

# Large Customers Group

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## Report-out Presentation

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# Why the Targets for Load Participation Are Needed

- Provide certainty in the market for sellers, CSPs, other market participants for investment in supporting technology
- Bigger RPS and resulting variable resources will lead to a market demand for more demand response
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# Barriers or Challenges to the Targets

## ■ Technical

- DR is not generation – representing DR as generation is a problem because of inherent differences
- Communication speed
- Threshold to meet standards is expensive (telemetry, engineering, controls)
- Sub-metering required to properly capture and characterize loads (but gaming must be prevented)
- Ability to control customer equipment within customer constraints (need to use set points to protect equipment)
- Varying technical requirements across the US disruptive to vendors and customers doing business in different places (fragmentation)

# Barriers or Challenges to the Targets

## ■ Market

- Volatile prices and impact of increased volume dropping prices and disrupting revenue expectation
- Prices in regulation trending down
- Value proposition to customer has to work
  - Customers do not care about grid optimization
- Varying market rules across the US disruptive to vendors and customers doing business in different places (fragmentation)
- Time disconnect in settlement between telemetry and revenue meter data
- Verification process in aggregation is hard without sub-metering
- Limitations against optimizing participation across multiple market products

## ■ Regulatory

- Lack of security standard (DOE work with NIST?)

# List of R&D, Technology and Market/Regulatory Development Needs to Reach the Targets

#	Title of R&D and Market/Regulatory Need
1	Research on characterization and modeling of demand response resources
2	Research on ancillary service needs and potential for loads to provide
3	Potential development for forward market or bi-lateral contracts for ancillary services
4	Demos and Pilots to understand trade-offs for all in value chain
5	Modifying ASHRAE standards for demand response, specifically time-based exceptions (i.e. for indoor air quality)
6	Open Standards, adopted by relevant organizations
7	Simulations to test improved policies and programs
8	Study benefits of demand response to support ancillary service – study investment trade-offs
9	Research to streamline participation of demand response in ancillary service markets
10	Research to enable customer participation for all customers in all markets
11	Expand scope of DOE EERE Industrial energy tools to include advice on DR deployment
12	Consider enabling aggregators to act in more markets