

**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 MISSION:DATA REGARDING TRACK 1 ISSUES

1. INTRODUCTION

Mission:data, a national coalition of technology companies offering effective, scalable building energy management technologies,¹ applauds the direction charted by this Commission’s April 25, 2014, Order Instituting Rulemaking, *Proceeding on Motion of the Commission in regard to Reforming the Energy Vision* (“REV Order”). Encompassing as one of its principal goals to “improve system efficiency, empower customer choice and encourage greater penetration of clean generation and efficiency technologies”², the Commission’s REV Order positions New York to both save consumers energy and money and lead the development of a vibrant, innovative market in energy management. Mission:data believes achievement of these important goals depends upon a critical step: empowering consumers with convenient access to their energy data³ with the ability to share that data with third parties of their choice.

Energy usage in homes and buildings makes up 40 percent of total electricity use in the U.S.⁴ Optimizing efficiency depends upon a large number of individual decisions. In the residential and small commercial sectors served by some of our members, where individual loads are smaller, the challenge has been particularly intractable. To the extent that software and information technologies can automatically

¹ www.missiondata.org. Our members include Alarm.com, Bidgely, Blue Line Innovations, BrightPower, BuildingIQ, Cleanweb Initiative, Ecofactor, EnergyHub, EnerNOC, Genability, Home Energy Analytics, iControl Networks, Lucid, OpenUtility, PeoplePower, Plotwatt, Rainforest Automation, Retroficiency, Solar City, ThinkEco and Verdafero.

² REV Order at 5.

³ 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.

⁴ Energy Information Administration, U.S. Department of Energy.
<http://www.eia.gov/tools/faqs/faq.cfm?id=86&t=1>

be applied to energy-use decisions and customers can be readily informed of actions they can take to save energy, transaction costs will be dramatically reduced; a much larger percentage of energy-use decisions can be cost-effectively optimized; and consumer confidence in the outcomes of efficiency projects or renewables installation will be increased, because they can be easily and independently assessed. In short, energy management software products and services represent one of a number of exciting behind-the-meter 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.”⁵ Placing the power of data in the hands of consumers 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 one of the central, stated objectives of this proceeding: to provide consumers and their authorized third parties with convenient access to their own energy data.**

The further development and use of new, technology-enabled energy management solutions -- bolstered by customer data access and further described in the Staff Report accompanying the REV Order⁶ -- will lay the foundation for achieving three critical objectives: (1) empowering consumers; (2) scaling clean and efficient energy technologies; and (3) promoting economic development.

1. Consumer Empowerment: As noted in the REV Order, 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 signals⁷ and to cost-effectively generate and save energy in ways that were previously unavailable. 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 the deployment of the smart grid promises.”⁸

⁵ REV Order at 2.

⁶ See *Reforming the Energy Vision, NYS Department of Public Service Staff Report and Proposal* (“Staff Report”), Case 14-M-001, April 24, 2014, pp. 1, 7.

⁷ Katrina Jessoe and David Rapson, *Knowledge is (Less) Power: Experimental Evidence from Residential Energy Use*, University of California, Davis, April 18, 2013, p. 3

⁸ NARUC Resolutions, July 2010

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.

The REV Order established a two-track process for gathering stakeholder input on issues presented in the New York Department of Public Service Report, *Reforming the Energy Vision*, including a first track devoted to examining how to enable customers to optimize their energy priorities with respect to reliability, cost and sustainability.⁹ Pursuant to the Administrative Law Judge rulings presenting a series of questions related to the first track,¹⁰ Mission:data is pleased to respond to specific questions posed related to consumer data access and offer the benefit of the experience we have gained on these issues from across the country.

TRACK I POLICY QUESTION VI. ENHANCED SERVICES.

“Basic Utility Service” Should Include Customer Access to Usage, Pricing and Account Information.

