Demand Side Participation in Ancillary Service Markets

Price Responsive Load Working Group
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Draft – for discussion purposes only

Key Issues

- ✓ Formal Discovery has raised issues pertaining to Modeling, Metering, Load Forecast, Bidding, and Settlement.
- ✓ Primary emphasis over the past month has been devoted to modeling and load forecast impacts.
- ✓ Three modeling options are being considered:
  - *Use conventional generator model*
  - *Use pumped storage unit (negative generator) model*
  - *Model as dispatchable load*
- ✓ All have implications for forward commitment and load forecasting

Factors Influencing NYISO Demand Response Modeling

- ✓ Co-Optimization of Energy and Reserves.
- ✓ Instantaneous Metering Required by Operations.
- ✓ Automated Settlement Required.
- ✓ Fairness in Commitment, Scheduling and Settlement Required.
- ✓ Must be Extendable to Avoid “Throw Away”. It must be flexible for all future demand-side participant types and program offerings as new regulations unfold.
- ✓ Compliance with NPCC/NERC Rules.

Modeling Demand Response as a Conventional Generator

- ✓ This approach is used in DADRP
  - *Limited to day-ahead scheduling*
- ✓ Issues with treating DSASP provider in load forecast, providing AGC signal
- ✓ May require significant expansion of current modeling capability

Modeling Demand Response as a Negative Generator

- ✓ Pumped storage facilities currently participate in reserves and regulation markets
- ✓ Limited ability to adapt to different types of demand response ancillary service providers

Modeling Demand Response as Dispatchable Load

- ✓ Scheduling software (SCUC, RTD, & RTC) understand dispatchable load; MIS, AGC and Settlements do not
- ✓ Can be modeled to handle full resource load, or just incremental load available for reserves/regulation
- ✓ Existing calculations of zonal load needs to exclude the telemetered actual interruptible load MW

Next Steps

- ✓ NYISO and ABB personnel investigating the effort required to fully expand the dispatchable load model
- ✓ If this proves infeasible, will consider negative generator model (unlikely scenario)
- ✓ Once the modeling approach is known, we can complete the functional requirements for bidding, settlement