

System Resilience Updates

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Risks / Dependencies:
 Extreme Weather | Physical/Cyber Attacks | Fuel Source/Security

FUTURE

Prepare

- Assess Risks**
Targeted risk management
- Strengthen Infrastructure**
Make critical assets less vulnerable
- Increase Coordination**
Cross-sector & public/private partnerships

Operate

- Strengthen Operations**
Expand coordination and communications
- Enhance Continuity**
Planned response exercises
- Apply Innovative Approaches**
Microgrids & distributed energy resources

Recover

- Stabilize the System**
Prioritize interdependent infrastructures for system survivability
- Regain System-Critical Functions**
Balance industry and societal priorities
- Make Enhancements Based on Lessons Learned**

L E A R N



THROUGH 2018

Prepare

Enhance

- › Situational awareness (drills/exercises)
- › Existing insider threat identification

Strengthen

- › Network design & segmentation
- › Supply chain security risk management processes

Evaluate

- › Reserves
- › Black start fuel
- › Frequency response
- › Changing resource mix

Identify

- › Threats to operations & planning (Reserve triggers)

Update

- › Black start plans

Upgrade

- › Emergency Comm.

BEYOND 2018

Expand Outreach

- › Federal agencies
- › State partners (Information sharing & exercises)

Enhance

- › Resilient monitoring capabilities

Operate

Evaluate

- › DER aggregation
- › Alternate technology
- › Price-setting resources
- › Load-following product
- › 30-minute reserves

Expand

- › Fuel security analysis

Examine

- › Infrastructure innovation
- › Alternate technology for black start

Leverage

- › Alternate technology for microgrids & DER

Enhance

- › Dispatching/switching for strategic islands & critical infrastructure
- › Flexible resources (Beyond reliability criteria)

Recover

Collaborate

- › Transmission owners
- › Industry (Infrastructure interdependencies)

Assess

- › Vulnerabilities in black start plans

Examine

- › Alternate technology for black start

Resilience Steering Committee

Monken