In considering the distinction between “basic services” and services identified in the Staff Report as non-essential, value-added services¹¹, Mission:data strongly urges the Commission to broadly establish customer data access as a basic service. Specifically, basic service should include near real-time usage data (provided directly from the meter to the HAN) and backhauled billing-quality data (provided through Green Button, including historical data) in automated format, as well as charges, tariff, cost and pricing information, and allow consumers to securely share that data with third parties of their choice.

It is important to qualify the term “access.” We submit that machine-readable access to usage data, in a manner that conforms to national standards, is critical to maximizing the benefits of consumer

⁹ REV Order at 4, 6.

¹⁰ Administrative Law Judges Stein and Bielawski, *Ruling Posing Questions on Selected Policy Issues and Potential Outcomes, Establishing Comment Process and Revised Schedule*, June 4, 2014,

¹¹ Staff Report at 61

participation in electricity markets. When data are stuck in difficult-to-use formats, the scalability of software is eliminated. Paper bills, for example, provide some important information, but they can't be cheaply digitized. Online bill-pay websites offer many promising alternatives for providing data to consumers, but too often they bury usage data in hard-to-reach places, and it is typically not possible for the consumer to automatically send his or her usage information to a third party for analysis. Interval usage data (at 15-minute or hourly time intervals, for example) is critical to advanced energy management technologies. As soon as a human being has to click through a website or manipulate non-standard data formats to make that information useful, then many software-enabled energy management services simply will not thrive in New York. It is important to be clear that a technically-specific, standardized method of data access must be defined as part of basic utility service; otherwise, vague notions of "access" can be misunderstood, and the promise of the smart grid not fully realized.

The collection and usage of energy information for billing purposes has always been integral to basic utility service, and customer access to energy data has emerged as a foundational enabler of the innovative energy management strategies and other benefits the Commission intends to achieve through the REV proceeding.¹² The lack of facilitated methods for consumers to access their usage, pricing and account information were identified repeatedly and by multiple parties as barriers by the Working Groups established within this proceeding.¹³

As pointed out by staff, customer data access offers benefits to all ratepayers – both residential and commercial/industrial, large and small – where that information is set forth in a consistent, usable format and accompanied by access to goods or services that empower them to understand and easily extract value from the data.¹⁴ For these reasons, Mission:data urges the Commission to ensure that all New Yorkers have convenient access to their data in a consistent, automated format, in near real-time and at the most granular level possible, at no charge, and the ability to share that with third parties of their choosing..

TRACK I POLICY QUESTION VII. ACCESS TO DATA.

Consumers Must Be Empowered with Secure, Automated Access to their own Energy Data, Consistent with Widely Supported Industry Standards. Consumers Must Be Provided with Systems to Conveniently Share their Data with Third Parties of their Choice.

¹² See Staff report at 41. Indeed it is the lack of customer data access and the lack of a customer's ability to share it with a third party, that the Commission has identified, correctly, as one of the chief barriers to the development of competitive, innovative markets.

¹³ We refer specifically to comments offered by Working Group representatives at "Technical Conference: Status Report on Track I Working Groups", (July 10, 2014, Albany, New York)

¹⁴ See Staff report at 33-34

As the Staff Report amply points out, customers' access to their own energy data, combined with convenient tools to describe and better energy use, has the potential to enable enormously significant and growing reductions in household and business energy use. Savings can be much higher where that data is near *real-time* data. Through deployment of software to instantly calculate cost savings from efficiency, conduct "no-touch" energy audits, quantify demand (kW) curtailment potential, and identify opportunities to save energy even down to the device level, new information technologies can – to an unprecedented extent -- cost-effectively meet New York's efficiency, clean energy and other objectives.

