

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

Proceeding on Motion of the Commission
in regard to Reforming the Energy Vision

Case 14-M-0101



**COMMENTS OF THE MISSION:DATA COALITION
*NOTICE OF TECHNICAL CONFERENCE REGARDING CUSTOMER AND
AGGREGATED ENERGY DATA PROVISION AND RELATED ISSUES***

1. INTRODUCTION

The Mission:data Coalition (Mission:data) is a national coalition of more than 35 technology companies delivering data-enabled services that focus on providing direct benefits to consumers. These services range from detailed energy usage analysis to demand response and device control. As we have stated in previous comments within the Reforming the Energy Vision (REV) proceeding, Mission:data believes that empowering consumers with convenient access to their energy data¹ with the ability to quickly and conveniently share that data with third parties of their choice will bring substantial benefits to consumers in New York and will advance the objectives of the REV initiative.

Background

Energy usage in homes and buildings makes up 41 percent of total primary energy use in the U.S.,² and 69 percent of total electricity use.³ Optimizing efficient operation of buildings, and efficiency investments can be a complex undertaking for individual customers. In the residential and small commercial sectors served by some of our

¹ By energy usage data, we mean to include electricity usage data made available from metering technologies (including interfaces such as near real-time data through the home/business area network (“HAN/BAN” or “HAN”) and backhauled billing-quality data through Green Button Connect, including historical data) as well as data related to pricing, charges and tariffs that enable consumers to easily understand the impacts of their energy use decisions, as further described.

² Energy Information Administration, U.S. Department of Energy. <http://www.eia.gov/tools/faqs/faq.cfm?id=86&t=1>

³ EIA, http://www.eia.gov/electricity/annual/html/epa_02_02.html

members, where individual loads are smaller, the challenge has been particularly difficult. Today, software and information technologies can automatically be applied to energy-use decisions and customers can be readily informed of actions they can take to save energy. This new capacity can reduce transaction costs while still providing customized, actionable information, increasing consumer confidence in efficiency or renewables. Energy management software products and services represent one of a number of exciting consumer resources for saving energy that have emerged as information technologies have evolved.

Because the most compelling new energy management technologies depend increasingly upon consumers having access to their energy usage and pricing data, Mission:data agrees with the Commission that a leading priority in this proceeding must be “[e]nhanced customer knowledge and tools that will support effective management of their total energy bill.”⁴ Placing the power of data in the hands of consumers and their chosen service providers enables substantial efficiency gains and reductions in carbon pollution while fueling compelling clean energy and high-tech jobs.

Mission:data and our member companies therefore strongly support a central objective of this proceeding: providing consumers with convenient access to their own energy data and mechanisms to share that information with service providers of their choosing.

Benefits of Consumer Data Access

The members of Mission:data share a simple vision: that consumers should have access to the best available information about their own energy use, what it costs them and the ability to share that information with the companies they trust and value.

Providing consumers with robust data access mechanisms and affirmative policies will lay the foundation for achieving three critical objectives: (1) empowering consumers; (2) scaling clean and efficient energy technologies; and (3) promoting economic development.

⁴ REV OIR at 2.

1. Consumer Empowerment: As noted in the REV OIR, consumers have unique interests, including energy savings, comfort and environmental considerations. New technologies increasingly offer consumers the means to recognize and respond more than ever to price signals⁵ and to cost-effectively generate and save energy in ways that were unavailable until recently. As such, policies should provide consumers with access to their own usage information to use as fits their particular needs and interests. Such a policy framework is consistent with federal policy, best practices from other states and long-standing NARUC resolutions that seek to provide consumers with “the benefits of the deployment of the smart grid promises.”⁶

2. Energy Efficiency: The research literature shows that providing consumers access to their energy usage information can drive significant savings in energy usage and demand response. Improving data access policies will increase the ability of New York to achieve significant improvements in energy efficiency, both through regulated programs and offerings from the private sector that are outside of traditional programs.

3. Economic Development: Mission:data includes within its membership companies that are actively developing products and services to help consumers save money and energy and participate more fully in energy markets. Several of our companies are based in New York State. Ensuring that data access policies are given full consideration will help drive a robust market for energy management services within New York and position this state for economic leadership in this sector.

As the Mission:data Coalition has stated in previous comments within the Reforming the Energy Vision (REV) proceeding and other proceedings before the Commission, empowering consumers with convenient access to their energy usage data with the ability to quickly and conveniently share that data with third parties of their choice is critical to bringing substantial energy savings to consumers in New York and advancing the objectives of the REV initiative. Energy usage in homes and buildings makes up more than consumption by transportation or industry, and data-driven strategies being developed across the country now represent among the most powerful, cost-effective tools for better managing and reducing this energy use.

