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 ENERGYHUB AND ALARM.COM ON DPS STRAW PROPOSAL ON TRACK ONE ISSUES

1. INTRODUCTION

EnergyHub[1] respectfully submits these comments in response to *Developing The REV Market in New York: DPS Staff Straw Proposal On Track One Issues*. EnergyHub, a division of Alarm.com, provides technology solutions to reduce home energy consumption and save consumers money. EnergyHub's software tools deliver energy management solutions through detailed energy use information, supporting utility peak power reduction programs and facilitating better communication between service providers and their customers. Over 900,000 people use EnergyHub software everyday to manage their energy use.

A longtime leader in enabling rapid deployment of demand response and energy efficiency programs, EnergyHub is pleased to have the opportunity to participate in the REV proceeding and the precedent it will establish in New York and, we believe, other

[1] In 2013, Alarm.com (www.alarm.com) completed the acquisition of EnergyHub (www.energyhub.com). Alarm.com provides a suite of connected home services, including substantial solutions for interactive energy management. Today, these combined companies have more than 2 million subscribers nationwide, with a substantial portion that have internet-connected thermostats.

states as well.

2. GENERAL REMARKS

We continue to enthusiastically support the vision articulated by the Commission and Staff in this proceeding. In particular, we agree with the objective to establish a regulatory framework in which "Markets and tariffs will empower customers to optimize their energy usage and reduce electric bills, while stimulating innovation and new products that will further enhance customer opportunities."

As we have stated previously, by participating in this proceeding, EnergyHub continues to adhere to this guiding principle:

> *Consumer-deployed technologies are valuable energy management resources that provide economic benefits and resource adequacy needs and support statewide policy objectives. These technologies should be encouraged to participate in New York energy markets through both regulated programs and open market mechanisms*.

It is clear that this objective is consistent with those established in Track One thus far and will be priorities within upcoming Track Two deliberations.

EnergyHub's specific recommendations are described in more detail in the following section. They can be summarized as:

1. Direct rebates for in-home technology will accelerate consumer adoption and should be encouraged. Service providers and demand response aggregators should also be compensated on an ongoing basis to reflect the ongoing value provided to the grid and the customer risk associated with enrolling customers in grid-connected programs;
2. Utilities should be required to provide feeder-level system information in a free, standardized format that can be used as an input for business planning and modeling analysis;
3. If utilities act as DSP operators, periodic reviews of performance and market

power should be conducted to ensure REV goals are being achieved and, if necessary, change DSP management;

4. Mechanisms should be established to allow secure exchange of customer account information to ensure consumers enjoy a seamless experience when purchasing or enrolling in new services;

5. Competitive service providers and non-utility companies should have the ability to propose rates, tariffs and other "regulated products" in order to support innovation and market animation;

6. Utilities should be required to immediately establish consumer access to their own energy usage information in electronic format;

7. Utilities should establish demand response programs tailored to the unique characteristics of residential customers and accommodating technology purchased through consumer channels.

3. COMMENTS ON STRAW PROPOSAL

The Straw Proposal offers a comprehensive analysis of policy issues and establishes a strong foundation for consideration of specific ratemaking and rule changes that will be the subject of Track Two discussions. We have limited our comments to a few specific issues that we believe, if addressed, will lead to a stronger Track One Policy Decision and a more robust market.

EnergyHub agrees with the Staff's view in the Straw Proposal that the DSP should foster, "… broad market activity that monetizes system and social values, by enabling active customer and third party engagement that is aligned with the wholesale market and bulk power system." EnergyHub believes modernizing the distribution system to create a flexible platform for new energy products and services by allowing aggregators to have greater access to the market furthers innovation. Therefore, EnergyHub promotes the creation of a market mechanism for aggregators to work directly with the market.

3.1 Comment: Consumer technology adoption will continue to increase DER capabilities and should be accelerated with targeted incentives

As noted in the Straw Proposal, consumer interest and enthusiasm for distributed energy and energy efficiency technology is high and "indicates the potential for substantial increases in residential customer adoption of home energy management and DER products." We agree that consumer adoption of these technologies will increase, but we also believe that certain near-term measures can dramatically accelerate the adoption of smart thermostats, load management devices and other consumer-oriented devices and applications.

