

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding
Policies, Procedures and Rules for
Development of Distribution Resources
Plans Pursuant to Public Utilities Code
Section 769.

R.14-08-013
(filed August 14th, 2014)

**RESPONSES OF MISSION:DATA
REGARDING DISTRIBUTION RESOURCES PLAN PROPOSALS**

FOR THE MISSION:DATA COALITION

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Dated: September 5th, 2014

INTRODUCTION

Mission:data, a new coalition of innovative companies that enable consumers to save energy and money through access to their own energy usage data and new technology tools¹, appreciates the opportunity to submit responses to D.14-08-013. The input solicited by the Commission cover a wide range of topics related to Distribution Resource Plans (DRPs), Distributed Energy Resources (DERs) and how best to deploy DERs in a cost-effective manner across the state. Rather than attempt to address all of the questions raised by the Commission, we intend to focus our comments on the Commission's inquiries related to customer energy usage data, and specifically on areas where existing and future Commission actions to allow customers (and their designees) access their own usage data electronically can support and greatly enhance the effort to deploy energy efficiency, demand response, and other DERs.

Mission:data members, representing over \$600 million per year of energy management sales worldwide, are the best and brightest technology companies whose products and services will be critical to successful implementation of Distribution Resource Plans. Technology innovation, fueled by access to granular energy usage data, is driving development of powerful energy management tools for consumers, offering novel means to manage their energy use and save money. Access to real-time, short-interval data from the Home Area Network (HAN), for instance, supports new technologies like disaggregation, the use of algorithms to interpret smart meter data to identify energy used by device. This in turn enables the development of automated personalized recommendations such as "Reduce your pool pump run time to save \$__ per month" or "Buying an EnergyStar refrigerator could save you \$___ per year." In addition to providing consumers with information, our members' products often include automation, enabling easy savings. This is but one example of how customer access to energy usage data makes technological development possible to help customers make larger efficiency gains.

Some of our members serve ratepayers with energy management solutions through the investor-owned utilities (IOUs) and energy efficiency programs. Others among our members serve customers with a direct relationship, outside the scope of efficiency programs. While we support certain ratepayer investments to jumpstart the consumer energy management market, we feel it is important to highlight the role of innovative companies in generating savings that exist outside of established programs. Sometimes referred to as "non-programmatic savings" or "non-incentivized savings," the energy savings from

¹ Our members are developing innovative information technologies to achieve significant energy savings in the residential, commercial and industrial sectors at scale. Members include Alarm.com, Bidgely, Blueline Innovations, Bright Power, BuildingIQ, the Cleanweb Initiative, EcoFactor, EnerNOC, EnergyHub, Genability, iControl Networks, Lucid, OpenUtility, People Power, Plotwatt, Rainforest Automation, Retroefficiency, Solar City, ThinkEco, Verdafero, and WattzOn.

Mission: data's membership are innovative and are delivered through business models that are financially attractive to various target markets, often without ratepayer subsidies. The Commission has recognized that *all* Distributed Energy Resources, subsidized or otherwise, will be essential to meeting the state's goals. For example, the vision set forth in the *More Than Smart* whitepaper recognizes the importance of making the grid's distribution infrastructure more "open"; indeed, the Commission's first question is, "What specific criteria should the Commission consider to ... enable a distribution grid that is ... open to distributed energy resources, and enables the achievement of California's energy and climate goals?"² For DERs to thrive in California, we submit that the "openness" of distribution systems needs to be much more than merely a hopeful concept; "openness" needs to be specific and technically detailed, ensuring that third parties are not discriminated against in their participation. The Commission has already made great strides with regard to promoting innovative energy management applications through advanced metering, the Home Area Network, and customer data access through Green Button. However, many friction points at the intersection of utility systems and third parties still exist, and the full potential of DERs will not be met without addressing those friction points. With that as background, we offer the following comments.

Question #1: What specific criteria should the Commission consider...?

California – and in particular this Commission – has been a policy leader in attempting to empower consumers with access to their electricity usage data. Within the past two years, California has enabled some consumers to access real-time HAN data directly from the smart meter,³ and obtain their data through utility web portals through implementation of Green Button. Green Button Connect, through D.13-09-025 (also known as the "Customer Data Access" proceeding), promises the ability for customers to share their consumption data with third parties of their choice beginning in 2015.