The American Council for an Energy Efficiency Economy ("ACEEE") has conducted several studies demonstrating how data access has been effective in delivering savings for consumers, whether in the form of in-home displays or information pamphlets that contextualize usage according to socially normative comparisons. Such approaches are varied and may or may not be implemented under the umbrella of a utility program. For example, the ACEEE's meta-analysis found 4% to 12% energy savings among consumers exposed to feedback on their consumption,¹⁵ with real-time data and feedback mechanisms enabling the highest energy savings by an order of magnitude. A more recent study of real-time information feedback approaches, in which consumers could react to instant power usage readings by reducing lighting or appliance loads, found energy savings on average of 3.8%; most encouraging was that some households saved over 25%.¹⁶ In the commercial and industrial sectors, Lawrence Berkeley National Laboratory has found median savings of 17% from energy information systems (EIS) that analyze interval usage data.¹⁷ A Natural Resources Defense Council (NRDC) study found 13.2% energy savings in commercial buildings with an EIS.¹⁸ Many other studies document the benefits of monitoring-based commissioning -- the practice of continuously tracking energy data in industrial or building systems to ensure that performance goals are met -- which depend entirely on electronic access to interval usage data. As tools evolve and improve, potential savings will increase. With homes and businesses consuming such a large portion of our nation's energy, the potential savings made possible by broad customer data access represent a tremendously important opportunity.

Mission: data encourages the Commission to let the private sector continue to develop innovative methods of engaging and empowering consumers. Rather than raw data, the most empowering signals for

¹⁵ ACEEE. Karen Ehrhardt-Martinez, Kat Donnelly, John Laitner. *Advanced metering initiatives and residential feedback programs: a meta-review for household savings opportunities*, June 2010. Report number E105. These savings would be approximately half of this amount over large numbers of households.

¹⁶ ACEEE. "Results from recent real-time feedback studies." Ben Foster and Susan Mazur-Stommen. February, 2012. Report number B122.

¹⁷ Energy Information Systems (EIS): Technology Costs, Benefits, and Best Practice Uses. Granderson, J., G. Lin. November 2013. LBNL-6476E.

¹⁸ NRDC. "Real-time energy management: A case study of three large commercial buildings in Washington, D.C." Philip Henderson and Meg Waltner. October 2013. Study number CS:13-07-A.

consumers have been socially or financially contextualized data. That contextualization process can be readily accomplished by the private sector in a way that evolves with social norms, the growth of the web and social networks, and developments in mobile computing over time. Instead of considering customer “engagement” a binary achievement (it either happens or it doesn’t), it is more practical and effective to treat successful customer engagement as a constantly evolving field. Innovative companies are most capable of following these trends over time, and they can do so only if customer data access is standardized and consistent.

To maximize the potential, Mission:data recommends that the Commission consider two basic requirements to provide consumers with secure access to their own energy usage: (1) access and (2) standardization. These are further described.

1. *Consumers’ access to their own energy data.* Customers should have easy and convenient access to the most granular information available about their energy use, as well as charges data for each meter, including all data from monthly bills such as metered charges, unmetered charges, adjustments, credits, taxes, fees, what tariff they are on, and service class information. Best efforts should be made to verify and maintain data accuracy and provide billing quality data. Customers should also have access to all data currently made available for large customers through Electronic Data Interface (EDI) data transactions. When a meter loses its connection and data are stored in memory, these data should be made available when the connection is restored.¹⁹

Usage (and cost) data should be made available to the consumer through two interfaces:

- (a) An electronic data exchange system for sharing “back-hauled” data online with third parties that authorized by the customer. This is generally subject to a 24-hour lag and provided in increments of 15 minutes or hourly; and
- (b) where advanced metering infrastructure is deployed, the home area network/business area network (HAN/BAN) interface that provides consumers, and customer-authorized third parties real-time information directly from the meter. This may be provided to the consumers in very short intervals, as small as 6 seconds, so that the customer can obtain very granular depictions of his or her energy use. The fact that it is in near real time allows a customer to activate appliances and immediately view the resulting changes in energy consumption.
 - a. Online information. Online information backhauled through the utility infrastructure – implemented through “Green Button” (also known as the Energy Services Provider Interface,

or ESPI) – allows customers to download their electricity usage information and share it with authorized third parties to help manage their electricity use. Though typically subject to a 24-hour lag and reported at intervals (due to low-bandwidth networks and meter data validation, editing and estimating processes), this information can be extraordinarily useful and can be obtained without additional hardware in the premise.²⁰

There are two implementations of Green Button – (1) Green Button Download, which requires a user to manually download their usage data and upload it to third-party applications, and (2) Green Button Connect, which lets the user authorize a third party to have consistent access to that user’s data. While Green Button Download is a useful first step, it has limited use.

