



Integration of Distribution System Markets and RTO Markets

June 5, 2019

PREPARED FOR
ESIG Workshop

Forrest Small

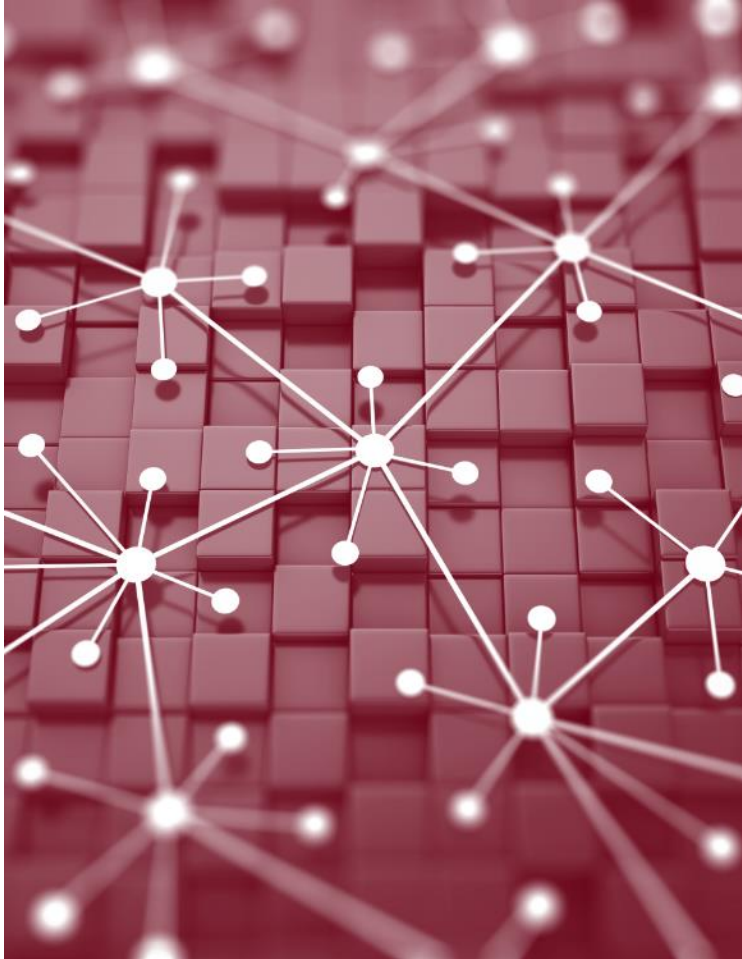


AGENDA

1. Context
2. The Distribution System Operator
3. RTO/DSO Alignment
4. Notable Work



CONTEXT



- DERs are increasing rapidly, particularly in states with wholesale energy markets
- Achieving the full value of DER requires grid and market integration
- Coordination between transmission and distribution is critical
- The grid challenges may be more straight forward than the market ones

THE DISTRIBUTION SYSTEM OPERATOR (DSO)

Model Types

- Transmission-Centric
- Distribution-Centric
- Peer-to-Peer



KEY AREAS OF ALIGNMENT FOR RTOS & DSOS

Visibility

- DER Monitoring
- Network Monitoring
- Forecasting

Coordination & Management

- Scheduling
- Dispatching
- Real-time Operations

Products & Services

- Grid Services
- Transaction Services



NOTABLE WORK ADVANCING ALIGNMENT

California

- DSO and market models, More Than Smart
- Transmission-Distribution Interface Working Group

New York

- New York REV
- Utility DSIPs
- Market Design and Integration Working Group

Federal

- Modern Distribution Grid (DSPx), DOE
- The Transmission-Distribution Interface, EAC

Contact

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