STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 94-E-0952 -	In the Matter of Competitive Opportunities Regarding Electric Service.
CASE 00-E-0165 -	In the Matter of Competitive Metering.
CASE 02-M-0514 -	Proceeding on Motion of the Commission to Investigate Competitive Metering for Gas Service.

ITRON'S COMMENTS IN RESPONSE TO THE COMMISSION'S OCTOBER 10, 2007 NOTICE SEEKING COMMENTS REGARDING PROPOSED FEATURES AND FUNCTIONS FOR POTENTIAL INCLUSION IN AN AMI STANDARD.

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Introduction

In its Notice Seeking Comment issued on October 10, 2007, the New York Public Service Commission (Commission) requests public input on issues relating to the need for, and content of, standards for evaluating electric utilities' AMI filings in the above-referenced cases. As the leading manufacturer of automated metering reading (AMR) and advanced metering systems, and as an industry leader in the research and development of the next generation of advanced metering infrastructure (generally referred to as AMI or smart metering), Itron appreciates the opportunity to offer the following perspectives on the issues raised in this Notice.

In summary, Itron believes that Commission's policy objectives can be met by allowing utilities to choose from multitude of technically and financially prudent options and the public interest served in the near-term with a variety of automated and/or advanced metering deployments beyond simply those that comply with the proposed AMI standard. Any decision by the state's utilities should balance the deployment of new technology with a careful consideration of economical use and extension of their existing install base, to provide the ratepayers with accurate and reliable billing, application of time-of-use (TOU) rates on a voluntary basis, and information regarding their energy usage.

Beyond a Standard: Ratepayers Benefit from Range of Metering Advancements

In its 10/10/07 Notice the Commission opines on the importance of using a consistent standard when evaluating AMI filings, and then goes on to offer list of features and functions it proposes to include in such a standard. Before addressing the Commission's questions related to that list, Itron would like to review several current Commission policies regarding advanced metering that should not be altered by the questions raised in this Notice.

Directive to deploy advanced metering systems, "where feasible and cost effective"

"We direct electric utilities to develop and deploy, *to the extent feasible and cost effective,* advanced metering systems for the benefit of all customers." (8/1/06 Order, page 13) Itron supports this directive. We believe it's a prudent course for commissions to encourage their utilities to screen for technical and commercially-viable metering options that meet both the

utilities' business needs and serve the ratepayers' interests, as there could be some utility-specific circumstances where deployments complying with a single standard may not be feasible or cost-effective based on the operational and geographic characteristics, population profile, population density, and economic considerations unique to each service territory. Clearly, one size does not fit all.

The cost-effectiveness of advanced metering systems that had to meet the proposed AMI standard could be further jeopardized by New York State law prohibiting the Commission from mandating TOU rates for residential customers (Chapter 307 of the Laws of 1997 amended Public Service Law Section 66(27)(a)), which given the cost magnitude of the required investment, could result in the minority of residential customers who voluntarily "opted in" to the TOU rates cross-subsidizing the majority of customers who did not. (Results from Puget Sound Energy's advanced metering/TOU experience in Washington State suggest that without a mandatory or "opt out" program, penetration is very slow – i.e. less than 10% over 3-5 years.)

Remove regulatory barriers to utility investment in advanced metering

Just as the Commission noted in its 8/1/06 Order that previous Commission metering policy, based on unmet expectations for a competitive metering market, may have discouraged utility investments in advanced metering, Itron is concerned that the proposed list of functions/features, if required of all future metering deployments, could have the same net effect on securing investment in this critical energy infrastructure – investment which Governor Spitzer has identified in his *Clean Energy Strategy for New York* as being needed to "help drive down New Yorkers' energy bills."

AMR deployments should be included in advanced metering plans

"We encourage electric utilities to plan for deployment of cost effective automated meter reading and…to incorporate any automated meter reading proposals in their advanced metering plans…" (8/1/06 Order, page 24) Itron agrees. As we have previously commented in this case, Itron believes that utilities should be allowed to deploy AMR technologies that are able to meet their current operating requirements in a manner that is cost justifiable and provides a reasonable rate of return. We further support the Commission's position that "the benefits of automated

meter reading are substantial for utilities and ratepayers…(and they are)…entitled to take advantage of new technologies to realize these savings and customer service improvements." (8/1/06 Order, page 23) AMR deployments are especially beneficial where they can be migrated to support added AMI-type functionality, allowing utilities to leverage already installed and partially depreciated assets to support the subsequent upgrades, without stranded investment.

In it's 8/1/06 Order, the Commission directed electric utilities to propose advanced metering systems necessary to provide access to data and support hourly pricing programs. Both of these Commission policy objectives can also be accomplished with AMR and/or AMR with fixed network systems.

Electric utilities are best positioned to select metering solutions

"The State's interest is best served by allowing utilities to make decisions relating to the kinds of advanced metering systems they plan to install…" (8/1/06 Order, page 26) Itron agrees. As many other interests have recommended in the case, Itron supports allowing utilities to select metering systems from among the wide variety of available technologies and telecommunication methods most suitable for their service territories and specific system objectives, so long as the selected systems produce the desired types of data at the desired frequency with unimpeded access for all authorized entities.

