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Obstacles And Opportunities In Electricity Markets

Smart Grid Regulatory Barriers

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# Not all Demand Side Management is the Same

## Characteristics of Demand-Side Management Products



	MANUAL DR	DIRECT LOAD CONTROL	AUTOMATED DEMAND MANAGEMENT	GENERATION-QUALITY ADSM
Cost-effective	●	●	●	●
Enhances customer satisfaction	■	■	●	●
Can be dispatched specifically to geographic areas, Feeders, or individual loads	■	■	■	●
Dispatch Verified with post-event settlement	■	■	●	●
Dispatch Verified with real time monitoring	○	■	■	●

## Characteristics of Demand-Side Management Products, cont'd

	MANUAL DR	DIRECT LOAD CONTROL	AUTOMATED DEMAND MANAGEMENT	GENERATION-QUALITY ADSM
Assets are installed within rate-base	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Dispatch control and customer relationship directly managed by the host utility	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Customer can define and control operating parameters for their site	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Can be dispatched within minutes such as with Ancillary Services	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Permanent Load Shifting from peak demand to low usage times	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Can be operated repeatedly, in short durations, many times per year with little, or no, customer impact	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Integrates distributed renewables including on individual buildings	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Cyber Security to NERC CIP and utility standards including system interfaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

## Fully-Automated Demand-Side Technology (ADSM)

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- A physical, capital asset, invested in by a utility
- Operated and dispatched like a generation unit
- “Negawatts” are operationally equivalent to megawatts

## What It Takes to Get to ADSM

- Appropriate regulatory framework using traditional rate-making mechanisms:
  - ADSM Asset - Plant in Service
  - ADSM Operational Costs
  - Customer Payments and Fuel
  - Paid for kWh Dispatched
  - Avoided Emissions

## Another Way to Get to ADSM

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- Establish a Distribution System Platform Provider
  - NY PSC's April 2014 REV Proposal: Reforming the Energy Vision