Subzonal Dispatch: A Transmission Support Service

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Issue

- From a Demand Response participant's perspective, Emergency dispatch of DR in regions more granular than an LDA places the participant at a competitive disadvantage relative to other loads and DR participants.
- Subzonal Dispatch treatment of Demand Response that does not recognize the incentives for DR participation can discourage DR registration in affected regions.

Overview

- DR and Generation Incentives differ
- DR and Generation are impacted differently by constraints
- Sub-Zonal emergency dispatch of DR provides uncompensated Transmission Support from DR
- What are the options?

Incentives Differ

- DR generally will not curtail for high prices
  - $1000/MWh offer cap is less than incremental cost
  - Industry studies indicated incremental costs upwards to $20k/MWh
- Participation based on cost offsets
- Penalty avoidance is primary performance driver

Demand Response

- Generation sees high prices as an opportunity
- Participation is primary business
- LMP Clearing price revenue is primary performance driver

Generation

Constraints (Subzones) impact DR and Generation differently

- A performing DR resources loses money with each event
  - Exception – customers with Incremental costs less than $1000/MWh
  - Caution – A single customer's incremental costs can vary significantly from day to day.

- A performing generator enhances profits with each Emergency event.

Demand Response

Generation

Subzonal Dispatch Impacts on DR

- DR participants within subzone experience lower quality service than DR participants outside the Subzone.
  - All DR providers receive the same LDA standby price, BUT
  - Only DR participants within Subzone experience the losses created by emergency dispatch.

Subzonal dispatch is Transmission Support

- Standby compensation for DR is modeled as if all generation within an LDA is deliverable within the LDA
- Therefore, Subzonal Dispatch occurs when transmission is not as robust as transmission planning processes anticipated.
- DR participants offer DR within an LDA but is dispatched within a more valuable Subzone. (Bait and switch?)
- Subzonal Dispatch of DR can be characterized as supporting Transmission.

Comparability with other Loads

- DR, unlike generation, pays for transmission service.
- DR that is subject to Subzonal Dispatch in effect experiences reduced transmission service compared to non dispatched loads
- DR that is dispatched by Subzones provides a Transmission Support Service that is uncompensated.

What about Generation Comparability?

- Potential DR losses when dispatched are limited by event limits.
- DR pays for transmission service
- DR is harmed by Subzone dispatch

- Generation Losses do not occur because incremental costs are exceeded by market prices.
- Generation does not pay for transmission
- Generation benefits from Subzone dispatch

Demand Response	Generation

Options

- Incentive compensation for response to sub zone events
- Voluntary Response
- Other

Supporters

- ClearChoice
- EnergyConnect
- EnerNOC
- Viridity

Questions?