⁵ Katrina Jessoe and David Rapson, *Knowledge is (Less) Power: Experimental Evidence from Residential Energy Use*, University of California, Davis, April 18, 2013, p. 3

⁶ NARUC Resolutions, July 2010

2. GENERAL REMARKS

The REV Initiative seeks to establish new market-driven solutions and overall “market animation.” Data solutions are fundamental to any functioning marketplace. Without the working knowledge of their own energy profile provided by a robust data-access framework, there is no way for consumers to meaningfully engage in a market and take advantage of the offerings.

Furthermore, functioning markets allow consumers not only to reveal, but, indeed, to discover their own preferences. As a notable scholar of innovation recently observed about the UK’s electricity market (a market that has served as an inspiration for this proceeding), “One crucial aspect of consumer benefit that is underappreciated is the effect of innovation on the benefits that consumers enjoy.” This is because, “In dynamic markets with diffuse private knowledge, neither entrepreneurs nor policy makers can know *a priori* which goods and services will succeed with consumers and at what prices. Similarly, consumers’ preferences are not fixed and known, either to others or even to themselves. Consumers learn their preferences through the process of evaluating available choices in a marketplace, and analyzing the relative value of those tradeoffs over time. The set of available consumer choices itself changes due to entrepreneurial activity.”⁷

In short, we don’t know what consumers want because they themselves have not yet discovered what they want. A functioning marketplace, enabled by robust data, is required for that discovery.

Therefore, Mission:data proposes three fundamental framing questions for the inquiry related to customer and aggregated energy data provision:

1. Should an affirmative data access policy and framework be established?

We believe the Commission can and should establish a policy that affirms that consumers have a clear right to access the best available information about their energy use, including interval details where available, real-time information directly from the meters with HAN communications and the corresponding details of bill charges and tariff information. Consumers should be able to share that information

⁷ Power Up: The framework for a new era of UK energy distribution, Lynne Kiesling, Adam Smith Institute, November 2015, p.27. Available from <http://www.adamsmith.org/research/reports/power-up/>.

with whomever they choose, which means that it is machine-readable, adheres to industry standards and can be delivered through secure and convenient web service protocols; and, finally, this basic level of service – which is exactly what consumers are getting in every other sector of the economy – should be delivered as part of basic utility service, with any implementation investments included in base rates accordingly.

To date, the Commission has not established, within the context of the REV Initiative, a clear framework for what data consumers will be entitled to as part of basic service. As a result, there is ambiguity with regard to what information consumers and market participants can expect from the platform market envisioned.

2. What steps can be taken today to implement that framework, even if only part of the larger vision?

We believe the Commission can and should find that benefits will come from immediate implementation of consumer data access protocols. Even in the absence of advanced metering functionality, there is value today for consumers to be able to quickly, easily and securely share information about their energy use with service providers and renewable energy developers.

3. What are the appropriate boundaries between basic consumer service, neutral platform services and competitive markets?

We believe the Commission should clarify what information is provided to consumers as part of basic service, what information will be available to market participants from a competitively neutral platform provider and what services are considered competitive services. We believe that currently this ambiguity may hinder the development of a robust marketplace as envisioned by REV.

As further general remarks, we offer the following observations:

There is broad consensus on the record in support of consumer data access.

Indeed, nowhere within the record have any parties posited that consumers should not have access to their data and the right to share that information with their chosen service providers. While there may be differences with regard to how to address privacy concerns, the investments required and design of the markets, there is no evidence within the record that any party has argued against consumer access to their own information as anything other than their fundamental right.

Consumer Data Access is consistent with federal policy and previous Commission action.

Federal policy has consistently supported consumer data access. In particular, the 2007 Energy Independence and Security Act, declared that, “It is the policy of the United States to support the modernization of the Nation’s electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth and to achieve each of the following, which together characterize a Smart Grid,” including “Provision to consumers of timely information and control options....”

Direct action and funding supporting data access is found with the National Broadband Plan, American Recovery and Reinvestment Act of 2009 and the Green Button Initiative.

