

FERC Order 719: Aggregation Concepts for DSASP

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Smaller DR Resources in Ancillary Services Markets

- ◆ FERC Order 719 - Paragraph 97:
 - *Assessment of technical feasibility and value of smaller DR Resources providing ancillary services within one year of the Order (Oct 17, 2009)*
 - Report findings on whether (and how) smaller DR Resources can reliably and economically provide operating reserves
 - Need for M&V and definition of what constitutes a “small demand response resource”

Challenges associated with Aggregations providing Ancillary Services - 1

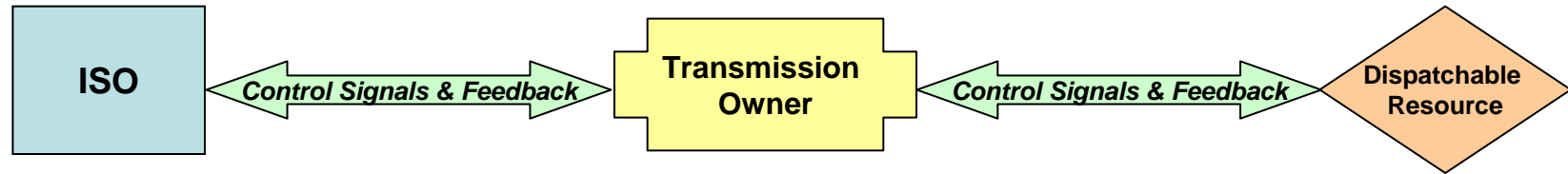
- ◆ Alternative real-time or near real-time communications needed for operational visibility
 - *Alternate communications protocol could also have operational implications, such as direct communication with Aggregator which means bypassing the Transmission Owner*
 - Identify acceptable interval/turn-around time for dispatch signals
- ◆ Aggregator's communication protocol with resources
 - *Turn-around time for communications and feedback*
 - *Protocols should not limit/delay a resource's ability to choose another aggregator*
- ◆ Location of resources in aggregation
 - *What are the limitations – zonal, subzonal, bus level, other?*

Challenges associated with Aggregations providing Ancillary Services - 2

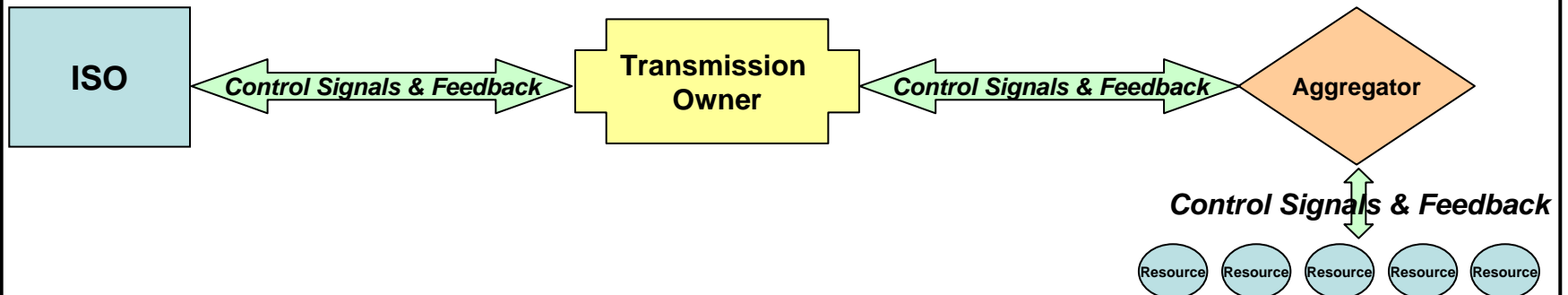
- ◆ Market rules for Aggregation structure
 - *Ability to identify individual resources to prevent duplicate registration*
- ◆ Measurement & Verification
- ◆ Performance and payments
- ◆ Integration into NYISO systems
- ◆ Reliability Council rules

Communication Basics

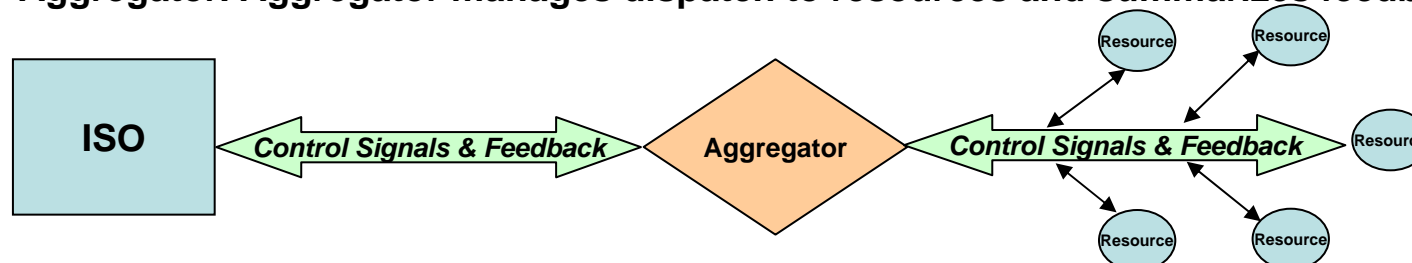
Current DSASP implementation



Possible Small Customer Aggregation Implementation with Transmission Owner relay to Aggregator. Aggregator manages dispatch to resources and summarizes feedback.



Alternate Small Customer Aggregation Implementation with direct communication to Aggregator. Aggregator manages dispatch to resources and summarizes feedback.



Objectives of demonstration projects to assess feasibility of small DR providing Ancillary Services

- ◆ Develop/identify communication protocol that would provide security, control and timeliness of dispatch signal from NYISO to Aggregator
- ◆ Operational visibility of aggregated resources
- ◆ Develop/identify communication protocol between Aggregator and resources
- ◆ Establish M&V procedures that provide verifiable reductions from an aggregation providing operating reserves
- ◆ Demonstration projects may need to be outside the market



The New York Independent System Operator (NYISO) is a not-for-profit corporation that began operations in 1999. The NYISO operates New York's bulk electricity grid, administers the state's wholesale electricity markets, and provides comprehensive reliability planning for the state's bulk electricity system.

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