DDSR Tariff and Battery Pilot Updates

APS Interconnection Forum Jason Delaney – APS Jessie Guest - EnergyHub





DDSR Aggregation



Background on Decision No. 77855

- APS was ordered to file a tariff that permits and provides compensation for the aggregation of distributed energy storage and distributed demand-side resources
- Calls for the valuation of operating characteristics and various DDSR technologies
- Provide a process to incorporate stakeholder feedback before submitting the proposed tariff

Value Streams •Capacity •Demand Reduction •Load Shifting •Locational Value •Voltage Support •Ancillary and Grid Services Technologies

- Connected Smart Thermostats
- •Water Heating Controls
- Pool Pump Controls
- •Managed EV Charging
- •Electric Batteries
- •Building Energy Management System





2021 All-DDSR RFP

APS requested proposals for multiple grid services

Product A Focus: System capacity, energy and	Product B Focus: Locational value on 6 APS feeders	Product C Focus: Ancillary services	
load shifting value 5-40 MW aggregated load	1-5 MW aggregated load	1-5 MW system support	

APS received 12 total bids from six bidders, with at least two bids for each of these services

RFP Preliminary Selection

- Selected three products
 - <u>Product A</u> = 5 MW system capacity
 - <u>Product B</u> = 2.5 MW on 6 feeders
 - <u>Product C</u> = 5 MW ancillary services
- All three grid services products will be provided by aggregating residential batteries
- Anticipating services to be delivered starting in early 2023
- APS will be filing a proposed DDSR aggregation tariff on June 1, 2022







Grid Services - Key Terms from RFP

	Product A Summer Capacity	Product B Locational Value	Product C Ancillary Service
Grid Services	Capacity, demand reduction, load shifting	Locational value on 6 feeders	Voltage, ancillary services
Season	Jun 1 – Sep 30	Peak: Jun-Sept Low Load: Oct-May	All year
Availability	3-9pm	Peak: 3-9pm Low Load: 10a-2pm	
Frequency	<u>></u> 20/year	Peak: 60/year Low Load: 80/year	When not providing other services
Duration	2-6 hours	2-6 hours	



DDSR Tariff Next Steps

- Stakeholder meetings in April and May to discuss
 - Tariff design
 - How the tariff can work to reward customers and aggregators



Residential Battery Pilot





(New) Residential Battery Pilot

- \$3 million, 3-year pilot launched in October 2021
- Incentives for newly purchased battery systems:
 - Data share: \$500/kW up to \$2,500 maximum per home
 - Capacity share: Additional \$1,250 per home
- BYOD design provides customer choice
- Current battery partners include EnPhase, SolarEdge, Tesla (added February 2022)
- 18 applications received to date, 1 system completed and energized



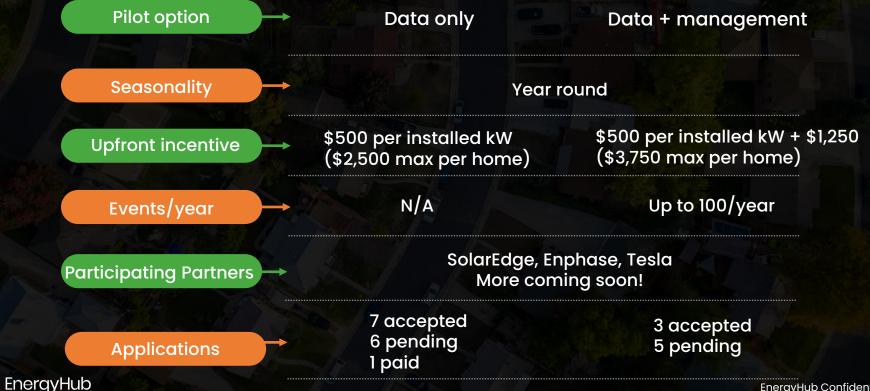


Interconnection Forum: APS Residential Battery Pilot

March 30, 2022

Pilot Design

Details



EnergyHub Confidential

Pilot enrollment process



