Open Automated Demand Response Progress Update

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Challenges with the Grid

- Manage Peak Capacity During Hot Summer Days
- Improve Affordability of Electricity
- Improve Grid Reliability
- Enable More Renewables on Grid
DR Services Spans Time Scales

**Shape**
- Years
- Incentivize EE and Behavior Change

**Shift**
- Seasons
- Mitigate Ramps and Capture Surplus Renewables

**Shed**
- Days
- Manage contingency events and coarse net load following

**Shimmy**
- AM/PM
- Hours
- Minutes
- Seconds
- Fast DR to smooth net load and support frequency
End Uses and Enabling Technologies
IEC OpenADR Standard

OpenADR 2.0b Profile Specification now an international standard from the International Electrotechnical Commission - IEC 62746-10-1:2018

- Systems interface between customer energy management system and the power management system - Part 10-1: Open automated demand response
- https://webstore.iec.ch/publication/26267
Future Directions

• Linking energy efficiency and demand response can be synergistic
• Demand Side Management is moving from static energy efficiency to dynamic energy management
• Integrated demand side management will help state achieve low carbon grid