Similar, the Commission determined in a 2009 investigation regarding advanced metering systems that, “AMI systems must have the ability to provide customers direct, real-time access to electric meter data. The data access must be provided in an open, non-proprietary format.”⁸

Action is available to the Commission today

We believe that the Commission has several pathways available for immediate action that would bring benefits to consumer today. Our coalition includes companies that offer energy efficiency, bill management, load control, detailed disaggregation and other services in markets across the country today. In consumer markets today, millions of customers are benefiting from products like intelligent thermostats and services available from control software and analytic tools. These digital technologies offer innovations at the edge of the grid that were not possible before and the value of the

⁸ 09-M-0074

corresponding economic and environmental benefits raises the opportunity cost of not establishing a strong, forward-looking open data framework.

There is no reason why consumers in New York today should not enjoy simple, convenient access to their energy information. Even without the enhanced granularity that will come from future advanced metering functions, there are services and benefits today available to consumers from having convenient access to their basic monthly bill data and the ability to share that with their chosen and trust partners.

3. COMMENTS

The “Notice of Technical Conference Regarding Customer and Aggregated Energy Data Provision and Related Issues” outlines several specific questions addressed both consumer data and aggregated data. We limit our comments to the issues directly addressing consumer data access.

Mission:data offers several additional comments in accordance with questions outlined in the Notice:

Q. Are there protocols or alternatives to Green Button Connect that should be considered, and if so, what are the advantages and disadvantages of each alternative?

Green Button Connect is available today and should be implemented.

While we do not believe that the Commission should prescribe one single standard for data access, and we do not believe that Green Button Connect is a panacea for all data needs, we do believe that it offers an implementation pathway many years in the making, with strong industry and government support, and currently being used in other states with millions of customers.

There is absolutely no reason why consumers in New York shouldn’t enjoy the same level of access as consumers in other states, notably California and – in the near future -- Illinois.

Green Button was developed by utility industry leaders based on the “Common Information Model” developed by the collaborative efforts of industry leaders. Because the foundations of the standard are based from an international data model with strong industry support, it enhances the interoperability of the solutions available. We also note that, in addition to direct interoperability, there is also an industry infrastructure that has developed around the Green Button, including groups like the Green Button Alliance, which offers certification, and the Smart Grid Interoperability Panel, which is continuing to develop standards solutions. Further, federal agencies such as the National Institute for Standards and Technology (NIST) have and continue to support industry adoption of Green Button.

Electronic Data Interchange (EDI) is insufficient for the modern marketplace.

The most commonly referenced alternative standard appears to be Electronic Data Interchange (EDI). While EDI may serve existing functions quite well and we do not propose that it should be eliminated, we believe it is important to recognize that EDI was developed decades ago, long before the web services used as common practice today. As a result there is a “looseness” in the standard that increases implementation costs and can introduce variances from one utility to the next; it is not available for direct-to-consumer applications; it introduces privacy and security risks by mixing personally identifiable information and its file transfer process; and, quite simply, it’s just the wrong tool for the job in 2016.

Green Button Connect is required for data access to be “convenient” in the modern economy.

With regard to Green Button, there two different “flavors” of data access considered – Green Button Download – a one-time file transfer that requires a manual intervention from the customer and Green Button Connect, which provides an ongoing stream of information for the consumer and solutions providers. This ongoing access allows the kind of “set-it-and-forget-it” customer participation that is what most people consider “convenient” in the modern world.

Q. Should vendors seeking to be provided customer data through Green Button Connect, or an alternative protocol, be considered a Distributed Energy Resource Supplier, as defined in Staff’s Proposal in Case 15-M-0180? If so, which, if any, of the rules proposed by DPS Staff in that proceeding should not be applicable to vendors seeking to obtain customer data through the Green Button Connect or alternative protocol? If vendors seeking to be provided data through Green Button Connect or an alternative protocol should not be subject to the rules developed in Case 15-M-0180, what requirements or oversight should be applicable to those vendors?

Data analytics and other data-enhanced services are not regulated functions.

We do not believe that vendors *with whom the consumer has elected to share information* should be considered Distributed Energy Resource Suppliers, as defined. Data-enhanced products and services are not regulated utility functions and should be treated accordingly.

To animate markets, particularly to enable young companies to participate in this market, it is important to avoid requirements that could impose significant barriers

to entry. California has adopted a framework under which such vendors must acknowledge that they have reviewed and agreed to abide by privacy and security requirements established by the Commission. Once vendors affirm this (as well as providing contact information and demonstrating technical capability), and presuming they are not on a list of vendors barred by the Commission from receiving consumer usage data, the utility provides customer usage data to the vendor as authorized by the consumer. If a vendor engages in a pattern or practice of violating Commission rules, the Commission, after due process, can order a utility to cease providing data to the vendor.

