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## ThinkEco response to Clean Peak Standard (CPS) Stakeholder Questions



ThinkEco is an IoT tech firm based in New York City, founded in 2008. We are a demand side management (DSM) program provider to utilities, such as National Grid, Eversource and Con Edison. We manage utility residential and multifamily customer peak load reduction programs since 2011. Our longest running program is with Con Edison, the SmartAC program, now in its ninth year (<https://smartac.coned.com/>). We enable control of home appliances like window AC units, PTACs, split AC units, dehumidifiers and other appliances.

ThinkEco is therefore uniquely positioned to comment on parts of the Massachusetts Clean Peak Standard stakeholder questions. We appreciate this opportunity to share our 10- year knowledge and experience of actual operation of customer-facing utility DSM programs, which includes all aspects from marketing, recruiting and enrolling to tracking load reductions, running demand response events, to M&V, analyses and reporting and incentives tracking and payment.

ThinkEco's technology platform is based on a Wi-Fi plug device that is self-installable by the customer. The utility provides it free in most of our utility programs. This is especially important for low income and multi- family customer segments, where these groups do not have many access points to participate in utility DSM programs. And, these segments have a higher than average reliance on window AC for cooling needs. Our device contains a meter grade chip, that records the appliance wattage usage by minute. This usage data is then sent to the cloud database, through the customer's Wi-Fi. Our software and phone app enable the customer to set appliance on/off schedules, view their usage history, view their energy savings and to calculate their monthly bill reductions, by entering their local \$/kWh rate. All of this is done without requiring AMI, or monthly meter data, as our solution records actual appliance usage data by minute and sends that data to the cloud database for storage and analysis.

ThinkEco's solution has been employed by utilities around the country to attack wasted energy by home appliances, particularly from the window AC. In fact, a July 2018 report commissioned by the Massachusetts EEAC, produced by Navigant\* (<sup>1</sup>[Res 1 Baseline Load Shape Study](#)), emphasized the benefits to peak load reduction from control of window AC. The study says that window AC saturation in the State is 48%, a significant potential peak load reduction resource. And, the study says:

"Central air conditioners (AC) are the single most important end use driving summer peak demand. Central AC should be the focus of efforts to reduce peak demands, but ductless heat pumps and room AC are also important to a comprehensive program offering."

We will now turn to our responses to the Clean Peak Standard stakeholder questions.

### Clean Peak Resource

ThinkEco supports a broad definition of Clean Peak Resource. The aggregated load reduction of home appliances qualifies under your current definition: "

a demand response resource that generates, dispatches or discharges electricity to the electric distribution system during seasonal peak periods, or alternatively, reduces load on said system."

Our resource is an example of a resource that is not connected to the electric distribution system but should still be recognized for its peak load reduction capability.

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<sup>1</sup> Res 1 Baseline Load Shape Study, Navigant, Boulder Co., July 2018. The study can be found at [ma-eeac.org/wordpress/wp-content/uploads/RES-1-FINAL-Comprehensive-Report-2018-07-27.pdf](http://ma-eeac.org/wordpress/wp-content/uploads/RES-1-FINAL-Comprehensive-Report-2018-07-27.pdf)

### Demand Response Resource

ThinkEco believes your definition of demand response is accurate and inclusive.

We believe in a broad definition of demand response, to recognize the peak load reduction contributions of home and office appliances. Appliances such as window AC units, and others are curtailed in offices for commercial DR programs, so it is logical that these same appliances when curtailed in homes and residences would qualify as demand response.

ThinkEco wishes to note that in many of our utility sponsored DSM programs, the load relief we create (as well as that of some smart thermostat load reduction providers) is not rolled up and sold to the regional or State ISO. The load reduction we create is used for local T&D relief (only) and is still cost effective.

### Establishing Seasonal Peak Periods

ThinkEco has years of experience designing residential peak load reduction programs, including the call window for DR events. We have called events for 1 hour up to 6 hours, every day of the week. Over time, the seasonal peak period (to us, the T&D system peak) has moved to later in the day, to fully capture the coincident T&D system peak in the late afternoon and evening from residential customer appliance usage. This means in DR programs we manage for utilities, we are calling events from 5pm-8pm, or in some jurisdictions 7pm-11pm.

Looking at load shape data for residential appliances and whole home energy usage will inform you as to the peak coincident nature of residential summer and winter load shapes in Massachusetts. ThinkEco's directly-metered appliance data produces these residential load shapes for the appliances we control. The Res 1 Baseline Load Shape Study referred to above has many load shape graphs in the appendix.

### Verification of Metered Data

ThinkEco does not agree with the DOER position that "all clean peak resources be registered with NEPOOL GIS as Non-NEPOOL participants." ThinkEco operates a platform that records actual customer appliance wattage consumption, with no estimation or intermediary system. The actual usage is recorded in our database and sent to the utility sponsor for M&V of load reduction. For ThinkEco, the added step and cost you propose is counter-productive to ours and other DR solutions.

### Value of Certificates

ThinkEco supports the role utilities will play in obtaining and valuing clean peak certificates.

ThinkEco would act as a load resource supplier to the utilities and be compensated as such in a private contract with the utility, under long term

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