

DDSR Tariff and Battery Pilot Updates

APS Interconnection Forum

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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 AII-DDSR RFP

APS requested proposals for multiple grid services

Product A

Focus:
System capacity,
energy and
load shifting value

5-40 MW aggregated load

Product B

Focus:
Locational value on 6
APS feeders

1-5 MW aggregated load

Product C

Focus:
Ancillary services

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
 - Product A = 5 MW system capacity
 - Product B = 2.5 MW on 6 feeders
 - Product C = 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	When not providing other services
Frequency	≥20/year	Peak: 60/year Low Load: 80/year	
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

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Pilot Design

Details

Pilot option	Data only	Data + management
Seasonality	Year round	
Upfront incentive	\$500 per installed kW (\$2,500 max per home)	\$500 per installed kW + \$1,250 (\$3,750 max per home)
Events/year	N/A	Up to 100/year
Participating Partners	SolarEdge, Enphase, Tesla More coming soon!	
Applications	7 accepted 6 pending 1 paid	3 accepted 5 pending

Pilot enrollment process