Green Button Connect is much more powerful than Download as an efficiency tool, as it supports ongoing, automatic analysis of usage data without manual user intervention. Green Button Connect will be implemented by California’s investor-owned utilities in early 2015. Pilots are currently underway at Pepco (Washington D.C.), ComEd (Illinois) and PECO (Philadelphia). In California, San Diego Gas & Electric has already implemented Green Button Connect (before they were required by the Commission to do so) with early positive results: over 15 third parties registered, and thousands of customers have downloaded their usage data or shared it with third parties. New York will benefit from the lessons learned from these implementations in other states.

- b. Near real-time information directly from the meter. In order to maximize energy savings for all consumers, customers and their designated third parties must have access to near real-time very short interval data (e.g. five minutes for commercial & industrial customers) provided from a smart meter through the HAN/BAN. As detailed later in this section, this should be provided as part of basic service subject to a robust cost-benefit analysis by customer class and service territory.

It is difficult to imagine key objectives of the REV, including reducing peak demand, being accomplished without advanced metering functionality and near real-time access to data. Such data enables customers to obtain immediate feedback (from easily testing devices in their homes) and to employ technologies such as disaggregation – the use of algorithms to

²⁰ Mission: data applauds Consolidated Edison and National Grid for committing to implementation of Green Button Download, an important first step. For consumers to realize more value from the backhauled data, it is important to implement Green Button Connect, the version that provides consumers automated data access per the ESPI standard.

interpret smart meter data to identify energy used in a household or business by *device*. This in turn enables the development of automated personalized recommendations such as for a residential customer “Reduce your pool pump run time to XX minutes this afternoon and save \$__.” This is where the combination of near real-time data and tools providing specific feedback about how to save energy drives much higher household efficiency gains²¹.

One example of the importance of Advanced Metering Infrastructure (“AMI”) deployment and near real time data is in enabling demand response. In order for customers to reduce consumption during peak demand periods as envisioned in the Staff Report, they or their third party demand response providers must know when peak periods are occurring and have immediate verification of load reduction. For example, if a DSPP is depending on a set of commercial & industrial customers to reduce demand in a certain network during a peak period but the customers have no insight into how much they have reduced until a day after the peak period, the customers will not be able to modify their behavior in real-time. As was noted in a recent California PUC decision underscoring the importance of near real-time access provided through the HAN, “the reduction in energy consumption achieved by customers monitoring their usage through a HAN device was projected to be more than three times the reduction achieved by customers accessing only a web portal to monitor their usage.”

To achieve the full benefits at scale, adoption must be convenient, easy and fast for customers. Having the infrastructure in place is critical. Convenient, timely access to the data made available through advanced metering must be provided to customers pursuant to cost-benefit analysis that accounts New York’s REV goals and captures the full extent of the benefits, including customer, utility and societal, that result from such access. In this regard, it is worth noting that the California PUC found AMI deployment and real-time data access to be cost-effective for all customer classes, based on consideration of both operational and customer demand-side benefits:²²

“The CPUC approved the Utilities’ deployment of the AMI infrastructure, including installation of electric smart meters pre-equipped with the HAN function, based on a finding of positive business cases for all three Utilities from the ratepayer’s perspective (specifically, the benefits to ratepayers exceeded the costs of each Utility deploying and

²¹ K Carrie Armel, Abhay Gupta, et. al., *Is Disaggregation the Holy Grail of Energy Efficiency: the Case of Electricity*, Precourt Energy Efficiency Center, Stanford University, Technical Paper Series: PTP-2012-05-1, 2012, p. 6.