Definitions and the AMI standard

Presuming that it's not the Commission's intent to preclude other advanced metering deployments deemed in the public interest via formalizing a desired set of functions/features for an AMI standard, Itron generally supports the Commission's interest in developing a consistent understanding of what characteristics define "AMI." From our marketing and regulatory experience across North America, it's clear that definitions for metering terms such as "automated," "advanced," "smart," and "AMI" can vary by jurisdiction. Hence, the Commission's interest for some in-state consistency with what metering systems qualify to be called "AMI" within New York is not misplaced.

Background on definitions

For the purposes of this case, the Commission could characterize electric metering into three segments: Automated Metering (or AMR), Advanced Metering, and Smart Metering (or AMI) – all with the potential to offer value and business case savings under the right circumstances.

In brief, an AMR system can be defined as one that automates the manual meter reading process and delivers accurate and reliable monthly meter readings to billing on a cycle basis. In additional to AMR capacities, advanced metering systems are capable of delivering interval data from all meters, can provide outage detection and restoration messages via the system, and support direct load control through add-on systems (e.g. paging). Finally, smart metering systems (AMI) have all the capacities of an advanced metering system, plus the ability to integrate demand response elements within the system, the capacity to allow a customer's active participation in energy conservation and demand response efforts that include, integrating direct load control where the utility sends signals to cycle load, and has the capacity to integrate indirect load control where the utility sends pricing signals and consumers program behavior of individual appliances as a response.

Proposed list of AMI features and functions

The list of AMI features and functions proposed by the Commission in the 10/10/07 Notice appears very comprehensive. It's similar to what the Public Utility Commission of Texas (PUCT) adopted earlier this year as part of its AMI standard. Itron was very involved in that commission's AMI standard-setting process. Based on that experience, we believe the Commission should strongly consider the length of time a standard setting process could take in this case. The regulatory and public input process in Texas (e.g. hearings, workshops, etc.), which resulted in the PUCT adopting an AMI standard with a feature set very similar to the one New York is proposing, took over two years to finalize. Hence a larger question for the Commission beyond what to include in an AMI standard, is how will ratepayers be served in the interim if all new metering infrastructure deployments are delayed until a final AMI standard can be approved? While there are legitimate augments about the economic and technical merits/risks

of various automated and advanced metering deployments; any variety of these metering systems offer the ratepayers substantial value in short/medium term over the status quo.

The 10/10/07 Notice references ZigBee as an example of an open standards-based communication protocol that could be included in the Commission's proposed list of features for an AMI standard. Itron, along with a diverse range of utilities and suppliers, is very involved in the ZigBee standard setting process. Virtually all the major AMI suppliers are members of the ZigBee Alliance, along with numerous utilities (e.g. CenterPoint Energy, Oncor Delivery, TXU Energy, Reliant Energy, Southern California Edison, San Diego Gas and Electric, Consumers Energy, DTE Energy and the Department of Primary Energy of Victoria Australia). This strong alliance of utilities and manufacturers are working together to offer a diverse set of interoperable products to empower consumers to actively and frequently participate in energy conservation and demand response. Specifically for the AMI and energy management and efficiency markets, this coalition of companies is developing solutions on a common ZigBee platform through a thorough certification process, which will ensure interoperability across AMI and in-home device suppliers. The certification process is expected to be finalized in the first quarter of 2008.

Itron would also note that at least one item included in the Commission's proposed standard, in practice, will rely on a Meter Data Management (MDM) system as part of an overall AMI implementation - specifically, bullet (f): "Direct, real-time (defined as a time lag of five minutes or less) remote read-only access for customers and/or competitive providers to meter data." In connecting a utility's CIS and other web-based systems, MDM software provides access to timely validated meter data and necessary billing determinants, which are not directly available from AMI data collection "head-end" software. Further, MDM provides a homogenous layer in a heterogeneous data collection systems environment, and enables system integration to support many of the other items in the Commission's proposed list. We would caution the Commission that real-time data access could over load an AMI system with a large volume of data requests unless there is some type of throttling capacity during peak times when user activity is highest.

One technical edit Itron would suggest to the Commission's proposed list would be to add the word "applicable" in between "all" and "ANSI" under the (a) bullet in the 10/10/07 Notice, as there are many ANSI standards that do not relate to metering.

An alternative the Commission could consider in the near term, which would give utilities a consistent benchmark for what an advanced metering system would entail, would be to use the Federal Energy Regulatory Commission's (FERC) definition until technical standards referenced in the 10/10/07 Notice are finalized. In its initial EPACT-mandated Demand Response and Advanced Metering Report issued in August 2006, FERC defined advanced metering as "a metering system that records customer consumption (and possibly other parameters) hourly or more frequently and that provides for daily or more frequent transmittal of measurements over a communication network to a central collection point."