

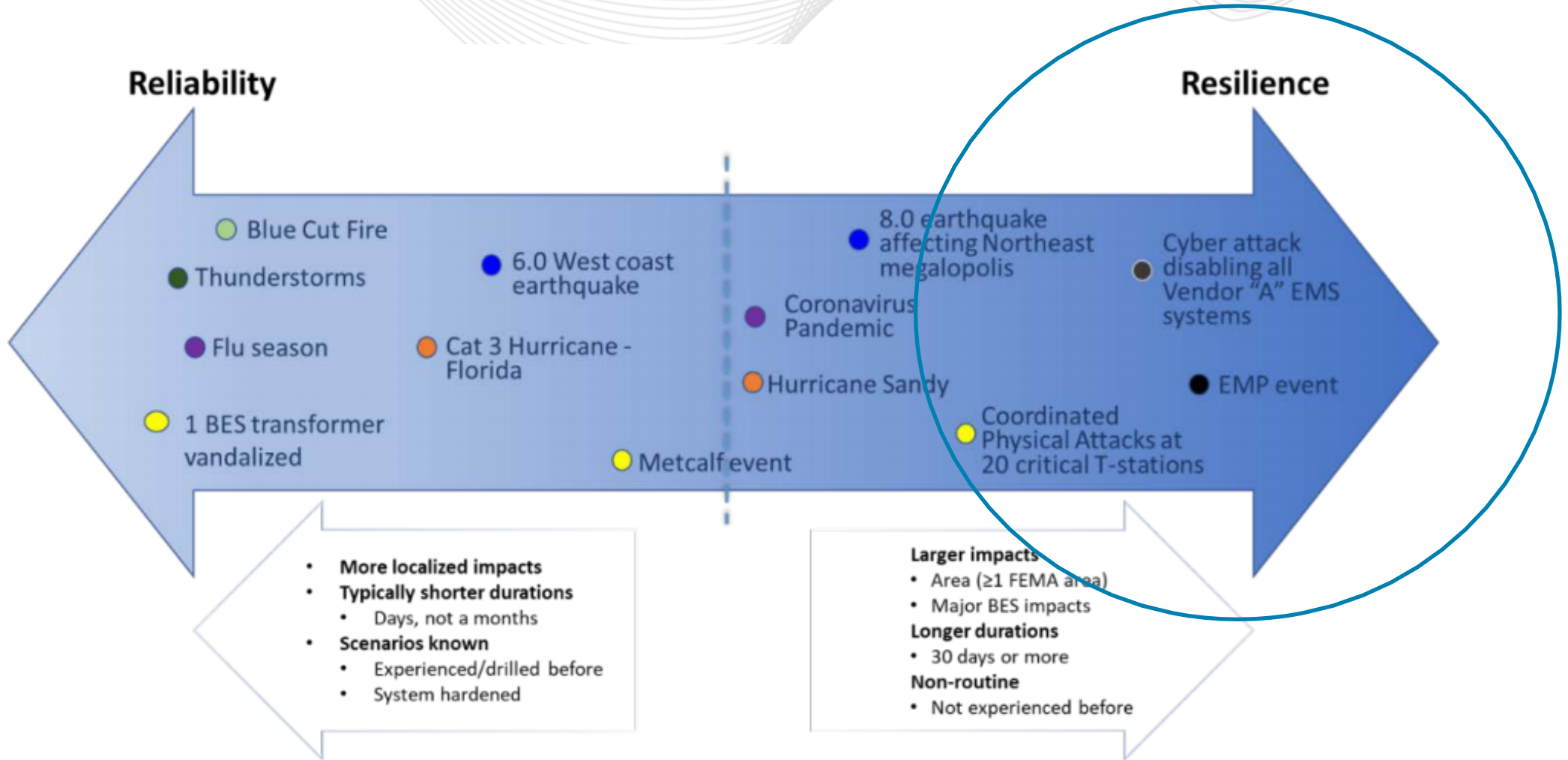


# Resilience Update

Operating Committee  
September 8, 2022

Chris Pulong  
Sr. Director, Operations Planning

- October 2020, NATF released version 1.0 of the Transmission Resilience Maturity Model (TRMM):
  - Developed by a team of over 20 experts from NATF, DOE, PNNL, EPRI and the electric industry
  - Builds upon, and ties together, existing industry best practices
  - Utilizes a systematic approach of topical areas (Domains) and questions designed at various levels of maturity to assess an organization's current maturity



**TRMM Model**

**Domain**

Model contains 9 domains (aka high level topical areas)

**Approach Objectives**

One or more per domain,  
Unique to each domain

**Practices at MIL1**

**Practices at MIL2**

**Practices at MIL3**

Approach objectives are supported by a progression of practices and Maturity Index Levels (MILs) that are unique to the domain

## Key takeaways:

- Methodical approach
- Over 300 practices

- 1) Resiliency Program Management
- 2) Risk Identification, Assessment, and Management
- 3) Situational Awareness
- 4) Event Response & Recovery
- 5) Resiliency Asset Management
- 6) Information Sharing and Communications
- 7) Supply Chain and Critical Entities Management
- 8) Transportation Management
- 9) Workforce Management

## NATF Resilience Assessment

**March 7–11, 2022**

Utilized the Transmission Resilience Maturity Model (TRMM)

### PEERS FROM:

- Hydro Quebec
- Arizona Public Service Company
- MISO
- Bonneville Power Administration
- TVA
- Lower Colorado River Authority

## Strengths

- Well-prepared and honest engagement by PJM
- Leader RE: ISO/RTO use of TRMM
- Uniquely positioned to positively influence industry resilience activities
- Strong management support for resilience
- Robust documentation management and control process
- Business continuity and Incident Response Team (IRT)
- Culture of learning
  - HPOE/RCA process
  - Events/drills

## Opportunities

- Resilience culture
  - Mindset shift from reliability-based to also include resilience
  - Intentional focus on resilience & explicit use of “resilience” term
  - Common understanding of and focus on resilience
- Think holistically (comprehensive vs. siloed)
- Proactive and sufficient allocation of resources
- Be proactive vs. reactive
- Develop a suite of design basis resilience events (DBRE)
  - Scenario, impacts, duration
- Formalize resilience activity feedback to risk process

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## Industry

- Continue to be a leader and advocate for resilience criteria with NERC and FERC
  - Cold Weather Standards
  - NOPR – Planning Performance Requirements for Extreme Weather
- Coordinate with the NATF Resilience Steering Committee as industrywide Resilience metrics are being developed

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## Resilience Program Oversight

Evaluate how to remove/reduce siloes of resilience and better coordinate

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## Resilience and Risk Management

Build on the recent Enterprise Risk Management progress and include Resilience



Presenter:  
Chris Piong  
Christopher.Piong@pjm.com

## Resilience Update



### Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

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(610) 666-2244 / [it\\_ops\\_ctr\\_shift@pjm.com](mailto:it_ops_ctr_shift@pjm.com)