Q. Pursuant to the Uniform Business Practices, Section 4(E), utilities may not charge ESCOs for providing customer-specific information including energy consumption history used to market to or enroll customers. Should that requirement also be applicable to customer-specific information provided to ESCOs and other vendors via Green Button Connect or an alternative?

No additional fees should be imposed on consumers with regard to their data.

Yes. We believe it is entirely appropriate to include restrictions on indiscriminate fees. As stated previously, we believe it is consistent with REV principles, existing Commission directives and other state and federal policy that basic consumer data regarding energy usage and associated charges should be provided to the consumer as part of basic utility service. Any implementation costs should be included within the corresponding rates.

It is particularly important to recognize that any fees are borne by the consumer, plain and simple. If there is a fee on Green Button Connect – the most convenient way for a consumer to share information – then it’s simply a fee that increases their cost unnecessarily and chills the development of the markets New York is attempting to animate. .

Q. What other implementation issues regarding Green Button Connect or an alternative, should be addressed and how should they be resolved?

Implementation costs should be immediately identified and evaluated.

Comments in the record, notably from utility parties, have suggested that implementation costs of providing consumer data access would overwhelm

potential benefits. Comments to this effect were reiterated at the December 16, 2015 Technical Conference in Albany. Consolidated Edison suggested that “Our benchmarks are twelve to eighteen months for implementation and cost anywhere from \$5 million to \$19 million.”⁹

Given the fact that nearly \$23 billion is spent every year purchasing electricity in the State of New York, we are curious to understand a more detailed assessment of the costs and benefits. In New York’s residential market alone, every improvement of 1% represents approximately \$100 million of customer benefit. This can be achieved without AMI or other advanced metering. Results of studies using Green Button functionality in California (where AMI is deployed) are demonstrating significant consumer benefits that, if extrapolated, dwarf the costs of Green Button Connect implementation.

To date, there are no cost estimates or cost-benefit assessments offered within the record of this or any other proceeding before the Commission. The conclusion that implementation costs may exceed benefits strike Mission:Data as premature, at best.

We further note that commissions that have engaged in an assessment have determined that the benefits far outweigh the costs.¹⁰

Finally, we would observe that it should not be difficult to quickly get cost estimates since nearly every major industry vendor has made public statements about their ability to support Green Button quickly and easily.

Therefore, we propose that the Commission should not accept at face value assertions that costs are not justified by potential consumer benefit. As we have noted, we believe the Commission can and should require immediate data access from all utilities within their jurisdiction. At a minimum, the Commission should require specific, on-the-record implementation cost estimates be provided.

As part of those estimates, we highlight that it is critical to distinguish between:

⁹ Transcript, Technical Conference, December 16, 2015 (14-M-0101, 15-M-0180, 14-M-0224)

¹⁰ See, for example, California PUC Decision 11-07-056, July 28, 2011. (R. 08-12-009)

- Costs associated with delivering secure web services and third-party authorization (similar to major services like Google, PayPal, Yahoo and the others); and
- Costs associated with the particular data standard used to package the information.

Many of the costs, we believe, are attributable to the former. That is, costs estimates should allow the Commission and other parties to determine whether there are incremental costs associated with the data standard. Our experience to date suggests that costs properly attributable to modernizing information infrastructure are improperly attributed to the particulars of Green Button or other data configurations. We believe this improperly inflates the cost estimates.

All advanced metering implementation should include clear implementation of data access

We recognized that the Commission is currently considering proposals for advanced metering systems. We believe it would be imprudent for any advanced metering systems to be approved or implemented *without* clear requirements and associated budgets for provision of consumer data access.

No service offerings should be approved without a clear data access framework and protocols.

Within the REV proceeding and in associated advanced metering proposals, utilities have proposed to offer data-rich services and offerings without establishing corresponding mechanisms for consumers or service providers to have access to basic consumer information. These products and services include subscription services, enhanced data analytics and access to Green Button Connect functionality.

Charging additional fees *without* providing clear access to information in an open market context only serves to introduce costs that limit customer choice and undermine the “market animation” goals established within REV.

As we have stated previously in this proceeding, while we recognize that utility-led data analysis solutions may help catalyze the market as a whole, we believe that these offerings should not inhibit non-utility data analytic providers from effectively

competing in the market. To avoid such a scenario, the Commission should clearly define the “basic” usage data available to consumers and service providers that will be provided by the DSP and ensure that policies and mechanisms are in place to ensure that any utility offerings do not preclude open and fair access to data by consumers and, with proper customer consent, third parties.