Recognizing that a key objective within the REV initiative is to "increase the DER asset base in the state," we encourage the Commission to establish incentive programs that will accelerate the adoption of these technologies through existing consumer channels. Consumer rebates, incentives and promotions can dramatically increase this aspect of the DER asset base. We believe that rebates for in-home consumer technologies can dramatically increase the adoption of technologies (such as communicating thermostats and load-control switches) that can be leveraged for energy management, energy efficiency and demand response capabilities.

However, it should be noted that our experience in other markets suggests that a one-time initial rebate, while effective to drive deployment, is insufficient to provide ongoing business value to service providers who will be engaged to manage events, develop control platforms and otherwise keep customers engaged. We recognize that questions related to ongoing rates, tariff and program designs are within the scope of Track Two discussions, and we look forward to offering more detailed thoughts in future segments of the proceeding.

In order to increase adoption of specific consumer-oriented distributed energy resources, the Track One Policy Decision should direct utilities to develop and propose consumer technology incentives within their Energy Efficient Transition Implementation Plans (ETIPs) and Distributed System Implementation Plans (DSIPs).

3.2 Comment: System information should be made available in common format

As noted in the Straw Proposal, "Customers and energy service providers should have access to system information, to make transparent and readily available the economic value of time- and location-variable usage." We believe that this system information is critical to developing an effective and comprehensive implementation plan and to identify critical system needs.

In order to support consistent planning across service territories and to support the development of DERs with the required capabilities in the locations needed, information about the distribution system should be provided in a manner that supports the use of a planning and analysis tool that is made available to the public. Other jurisdictions are proposing to assemble and provide to the market exactly this kind of feeder-level information for the purposes of distribution system planning. Notably, the California Public Utility Commission initiated a rulemaking to develop guidance for utilities in the state in advance of Distributed Resource Plan filings due in June 2015.

As an example, parties (including EnergyHub) have proposed that information be shared in format that supports the use of the GridLAB-D software. GridLAB-D is a distribution system simulation and analysis tool that is designed to support the design and operation of distribution systems. It was developed by the U.S. Department of Energy (DOE) at Pacific Northwest National Laboratory (PNNL). It was specifically

designed to allow users to create detailed models of how new end-use technologies, distributed energy resources (DER), distribution automation, and retail markets interact and evolve over time, including creation and validation of rate structures, consumer reaction and the interaction and dependence of programs with other technologies and wholesale markets. More information is available at *http://www.gridlabd.org*.

Regardless of the specific modeling applications, it is clear that detailed system information will allow non-utility service providers to identify opportunities for immediate deployment and future product development. By establishing standardized reporting formats, this information can be shared in ways that allow comprehensive statewide analysis and avoiding security concerns.

The Track One Policy Decision should direct utilities to develop a common format for making system information available so that the information is consistent statewide and can support the use of common tools.

3.3 Comment: DSP function should be subject to periodic review

As discussed in the Straw Proposal, there are many potential benefits to an independent DSP operator. However, there are also concerns regarding efficiency, standardization and the exertion of market power. For example, Staff concluded that "market power must be addressed in any event." Further, they suggest that, "As DSP markets and develop and mature, it may be more feasible to entertain the proposal of an independent DSP."

Given the overall objective of establishing market-based strategies and market power considerations, we believe that a periodic review of the DSP function is

warranted. Therefore, we propose that the Track One Policy Decision identify a mechanism by which the DSP function is reviewed against REV objectives and, as appropriate, management changes can be considered and initiated.

3.4 Comment: Data exchange should facilitate exchange of customer information to facilitate market transactions and program enrollment

In earlier comments, multiple parties (including EnergyHub, Alarm.com and retail providers) noted that establishing systems that facilitate consumer access to their account information would address a major barrier to customer enrollment in programs and market activities. It has been noted repeatedly that drop-out rates of up to 90% are common at the stage of program enrollment when customers are required to manually retrieve their account information from a printed bill. The impact of this seemingly small barrier is dramatic and suggests that the effectiveness of both regulated programs and consumer market activity could be increased significantly.

