

# Storage Participation

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## Goals

- **Market Rules that are technology neutral**
- **Market Rules that are non discriminatory**
- **Market Rules that provide least cost provision of service**
- **Market Rules that provide clearing prices that equal the marginal offer**
- **Remove artificial barriers to entry or participation**



## General Approach

- **Review the rules for inconsistencies and artificial barriers**
- **Introduce offer parameters/market rules that allow storage to participate where it is technically and economically feasible to do so**



## Specifics

- **Storage can already participate as DR**
  - **No changes to these rules**
- **Rule changes/review are for in front of meter participation**
  - **Correct metering can put “behind the meter” resources in front of meter for purposes of participation in ancillary services**



## Capacity Market

- **24 hour capability must be the basis for capacity**
  - **Need definition that is consistent with long term operation**
    - **Shorter obligation creates an inferior good that competes with 24 hour obligation**
    - **10 hour definition is not sustainable**
  - **Need consistent treatment across all resource types**
    - **24 energy offer required for capacity resources equal to capacity MW obligation**



# Capacity Market

- **Must offer requirement in capacity going forward**
  - **MW equals cleared offer**
  - **Lesser of 24 hour capability or purchased injection rights**



## Injection Rights

- **Can request/build injection rights = 1 hour max injection/withdrawal capability**
- **Injection right MW can be greater than 24 hour capability**
- **Testing required to maintain**



## Energy Offer

- **Must offer requirement in energy market if capacity resource**
- **Subject to offer capping**
- **Offers (\$/MW)**
  - **Non crossing offer and buy bids**
  - **Monotonically increasing**
- **Max injection rate/Ramp Injection rate**
- **Max charge rate/Ramp Charge rate**
- **Losses**
- **Pool (Storage capacity)**





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