to note, however is that with either a standard or advanced AMR system, the benefit to a utility whose existing meters are of the older, conventional, non-AMR type can be great. Several utilities in recent years have undertaken AMR deployments based on a business case supported by savings in meter reading operations.

The type of meters most closely associated with demand response is referred to as advanced meters. These meters provide automated meter reading functionality but do so by way of a fixed communications network which provides flexible two-way communications capability. These meters are defined by having the ability to deal with data according to several parameters:

1. Recording and measurement of data on at least an hourly interval basis
2. Retrieval by/Transmittal to the utility on at least a daily basis
3. Customer access to usage data on at least a daily basis (via a free website)
4. Provision of interval based usage and pricing data to customers on at least a monthly basis (via the monthly bill).

These advanced meters provide the most benefits to customers, the providing utility, and to regional operating entities among the three meter types discussed above.

Costs of Meters

The IPC Viability Study indicates in numerous instances that the "high" cost of metering makes TOU/dynamic pricing prohibitive from a cost effectiveness standpoint. The cost data for use in determining cost effectiveness are found on page 32 of the report.

- The average meter cost per customer for a standard time-of-use meter is said to be $145, with the total cost being approximately $47 million for deployment to IPC's approximately 300,000 customers.

- incremental cost of the TOU meter compared to the standard meter now installed for residential customers would result in an increased charge to customers of about $1 a month.
- The latest cost estimate to install an AMR system across Idaho Power s service territory is approximately $72 million.

Absent any other data being presented, DRAM offers the following questions/comments:

- It is unclear if the average of $145 is an average of all customer types or only residential customers. DRAM presumes the latter but, if so, would submit that an average cost of $100 is more appropriate for an advanced meter capable of allowing TOU pricing.
- It is unclear what incremental costs are being considered in the estimation of the $1 per month charge. It is also unclear over what period the $1 charge would be in effect.
- It is unclear whether the $72 million cited is this incremental cost and, in either case, what the cost consists of, i.e. different meters, additional system costs, etc.

The main cost differential between the standard TOU meters described in the IPC Viability Study and AMR or Advanced Meters is the cost of the communications system deployed. DRAM presents Table 1 as its understanding of current costs for the three metering types discussed above.

Table 1

Cost of Metering Technology

	Customer Type	Non Communicating Conventional Meter	Communicating AMR Meter	Non Communicating TOU Meter (standard)	Communicating Advanced Meter
Metering Costs	Mass market meter (single phase)	$25	--	$75-100	--
	Module to retrofit used mass market meter	--	$45-100	--	$45-75
	Mass market meter with communications built-in	--	$50-100	--	$50-100
	Large commercial meter (polyphase)	$175-300	--	$175-600	--
	Large commercial meter with communications	--	$300-1,000	--	$300-1,000
Meter Installation Costs	Mass market meter, scattered deployment	$50-100			
	Mass market meter, saturation deployment	$5-10			
	Large commercial meter, scattered deployment	$150-250			
	Large commercial meter, saturation deployment	$50-100			
Communications Network Costs[5]	(includes installation)	--	$2	--	$10-100
Total Metering & Communications	Mass market	$75-125	$52-200	$125-200	$70-225
	Large commercial	$225-400	$350-1,000	$225-700	$350-1,250

[5] Network costs vary according to volume. Cost range shown is for a minimum deployment of 50,000 points.

Based on a cost estimate of $100 per customer, which may be at the high end of the applicable cost range, the total cost for providing advanced metering to all 300,000 of IPC's residential customers would be approximately $30 million. This estimate is based on commercially available technologies installed on millions of customers in the U.S. While this estimate could conceivably rise due to special circumstances present in the IPC service territory, DRAM still believes that the estimate of $72 million for an AMR system as presented in the report is substantially too high.

Benefits

One of the challenges of demand response options is to identify the costs and benefits attributable to DR efforts. Accounting for all of the benefits may be by far the more difficult task of the two.

In its report for IPC, Christensen focuses on the costs and benefits of shifts by customers in usage and prices paid, as well as revenue gained or lost by the utility. The study also appears to address the benefits to non-participants and the system overall from dynamic pricing's effect on wholesale prices and the market power of wholesale prices. It is less clear as to whether the positive externalities that accrue to the region from an IPC program are accounted for; it does not appear as though they have been

DRAM does not present questions as to the modeling and analysis related to these benefits (and costs, in the case of the potential revenue impacts upon the utility).

However, DRAM does believe that other benefits of a dynamic pricing program are not addressed in the report, and suggests that these warrant further examination by the Commission should it decide to continue its exploratory effort. These include:

Benefits of Advanced Metering in Unrelated to Dynamic Pricing

- Distribution company benefits resulting from advanced metering with two-way, fixed network, automated communications.

  The introduction of an automated meter reading system as a replacement for a system of older, conventional meters couple with manual meter reading can lead to dramatic benefits to a distribution company. When deployed via a two-way fixed communications network, distribution operations personnel find themselves with new data, new functionality, lower costs and a number of other advantages. These include:

  - Outage Management/Response
    - Trip avoidance
    - Crew Optimization
  - Customer Care

        - More timely and efficient response to customers
    - Reduced Meter Reading Costs
        - Reduced labor costs
        - Avoided vehicle and equipment costs
    - Improved Meter Reading Accuracy
    - Reduction in estimated bills
    - Two-way communications ability and interactive messaging ability
    - Load control and management capabilities
    - Acquisition of new and different data
    - Improved forecasting
    - Distribution system optimization
    - Distribution system planning and expansion

- individual customer benefits
    - enhanced usage information - resulting in enhanced ability to practice energy management
    - additional rate options (customer choice of different product from same provider)

- system benefits
    - faster wholesale power cost settlements

- improved data
- improved forecasting
- system optimization
- system planning and expansion

Summary

DRAM commends the Commission and other parties in Idaho for their initiative in exploring dynamic pricing for mass market customers. We believe that the proceeding to date has been a good start in identifying the cost and benefits of dynamic pricing but yet we also believe the costs of the enabling technology, in this case advanced metering, may have been overestimated and that some of the benefits from deployment of advanced metering may not have been accounted for. DRAM would be happy to provide more detailed information on any of these issues.

Respectfully submitted this 6th day of December, 2002

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