²² *Id.*

operating the AMI infrastructure over its projected life). The benefits enabled by the AMI systems in these cases included 1) operational benefits realized by the utilities in achieving more efficient operations and improved system reliability and 2) demand side benefits (such as energy conservation and demand response) realized by the ratepayers through avoidance of future electricity supply costs due to the demand reduction achieved by customers receiving timely information about their energy consumption generated by smart meters and time-differentiated price tariffs and load control signals supported by smart meters.”²³

Given the similarity in state policy goals and high energy costs in New York, Mission:data believes a similar finding is likely warranted here.²⁴ The Massachusetts DPU also recently reached a similar decision. “In its first GMP filing, a company also must include a five-year short-term investment plan (“STIP”), which applies only to a company’s capital investments. A company’s STIP must include an approach to achieving advanced metering functionality²⁵ within five years of the Department’s approval of the GMP.”²⁶

While infrastructure is critical, it is equally critical that deployments be accompanied by policies – particularly data access – that allow consumers to realize tangible benefits from these deployments. One lesson learned is that customers may question the value of advanced meters if they do not perceive benefits. For example, the ACEEE stressed the importance of going beyond AMI alone and making data actionable and empowering:

Advanced metering initiatives alone are neither necessary nor sufficient for providing households with the feedback that they need to achieve energy saving; however, they do offer important opportunities. To realize potential feedback-induced savings, advanced meters must be used in conjunction with in-home (or on-line) displays and well-designed programs that successfully inform, engage, empower, and motivate people.²⁷

Demand side benefits, if enabled, represent a significant portion of the benefits of advanced metering – in some cases more than half.²⁸ In one prominent deployment, consumer demand

²³ California Public Utilities Commission, Energy Division. Item #25 (Rev. 1). ID #11515. Energy Division Resolution E-4527. September 27, 2012, p.5

²⁴ Without the AMI deployment, real-time data access can only be achieved through installing a KYZ pulse on an existing utility meter. This is an inferior technological option, as KYZ pulses provide less accurate meter data than AMI deployments as data intervals become more granular

²⁵ Advanced metering functionality is defined as: (1) the collection of customers’ interval usage data, in near real time, usable for settlement in the ISO-NE energy and ancillary services markets; (2) automated outage and restoration notification; (3) two-way communication between customers and the electric distribution company; and (4) with a customer’s permission, communication with and control of appliances.

²⁶ Massachusetts Department of Public Utilities, Order 12-76-B. June 12, 2014. Page 3.

²⁷ <http://www.aceee.org/press/2010/06/aceee-study-finds-smart-meters-not-smart-enough-slash-re>

²⁸ Institute for Electric Efficiency, *The Costs and Benefits of Smart Meters for Residential Customers*, July 2011.

side benefits were estimated at \$816 million, compared to operational benefits of \$1,174 million, fully 41% of total benefits.²⁹

Once the AMI is deployed, access to near real-time data through the HAN/BAN comes at minimal additional cost. Smart meters from manufacturers today come with the Zigbee radio, and thus the capability to provide direct real-time access through the HAN/BAN by default. This is a standard offering. Activating the capability can be done with a flip of the switch in the meter before deployment. Once the switch is activated and the metering is deployed, utilities do not need to take further action to provide data through the HAN/BAN.

2. Standardization. The second basic requirement is that energy consumption and pricing information should be provided in a manner consistent with widely supported industry-led standards. Mission:data agrees with the Staff Report that successful, market-driven technologies will require interoperability, connectivity and open standards.³⁰ Specifically, Mission:data recommends that data access be required through widely-adopted industry standards such as Smart Energy Profile (“SEP”) and the North American Energy Standards Board-ratified ESPI to support the full spectrum of customer benefits.