We have also experienced significant drop-out rates when the consumer experience is not seamless. For example, a process that requires consumers to *leave* a webpage to gather account information and *return* to the original page to continue a transaction or program enrollment is a common, albeit subtle, barrier to consumer engagement. Therefore, we emphasize the importance of not only information systems that are interoperable (such as between the Data Exchange and utility account systems), but also policies that ensure seamless consumer experiences. Customers should be able to complete a transaction, whether purchasing a product, ordering a service or enrolling in a program, without leaving the original site. We would be happy to provide more details in the appropriate venue.

Whether as a component of the proposed Data Exchange or some other channel, we believe that the Track One Policy Decisions should establish a directive to establish a mechanism by which the DSP maintains an authorized and federated process to automate the access to consumer account information to facilitate market activity. This mechanism should be addressed in the proposed ETIPs and DSIPs.

3.5 Comment: A clear and open process should be established for development of tariffs and regulated products

While we recognize that Track Two is anticipated to address many of the detailed aspects of rate and tariff design, we believe that the Track One Policy Decision should affirm a process by which market participants can propose rate and tariff structures. Especially in light of market power concerns articulated within the Straw Proposal, it is critical that innovations from competitive service firms and DER providers have a clear pathway into the ratemaking process.

This suggestion is consistent with the objective that, "The end-state market should be transparent, providing all market participants with the data required to understand what values different DER products could provide in different circumstances and locations and with clear information on how compensation will be provided for those values." As we have noted previously, the value of a given product or service is inextricably linked to its specific location within the physical distribution system and linked to the characteristics of the distribution system at that local feeder-level location. This is why we have emphasized the importance of feeder-level system information that can be used for modeling and identification of opportunities by utilities, DSP's, sophisticated consumers and non-utility service providers.

Once the localized values and characteristics are understood, we reasonably expect that many innovative applications, services and products will be designed to address system needs. These will include both critical system reliability needs and opportunities to address more effective system utilization and DER integration. However, in order to fully realize these opportunities, non-utility service firms and sophisticated consumers should have access to a mechanism by which they can propose rates and tariffs that could be evaluated by the Commission and established by the DSP as "regulated products".

As described in the Straw Proposal, competitive service firms will be encouraged to innovate with services that are "derived from the set of regulated products that are created in the retail marketplace." As discussed in the working group process, the Commission anticipates products that will include:

- Base load modifications
- Peak load modifications
- Non-bulk ancillary services
- Contingency and planning products (such as T&D investment deferral)

Given that these regulated products will establish the foundation for innovation, it is critical that the Commission establish open processes by which market participants can propose new regulated products and tariffs. A process such as this is important because (1) by its nature, innovation is more likely to be exogenous to the existing utility companies, and (2) the exertion of market power may limit the design of the core "regulated products."

Information asymmetries are the foundation of market power, which can be expressed in rate and tariff design. As noted in the Straw Proposal, "utilities, in the role of DSP and in general, have the ability to exercise market power as gatekeeper to the

distribution system's physical infrastructure and related communications network." Ensuring a process by which parties other than existing utilities will mitigate these market power influences.

Establishing a clear and open process for development of tariffs and regulated products will mitigate many of these concerns and ensure that "market animation" goals are more fully realized.

3.6 Comment: Customer access to data should be enabled through electronic data exchange

The Straw Proposal recommends establishing a bi-directional data exchange that may be operated by the winner of a competitive procurement process. The Straw Proposal also recommends that one entity operate the exchange to ensure a standard format for the data collected. If a data exchange is established, we support the exchange operator being selected through a competitive process as this would tend to limit the market power of incumbent utilities.

We are pleased that the Straw Proposal affirms the right of consumers to access their own energy information. It is unclear the mechanism by which this access should be obtained. If a Data Exchange is established, it should also serve as a delivery channel for consumers and their authorized service providers. Such access should be considered part of basic utility service and provided free from any charges. Further, the Data Exchange should support delivery of information in an ongoing way through commonly accepted, nationally recognized standards such as Green Button Connect.

