January 30, 2015

Honorable Kathleen H. Burgess
Secretary
New York Public Service Commission
Three Empire State Plaza, 19th Floor
Albany, New York 12223

Re: Case 14-E-0423 – Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs – Comments of ThinkEco, Inc.

Dear Secretary Burgess:

ThinkEco strongly supports the New York Public Service Commission December 15, 2014 order to develop dynamic load management programs, with a focus on distribution-level demand response initiatives that can be implemented starting in 2015. ThinkEco supports the PSC's instruction that utilities look to Con Edison demand management experiences in helping guide the creation of new programs throughout the state. Con Edison is widely recognized as a leader in demand management and this experience should serve as a useful example, though not a limitation, to the development of distribution level demand response (DR) statewide. In addition, ThinkEco's experience designing and managing demand management programs in other jurisdictions in the US gives us a breadth of experience outside of New York. ThinkEco supports this process as a party to the proceeding, and respectfully submits the comments below in accordance with the January 9, 2015 Notice of Stakeholder Meetings.

Introduction to ThinkEco

ThinkEco Inc. is a leading provider of energy efficiency solutions for homes and businesses through our patented Internet-of-Things technology platform. Since our founding in New York City, we've expanded our footprint across the United States and internationally. Our technology platform enables cloud-based applications powered by intelligent big-data algorithms, and features an API (Application Programming Interface) through which partners can integrate their devices and data into our customer engagement interface.

For utilities, we offer full-service, turnkey solutions that can be customized to meet their unique program management needs and engage their end-customers. Using our cloud platform as the foundation, we're able to efficiently create hardware, software, and mobile solutions to meet the needs of each customer. Our meter-grade hardware records and stores appliance energy usage at one minute intervals, and is the basis for our measurement and verification process.

Beginning in 2011, ThinkEco partnered with Con Edison to create and implement the coolNYC program, an RSAP-funded DR program focused on the aggregation and demand management of non-central AC loads, including the window and room air conditioners that comprise more than 20% of New York City's summertime peak load. Now entering its 5th year, coolNYC counts several thousand customers and several times more connected ACs in its program community. The coolNYC program has also served as the vanguard for connected device programs, an idea now gaining traction nationwide, with ThinkEco currently implementing programs with utilities Baltimore Gas and Electric, Commonwealth Edison in Chicago, and CPS Energy in San Antonio, among others.

ThinkEco has unique experience in New York in segmenting, targeting, and engaging residential (single family and multi-family) customers, as well as small business customers. ThinkEco uses an analytics-based, big data approach that leverages both customer data and energy usage data to effectively segment and target potential program participants. Except for Con Edison's Direct Load Control program, DR in New York has been largely a Commercial and Industrial customer opportunity. ThinkEco has extensive knowledge of the type of two-way communications required to create successful program recruitment and ongoing engagement in the residential space, knowledge imperative for achieving cost-effective programs with high customer satisfaction.

Remarks on Case 14-E-0423

1. *Innovation as a Priority*: The PSC order to develop dynamic load management programs comes at a very unique time in the evolution of "connected devices" and consumer technology adoption. Market research consistently indicates that the United States is entering a period of dramatic growth in the quantity of connected devices that will be found in the residential and small commercial settings, as costs of connectivity continue to fall and customer familiarity and comfort with connected technologies continues to increase. ThinkEco believes that these devices offer revolutionary potential for utility load management, but will also require iteration to arrive at optimized program implementation. ThinkEco believes it should be an express priority, particularly in light of the unique nature of New York State's electrical grid, to invest in this innovation. Central thermostat programs – whether focused on Direct Load Control models or other programmatic design – benefit from decades of knowledge gained from programs focused on controlling these devices. These central air conditioners (CACs) will comprise an important part of distribution-level demand management in New York, but given that CACs comprise a minority of residential cooling in the state, and HVAC comprises only one piece of broader load management opportunities, the PSC should prioritize investment in and scaling of programs that leverage broader opportunities in controlling energy consumed by connected devices.

2. *Importance of a Diverse Portfolio of Load Management*: The PSC order to focus on distribution level demand management by its very nature requires the aggregation of a diverse portfolio of load management options – including diverse pricing structures, program designs, and enabling technologies. Benefits cited by the PSC – including deferral or avoidance of infrastructure spending, and improvement of system reliability, resiliency and efficiency – are dependent upon

the specific quality of the distribution system down to the individual sub-station, feeder, and transformer levels. Given that distribution networks will often offer only unique demand management opportunities – for example, only multi-family residential customers in one stressed part of the network, or largely industrial customers in another stressed part of the network – it is essential that each utility develop a diversified portfolio of load management resources. This is the only way to unlock the full value of distribution-level demand management. Furthermore, it is essential that these technologies are able to be precisely controlled, with geographic control options as a critical requirement to effectively target critical load pockets.

3. *Load Metering*: Many innovative ideas in residential and small commercial load management encounter questions regarding how to accurately measure energy consumption and impact of conservation measures. Given the limited deployment of AMI in New York State, this question remains an important one in considering program design. ThinkEco encourages a clear set of rules that allows for "bright line" understanding of acceptable approaches toward load measurement. Efforts at measurement should value direct metering where possible, and attempt to minimize the use of assumption-based calculations whenever feasible. In evaluating initiatives that require the incorporation of additional metering hardware, the full cost of load measurement should be considered.

4. *Speed of Implementation:* The PSC order aims for program implementation by 2015, a timeline that recognizes the potential benefit of implementing distribution level demand response, and the costs associated with delaying implementation. Further, the PSC recognizes that to achieve such timelines "program differences across the various distribution utilities….should be minimized to the extent possible." The challenge of successfully implementing demand response programs by the summer of 2015 is significant, meaning that technology and program providers with experience rapidly scaling programs should be favored. Those providers that have proven success in creating load management programs in the state are best positioned to quickly scale DR programs on the timeline required.

ThinkEco looks forward to participating in this proceeding, and stands ready to provide further information regarding any of the above remarks. We appreciate the consideration of the PSC and the state's utilities in this matter.

Sincerely,

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