The Commission should establish clear delineation between classes of products and services.

As we have noted, we believe there is an ambiguity with regard to what products and services will be included as part of basic service, as platform functions or as competitive services. We believe this ambiguity is eroding the ability of parties to find common ground and consensus. With regard to data in particular, we propose that the Commission clarify the boundaries between three domains:

1. Basic: As stated, we believe consumers should have access to sufficient usage and cost data to develop the most meaningful profile of their usage and what it is costing them. We submit that minimum level of customer information – usage, cost and real-time information – is assumed as a minimum-level function in any description of a “smart” or “modern” grid. Further, electricity remains the only sector of the economy where this is somehow considered novel or forward-looking in the year 2016. (For example, consumers have been able to download financial information into analysis software and online services – e.g., Quicken or Mint.com – for decades.) This should be part of basic service and any costs should be addressed through traditional cost recovery mechanisms;
2. Platform: What services are required to successfully operate the system and its platform capabilities? Are any of these value-added services that can be offered by the platform provider in a competitively neutral fashion. If so, we presume the associated fees levied on market participants would be determined in a cost-of-service manner similar to basic consumer rates.
3. Competitive: What are competitive services? Clearly, we believe that partnering with consumers to meet their needs is an area where competitive products already exist and so we question the need for the utility to accelerate the market. We also question whether they are in some way better positioned than others to lead the innovation and market animation REV seeks.

Clear boundaries between competitive services and platform functions are required. As we have noted, demonstration projects include products – like a subscription to enhanced data analytics – that are available today from companies in open markets. But these companies are precluded from working with customers in New York State because the data are available only through utility channels and not through a competitively neutral platform.

Off-line discussions that are not part of the official record seem to suggest that data-rich services – like enhanced analytics – should somehow be “reserved” to support utility market-based earnings (MBE’s) and to augment declining utility revenues. This seems misguided. We implore the Commission to be mindful of the proverbial monkey paw trap, where a firm grasp on the small prize forfeits the much greater benefits available from innovations and open markets.

The very goal of economic regulation in general is to simulate this competitive result. The President of NARUC, addressed his colleagues last year and mused on this central paradox of regulation, which is that “competition, if it could work...would work better than we do. That is a humbling thing,” he concluded. And he continued by imploring his colleagues to explore where markets are available today for new technology and to be vigilant in the face of “parochialism and rent-seeking behavior.”¹¹ In this context, we agree that it is important for the Commission to effectively determine that utility participation in service offerings is value-additive and not merely an economic gain without reciprocating any benefits back to society through wealth creation.

This concern about the impacts to fair competition is echoed by parties on the record in this proceeding and raises important questions about the ability of the utility to simultaneously execute its neutral system operation functions – the “platform” services – while also participating in competitive markets. This is why some clarification is required immediately with regard to what services consumers can and should expect.

4. SUMMARY

¹¹ Installation Remarks of NARUC President Travis Kavulla, November 10, 2015. Available at <http://www.naruc.org/News/default.cfm?pr=511>.

To summarize, Mission:data requests the Commission to consider that:

- Customer usage and price information has been demonstrated in studies and in practice to reduce overall energy consumption, reduce peak lead energy usage, save consumers money and create environmental benefits.
- Utilities across the country have implemented systems that effectively, securely and affordably provide consumers with access to their own energy data according to common standards.
- The lack of data access has been identified by staff and working group participants as a barrier to effectively achieving “market animation” and other REV goals.
- Potential benefits appear, *prima facie*, to far exceed implementation costs.

Based on these observations, Mission:data urges the Commission to:

- Adopt a clear policy that affirms that:
 1. Consumers have a clear right to access the best available information about their energy use, including interval details where available, real-time information directly from the meters with HAN communications and the corresponding details of bill charges and tariff information.
 2. Consumers should be able to share that information with whomever they choose, which means that it is machine-readable, adheres to industry standards and can be delivered through secure and convenient web service protocols; and, finally,
 3. This basic level of service shall be delivered as part of basic utility service, with any implementation investments included in base rates accordingly.
- Require immediate implementation plans from all utilities that provide timelines and cost estimates for achieving such “best available” consumer data access.
- Incorporate data access protocols within any and all proposal for advanced metering equipment of functionality.
- Provide clear delineation between three classes of service with regard to consumer data – basic, platform and competitive.