One critical reason for the use of clear functionality requirements and widely-adopted standards is to increase the ability of emerging technologies to efficiently and rapidly achieve scale. Emerging growth technology companies will be able to develop products more inexpensively and scale up more easily to the extent that utility metering technologies and procedures (i.e. for certification and validation of devices) are the same. For example, the lack of standardized methodologies or testing procedures requires new technologies to incur duplicative costs for certification with each network. Early deployments have necessarily seen utility-by-utility validation for each device (and, sometimes, for each type of meter or firmware version). In California, the PUC has mitigated this by requiring utilities to collaborate on a uniform certification process. Ultimately, broadly-embraced industry standards should be the rule, and the process of sharing backhauled and near real-time data with authorized third parties should be identical. This will help innovations to scale and consumers to more quickly realize new offerings at lower costs.

²⁹ California Public Utilities Commission, Energy Division. Item #25 (Rev. 1). ID #11515. Energy Division Resolution E-4527. September 27, 2012, p.5

³⁰ Staff Report at 36

Mission:data also urges the Commission to develop a simplified procedure under which consumers and their authorized Energy Service Companies (“ESCOs”)³¹ can obtain access to online data through Green Button Connect. To successfully develop an innovative ecosystem, the adoption of a simple, accessible process for ESCOs to become eligible to receive Green Button data on behalf of their customers will be necessary. The goal should be an ecosystem that supports the development of robust, innovative market capable of delivering multiple offerings to consumers. This process can be defined around a set of three criteria that an ESCO would have to meet in order to be eligible to receive customer usage data through the ESPI platform. The ESCO would be required to

- 1) provide to the utility valid contact information when registering to use the utility platform, including a valid name, mailing address, telephone number and email address;
- 2) possess the technical capability to connect to the ESPI platform and receive data in the ESPI format; and
- 3) acknowledge receipt of a copy or a link to documents detailing a state’s privacy rules for handling usage data, outlining the rights and responsibilities of both the utility and customer-authorized third parties.

The California Public Utilities Commission adopted a process incorporating these principles, with broad support from investor-owned utilities and third parties, with the Commission retaining sole authority to cut off access where third parties violate Commission rules.

Finally, we note the Staff Report’s reference to privacy issues. Mission:data does not believe that privacy concerns should limit the consumer’s right to access *his or her own energy data*. Such access has been implemented in multiple jurisdictions with high levels of data security through encryption and generally-accepted security norms (similar to other industries that manage credit card information, medical information and other highly sensitive data).

Mission:data and our companies agree that consumers should have the opportunity to understand how their energy usage data is being used and to consent to that use, although there are important details that must be considered and addressed in developing policies in this area and it is important not to burden young companies with highly detailed and expensive requirements. Overly restrictive or burdensome privacy or security requirements could emerge as costly barriers to entry. It is important to note that the issues of privacy have been dealt with successfully in legislation in other states, and workable templates exist to protect consumer privacy without hindering the innovation of new energy management technologies.

³¹ Our use of this term is meant to refer to any third party providing energy-related services, per the expanded definition suggested by staff. Staff Report at 38.

2. SUMMARY

To summarize, Mission:data request 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 load 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.
- Significant applications have been identified within the REV proceeding that can be delivered through both regulated programs and consumer market channels, consistent with REV goals.
- 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.

Based on these observations, Mission:data urges the Commission to adopt policies to ensure that:

- Consumers are provided with secure and convenient access to their energy usage, charges, pricing and account information, both historical “backhailed” information and near real-time information through the Home/Business Area Network;
- Consumers are provided with convenient methods to share this information with authorized third parties of their choosing;
- Utilities or the DSPP’s provide this information in a consistent manner across the various service territories;
- Such data access should be provided to all customers at no cost as part of the basic utility service provided by the DSPP;

We further urge the Commission to ensure that the upcoming initial Staff straw proposal address these components of consumer data access.

3. CONCLUSION

Mission:data appreciates the work of the Commission and its stakeholders to position New York as a leader in energy innovation, empowered consumers. We appreciate the opportunity to comment and would be pleased to work with the Commission in the development of its order incorporating the points we have raised.

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Respectfully submitted,

For **Mission:data**

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