The Track One Policy Decision should clearly establish the means by which consumers and their authorized agents are able to access energy use information as part

of basic utility service. Such information delivery should be addressed with ETIPs and DISPs.

3.7 Comment: Utilities should be directed to establish demand response programs leveraging consumer technology

As stated in the Straw Proposal, "Toward the goal of developing mature DER markets, distribution utilities should further be directed to revise reliability-oriented DR programs, as needed, to use DR as an economic system resource and provide a platform on which DSPs can ultimately utilize DER as a component of their supply portfolio along with purchases from the bulk power system."

We agree with this basic suggestion. Demand response programs are an essential service, especially in light of the economic benefits identified in the Straw Proposal. Both to support this goal and overall consumer engagement and market animation goals, we believe that demand response programs should also include programs that are specifically designed to leverage consumer-deployed technologies.

The residential sector has unique characteristics that should be considered when designing demand response programs. For example, in New York (consistent with other regions of the country), much of the contribution to peak load from the residential sector is attributed to air conditioning load. The residential sector represents a significant DER opportunity, but development residential demand response programs should accommodate unique requirements, such as:

- *Weather Dependence*: Programs should emphasize adjustments to air conditioning needs, which could include traditional load control, but also more sophisticated strategies such as pre-cooling and coordination with

weather data;

- *Consumer Technology*: Because air conditioning loads will be a primary focus of these programs, there should be ways to effectively integrate devices that have been purchased through consumer channels (thermostats, for example) into demand response programs. If consumers are required, for example, to replace thermostats with utility-installed devices, the overall resource potential is dramatically reduced;
- *Delivery Windows:* Many demand response programs have established very long delivery windows (noon to midnight, for example). Such long windows for participation are often incompatible with consumer lifestyles and will dramatically reduce participation;
- *Flexibility*: In order to satisfy system operational needs and consumer demands, flexibility in delivery should be established. For example, allowing service providers to deliver demand reductions using a "rolling portfolio" approach (where, for example, a group of consumers provide demand reductions for part of the delivery window and then another group substitutes for them) may successfully provide a consistent, predictable resource without diminishing program participation rates.

Specifically, and as we have noted in previous comments, "Bring-your-own-thermostat" programs are an effective means of allowing consumer-owned technologies to be leveraged for demand response purposes. Given the immediate concerns to determine effective transition policies and programs and objectives to enhance DER deployment in the state, establishing such programs are appropriate and consistent with policy objectives.

The Track One Policy Decision should include directives to include programs that (1) target residential consumers and (2) incorporate consumer-owned technologies as a demand response resource. In order to help develop these programs, we recommend that a working group or collaborative process be established to develop program and implementation recommendations.

4. CONCLUSION

We appreciate the opportunity to provide these comments. EnergyHub's specific recommendations are summarized as:

1. Direct rebates for in-home technology will accelerate consumer adoption and should be encouraged. Service providers and demand response aggregators should also be compensated on an ongoing basis to reflect the ongoing value provided to the grid and the customer risk associated with enrolling customers in grid-connected programs;

2. Utilities should be required to provide feeder-level system information in a free, standardized format that can be used as an input for business planning and modeling analysis;

3. If utilities act as DSP operators, periodic reviews of performance and market power should be conducted to ensure REV goals are being achieved and, if necessary, change DSP management;

4. Mechanisms should be established to allow secure exchange of customer account information to ensure consumers enjoy a seamless experience when purchasing or enrolling in new services;

5. Competitive service providers and non-utility companies should have the ability to propose rates, tariffs and other "regulated products" in order to support innovation and market animation;

6. Utilities should be required to immediately establish allow consumer access to their own energy usage information in electronic format;

7. Utilities should establish demand response programs tailored to the unique characteristics of residential customers and accommodating technology purchased through consumer channels.

We believe the suggestions we have offered here will strengthen the upcoming Track One Policy Decision and establish a powerful foundation from which to being the discussion of ratemaking and other rule changes.

Respectfully submitted,

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