advanced energy management alliance

Advanced Energy Management Alliance

Leveraging Utility-Aggregator Partnership Models

May 14, 2019

IPL IRP Public Advisory Meeting #3

Advanced Energy Management Alliance

Empowering consumers through distributed energy resources, including demand response and advanced energy management

We are providers and consumers united to overcome barriers to nationwide use of distributed energy resources. We advocate for and educate on policies that empower and compensate consumers to have cost-effective, efficient, resilient, reliable, and environmentally-sustainable choices.

advanced
energy
management
alliance

AEMA Members*

Alcoa
CPower Energy Mgmt
Direct Energy
Eckert Seamans
Ecobee
Enel X
EnergyHub
Great Circle Solar
Google/Nest
Gowling WLG
IPKeys
Icetec
Itron
Jennings Strouss
NRG
NRStor C&I
Roden Energy Solutions
Smart Energy Water
Stem
Tesla
Viridity Energy
Walmart
Whisker Labs

advanced energy management alliance

*This presentation represents the collective consensus of AEMA as an organization, although it does not necessarily represent the individual positions of the full diversity of AEMA member companies.

Opportunities for MISO States

- Throughout MISO, there is either less DR than cost-effective market potential, or when there is existing DR, it is often not leveraged to its full potential.

- Price signals for capacity do not exist, limiting the ability for new DR to provide capacity even when it is more cost-competitive than existing or new generation. This is not MISO's fault, but is a function of a heavily "residual" capacity market.

- The needs of MISO and utilities are evolving (e.g. flexibility, shoulder periods, peak shaving), after being largely unchanged for several years, but certain legacy tariffs have not evolved to meet those needs.

- Regulatory constructs often do not encourage utility DR investments, or collaboration between utilities and DR Providers.

advanced
energy
management
alliance

Whitepaper Addresses These Challenges

Download link here

advanced
energy
management
alliance

Benefits of Demand Response

~$800M in projected net benefits in IN/MI from C&I over 10 years*

Tens of millions in annual payments to customers in each state

Lower energy bills

Reliability and resiliency

Strong performance during severe weather events

Increased economic competitiveness

Risk mitigation

Avoids long-term risks to consumers + controversy

Renewable integration

Helps balance wind and reduce CO_2 emissions

advanced energy management alliance

*Economic Potential for Peak Demand Reduction in Michigan, from http://info.aee.net/hubfs/PDF/Peak-Demand-Reduction-Potential-forMichigan021717.pdf?t=1487398737782;
Potential for Peak Demand Reduction In Indiana, from https://info.aee.net/hubfs/IN%20DR%20Study%20Final.Feb.7.2018.pdf

Benefits of 3rd Party DR Providers

- Significant private capital investments in advanced technology that provides real-time resource visibility; supplements utility capabilities while being efficient with ratepayer dollars.

- Expertise in discovering and maximizing customer flexibility; harness potential from a diverse pool of C&I customers, not just the largest, to lower costs for all customers; provide market interface.

- Portfolio aggregation enables reliable performance while shielding individual customers from out-of-pocket penalties that serve as barrier to entry; can also play "tetris" with limited duration customers who may not be able to participate individually.

advanced
energy
management
alliance

Facilitating Demand Response Participation

- Indiana's existing ARC ban does not need to be overturned in order to leverage benefits of 3rd party DR providers; Indiana utilities are doing this today.

- Goal should be to develop a model that maximizes reliable, cost-effective customer participation through ARC-utility collaboration while maintaining utility control/visibility over customers.

- Options include bilateral contracting or an open utility tariff.

- MISO's evolving markets pose both risks and opportunities for customers participating in DR programs today; ARCs can help customers & utilities adapt to these changes.

advanced energy management alliance

How have MISO states addressed ARC participation for regulated utilities?

In the last year, multiple states have encouraged/directed utilities to work with 3rd Party DR Providers, without overturning state bans on ARCs:

- Missouri PSC:

"Authorizing unregulated ARCs to take control over aspects of electrical service would prevent the Commission from regulating the service these entities seek to provide. Additionally, the Commission would continue to regulate the utilities to which aggregating customers subscribed, but would have no control over the manner in which the aggregators conducted business. Based on Staff's research an approach in line with the Indiana Model appears to mitigate these issues. Therefore, Staff recommends the Commission encourage the electric utilities to submit tariffs similar to the Indiana Model."[1]

- Louisiana PSC:

"LSE's are encouraged to work together with third party demand response agents who work with the utility to aggregate DR load, if such efforts are prudent and cost efficient, to encourage and implement the demand response programs and to take advantage of the demand response benefits offered by the RTO markets. However, those programs must be developed and implemented under the regulatory authority of the Commission; the Commission will determine the effectiveness of those programs, and how the benefits should be shared by retail customers."[2]

advanced energy management alliance

1. *Missouri PSC Staff Report on DERs, Apr. 5, 2018, Docket No. EW-2017-0245*
2. *Louisiana PSC General Order, Mar. 9, 2019, Docket No. R-34948*

Goal should be to maximize cost-effective DR participation to drive system-wide savings

- Utilities can leverage benefits of 3rd party DR Providers to maximize participation while retaining planning control, insight, and jurisdiction over their customers.
- Two different models:
  - Indiana-style tariff (e.g., I&M Indiana's D.R.S.1 tariff)
  - Bilateral contracts:

DR services provided by aggregator to utility

Full turnkey program management provided by aggregator

- Model should suit the needs, capabilities of utility & customers and can be adapted accordingly.

advanced energy management alliance

APPENDIX

Potential Models: I&M Tariff in Indiana

- Tariff allows qualified DR providers to recruit C&I customers to participate in wholesale capacity program, but enrollment must happen through utility;
- Enables I&M to account for DR in their system planning and exercise control, while leveraging capabilities of DR providers;
- Compensation is higher of average wholesale capacity price for last four years or 35% of Net CONE (cost of new generation);
- Tariff is compatible with ban on ARCs, as utilities enroll customers in the market, not the ARC. ARCs bear underperformance risk, **not** customers; and
- Won the "Program Pacesetters" award from the Peak Load Management Alliance.

advanced
energy
management
alliance

Potential Models: Bilateral contracts

- Competitively solicit for DR resources through 3rd party service providers to drive competitive outcomes;
- Can contract for DR capacity to meet wholesale (e.g., MISO capacity credit) and retail (e.g., peak shaving) needs;
- Utility receives full oversight of DR resources and pre-determined quantity of dispatchable demand; can white-label 3rd party's platform if desired
- Contract terms can be determined based on unique circumstances / needs and tailored to utility service area; and
- Utility should receive incentives for procuring DR when it has higher net benefits to all customers than traditional infrastructure.

advanced
energy
management
alliance

advanced energy management alliance

Questions?

To learn more about Advanced Energy Management Alliance, visit our website.

www.aem-alliance.org