Some Uncertainty on Energy Storage compensation in value stack

- “Energy Storage paired with electric generating equipment, only the non-storage generation can qualify for Alternative 2 compensation.” – one utility tariff

- Not same in all utility tariffs, DPS has clarified ES green electrons should be eligible for Alt 2

- Stand alone Storage being fast tracked for VDER eligibility
Implications

Interim period of green/brown eligibility can lead to restrictive configurations

- Limiting inverter configuration (Limiting to DC coupled system)
- Preventing battery discharge to the grid

Or not receiving appropriate value

- Compensation limits (i.e. don’t get alt 2)
Implications

Restrictions reduce benefit and value

- Building application BTM Storage + PV:
  - If the battery is precluded from discharging during times of injection (to avoid brown electrons) then system can’t shift the green energy to higher value periods (i.e. Alt 2)
  - If can’t grid charge the battery then cannot address customer demand
  - If separate service then no customer BTM benefits
Restrictions reduce benefit and value

- Community Solar + Storage:
  - Station power from the grid is likely necessary
  - If the Battery is precluded from exporting power then cannot shift CDG output
  - Battery may need to shift grid-source power to provide ancillary services (inverter configuration matters)
Steps to provide clarity

- Eligible generation shifted by energy storage can receive VDER Alt 2 Capacity
- Action should anticipate Standalone Energy Storage VDER
- Metering as a solution for making sure grid-sourced and green electrons are appropriately compensated (as opposed to restrictive configurations to prevent occurrence)
Key Use Cases

- Community/Remote Solar + Storage – Alt 2 capacity for PV-sourced energy during summer and flexibility to operate with grid-sourced energy to provide other services i.e. ISO ancillary or DISP…

- BTM Solar + Storage - Alt 2 capacity for PV-sourced energy during summer and flexibility to use grid-sourced energy to manage demand or provide services (i.e. demand response)
Typical Configuration

Source: Demand Energy
Single line example

Source: Stem
Flexibility of Multi-meter Configuration

Validate solar only charging

Track grid and solar charging

Meter output for future attribute tracking
## Tracking Grid-Sourced and Solar Electrons

Interval data is collected from meters at both the PV and ESS terminals.

Grid-sourced and green energy is tallied.

Appropriate compensation is applied to each.

### Source: Borrego Solar
Other Considerations

- Due to cost of metering would not want to require multiple meter configuration for small systems (residential, possibly small commercial)

- Creates more overhead for utilities in billing

- Device level and/or third party metering should be allowed

- Can be used to choose VDER tariff or Load reduction for a DER output (Policy decision, but technically feasible)

- Metering can apply to both AC and DC coupled systems
Key Use Cases

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- BTM Solar + Storage - Alt 2 capacity for PV-sourced energy during summer and flexibility to use grid-sourced energy to manage demand or provide services (i.e. demand response)
Discussion