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PROJECT NO. 53911

**AGGREGATED DISTRIBUTED ENERGY § PUBLIC UTILITY COMMISSION
RESOURCES - ERCOT PILOT PROJECT § OF TEXAS**

**ARMADA POWER COMMENTS ON TASK FORCE OBLIGATIONS,
PURPOSE, AND SCOPE**

Armada Power is a thermal storage company which uses reliable aggregated water heater demand control as a grid resource. Invented solely to respond to grid reliability, our patented hardware and software participate in markets across the United States and Canada.

Engineered with a focus on grid reliability and resiliency to support renewable energy growth we bring a unique perspective as a non-traditional technology to the Aggregated Distributed Resources (ADER) conversation. To achieve the guiding principles laid out by the PUCT, the taskforce should set a program structure which leave open the door to both existing and future technologies while defining the requirements of the technology for eligibility without specifying a particular technology.

Armada recommends the taskforce design a recommendation for any technology which can provide MW's to the grid to have device level revenue grade metering to participate in the pilot. There are many current technologies which provide MW's to the grid in an accurate and measurable way. While there are versions of disaggregated load to utility metered usage, the most accurate approach for ERCOT is to require device level metering in the ADER program.

Revenue grade metering is common in technologies which provide MW and should be a requirement for any ADER program to ensure a device is achieving the impact intended as an aggregated ancillary market product. Given many of these technologies will exist in residential homes which are not metered on demand, the demand read should take place at the device level and be rolled up into the ADER LSE's pool for an accurate demand read. This will provide ERCOT accurate ability to rely on this load for dispatch to the grid and allow ERCOT to understand the impact to the grid down to the device level.

Armada recommends the taskforce include a process where a customer's use of an LSE for the ADER program not be restricted to the same LSE for generation supply (same REP). This will allow customers to retain flexibility in their choice of a



REP or REP product in addition to participation in the ADER pilot and future programs. A customer who must choose between a great supply product and participation in the ADER pilot program may opt out of the ADER program and in turn those MWs would be lost to the grid. Separating the customer's chosen ADER Program LSE from the customer's chosen REP will give ERCOT certainty of the MW available without concern of disenrollment due to REP product choice. This also will achieve the future state allowance of third-party aggregators while also achieving broad participation and competition for the program.

Armada recommends the taskforce provide a recommendation of aggregation size (100 MW, etc.) which allows for broad participation of many technologies and customers. A reasonable aggregation will increase competition and participation in the program.

Lastly, Armada recommends the taskforce provide a series of ancillary products like those offered in other wholesale markets. The value to the grid of an ancillary product is in how it is used, and to that end Armada recommends the taskforce review the following products for inclusion:

- Renewables Firming: a real time to forecast signal response.
- Synthetic Inertia: ADER response to droop control
- Bi-Directional Frequency Regulation

Armada is a committed stakeholder in this important pilot project and looks forward to participating in the taskforce process and working with all interested parties to fully examine and ultimately employ ADER for the betterment of Texas.

Respectfully submitted,

A handwritten signature in black ink that reads "Paul A. Cauduro". The signature is written in a cursive, flowing style.

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