Enablement of these functionalities is critical to realization of demand-side benefits for consumers. However, lingering implementation issues remain. For example, with regard to the HAN, many customers are still unable to take advantage of HAN devices because of technical issues with meters. Small businesses in PG&E's territory have smart meters installed with Zigbee radio capability, but only a tiny fraction are eligible for HAN today because of outstanding meter/Zigbee incompatibilities. The issues are solvable, but they require continued attention and oversight by the Commission.

² D.14-08-013, page 6.

³ For example, Resolution E-4527 establishes the framework under which IOUs will support enablement of an unlimited number of HAN devices by 2015.

With regard to Green Button Connect, the Commission ordered the IOUs' systems to be technically consistent⁴ in order to reduce third parties' implementation costs. Unfortunately, PG&E's and SDG&E's implementations (per the amended advice letters 4378-E-A and 2586-E-A, respectively) will not be entirely the same, creating some obstacles to third parties. For example, PG&E provides third parties with automatic access to customers' historical usage information, including whether that information was used to generate bills, whereas SDG&E does not.⁵ These variances between IOUs create unnecessary additional costs for third parties to operate across the state.

The specific criteria we believe the Commission should consider with regard to DRPs are whether or not conformance tests conducted by impartial third parties are included in the IOUs plans, particularly around data interfaces such as the HAN or Green Button Connect. From the examples above, one could reasonably conclude that the IOUs are "at the five-yard line" with enabling third party access to data with customer consent: the systems are mostly done, but the ball is not quite in the end zone. To ensure that the IOUs reach completion, the Commission should take advantage of work led by the National Institutes of Standards and Technology (NIST) and the UCA International Users' Group on a testing and certification process for Green Button Connect. By having the IOUs' Green Button Connect systems tested by a neutral third party, the Commission achieves its dual goals of technical uniformity across service territories and the elimination of barriers to DER participation. As the Green Button standard (the "Energy Services Provider Interface") changes over time, it becomes increasingly important to ensure that implementations are consistent in California because the DERs of the future in California will depend on it.⁶

Question #9: What types of data and level of data access should be considered as part of the DRP?

In our view, the HAN and Green Button Connect are essential technical components of a well-functioning, distributed-energy system. It is important that energy usage data and cost data are freely available to customers (and their designees) with a minimum of friction. However, it is important to

⁴ D.13-09-025, "Decision Authorizing Provision of Customer Energy Data to Third Parties Upon Customer Request," page 55.

⁵ The IOUs are making good-faith efforts to synchronize their Green Button Connect systems, and the Energy Services Provider Interface standard continues to evolve. Nevertheless, the tariffs as filed by PG&E and SDG&E are noticeably divergent from one another.

⁶ Ensuring periodic third-party testing of IOU systems should also be considered under Question #11, "What considerations should the Commission take into account when defining how the DRPs should be monitored over time?"

consider not just the type of data, but also the quality of data that is needed to support DERs. One outstanding challenge with Green Button Connect today has to do with whether or not it provides “revenue quality meter data” (RQMD). Many innovators and entrepreneurs would like to see demand response and energy efficiency solutions brought to smaller loads, such as in homes and small businesses. The Commission would also like increased penetration of these distributed resources: the fourth principle of distribution grid planning described in *More Than Smart* states that “California should expedite DER participation in wholesale markets and resource adequacy...”⁷ Unfortunately however, there is a gap between the quality of data that is needed and that which is available under Green Button Connect. The California Independent System Operator (CA-ISO) requires RQMD for settlement purposes under Rule 24; however, the usage data easily accessible to third parties through Green Button Connect is not “revenue quality.”⁸ This gap effectively precludes low-cost, residential or small-commercial customer participation in wholesale markets.

Our point is that, when it comes to exchanging meter data in a well-functioning distributed energy system, the *quality* of the data provided by a utility as well as the *interface* between a utility and a third party DER need rigorous Commission oversight to ensure that technical obstacles are removed. The exchange of meter data is an essential process that must occur seamlessly for many DERs to function properly. In considering DRPs, the Commission should require (i) ongoing IOU technical coordination and (ii) periodic testing by neutral third parties of data access methods into the future.

CONCLUSION.

Now that our AMI deployment is complete and customer data access is almost realized, we encourage the Commission to leverage the innovative, data-driven technologies that harness AMI data to achieve its distributed energy resource goals. Attention to technical details and ongoing testing will ensure that DER participation is as frictionless as possible.

Thank you for your consideration.

⁷ *More Than Smart*, page 4.

⁸ PG&E (in 4378-E-A) says it will flag usage data as being “revenue quality” after a monthly bill has been issued, but SDG&E (in 2586-E-A) stops short of revenue quality, calling its data provided through Green Button Connect “best available.”

