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Explore Together



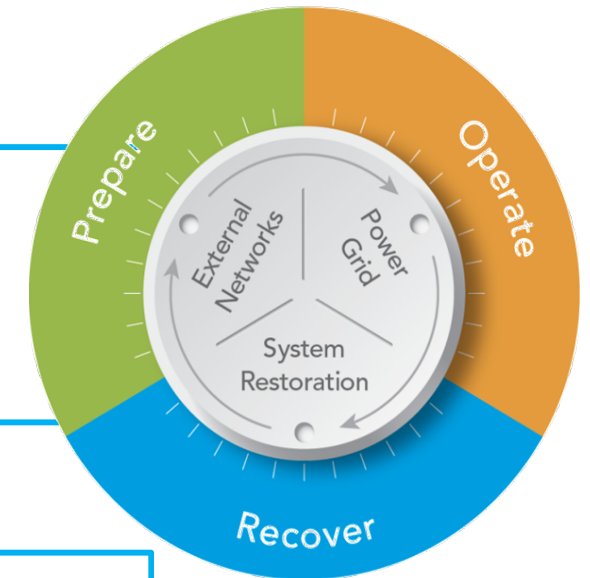
Grid Resilience and the Markets

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FERC's Proposed Definition: The ability to withstand and reduce the magnitude and/or duration of disruptive events, which includes the capability to anticipate, absorb, adapt to, and/or rapidly recover from such an event.

PJM's Working Definition: The ability to withstand or quickly recover from events that pose operational risks.

Prepare + Operate + Recover

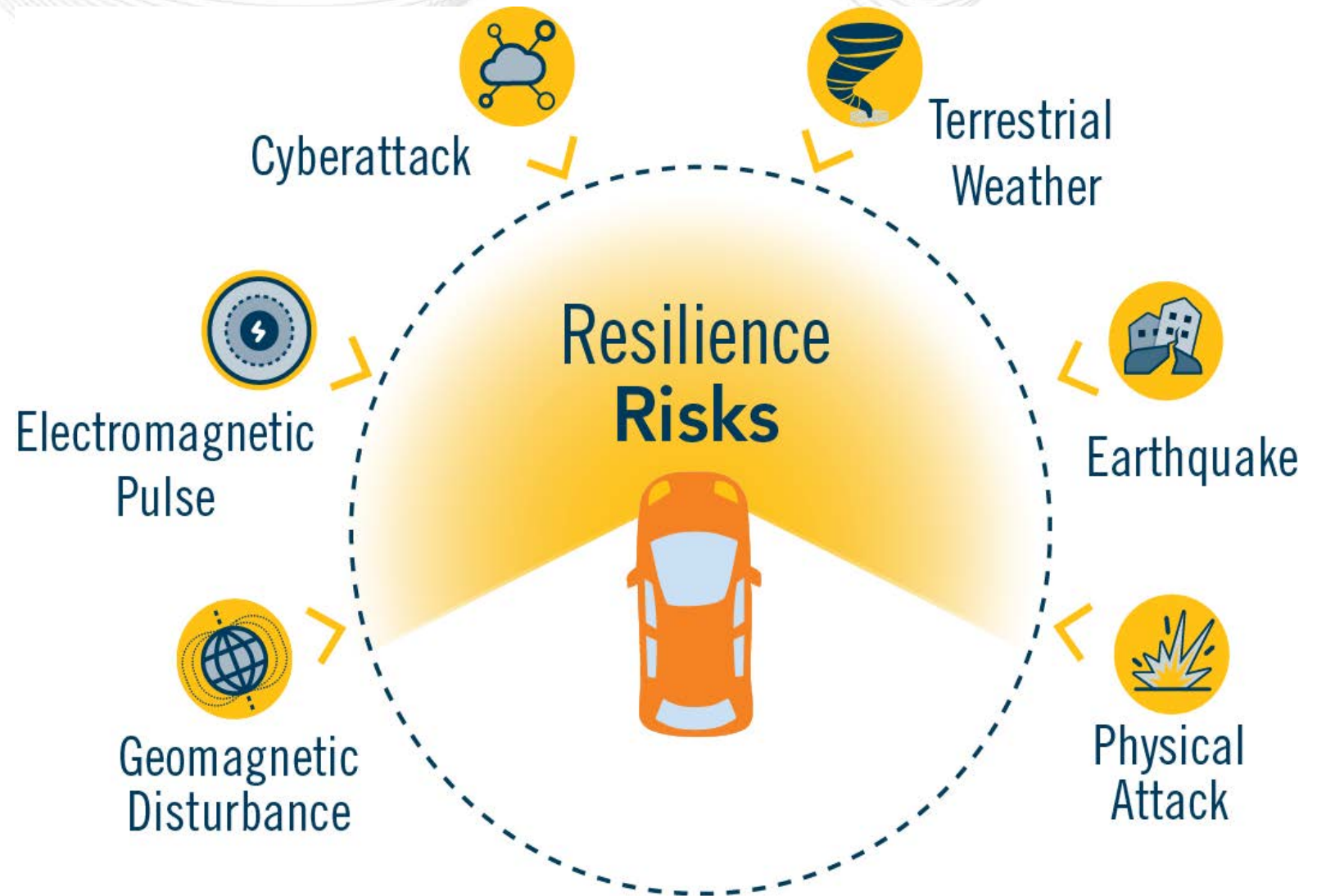


Reliability: Delivering electricity consistently and uninterrupted

Resilience: Grid survivability during extreme events, even if that means outages

Risk Assessment

- 1 Determine risks we will protect against
- 2 Identify steps to mitigate





Tomorrow Considerations

- Critical load definition (gas, water, telecom)
- Black start fuel assurance and alternative technologies
- Cranking path redundancy
- Cross-industry restoration drills and continued GridEx
- Business continuity extended plans
- Coordination with industry "spare parts" initiatives like grid assurance



- 1 “Do No Harm”
- 2 Opportunistic Resilience
- 3 Resilience as a Driver



Tomorrow Considerations

- Gas contingencies (reliability) and critical infrastructure joint planning (do not build critical assets)
- DIMA integrated into PJM simulator
- Distributed situational awareness (DIMA) to TOs
- Dynamic restoration path identification (research)
- Smart islanding (research and development)
- Strategic ALR concept enabled via markets
- Telecom tertiary alternative technologies



- 1 Survivability of market functions
- 2 Driving resilience through market forces