

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# State of Reliability Report

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FERC/NRC Joint Commission Meeting

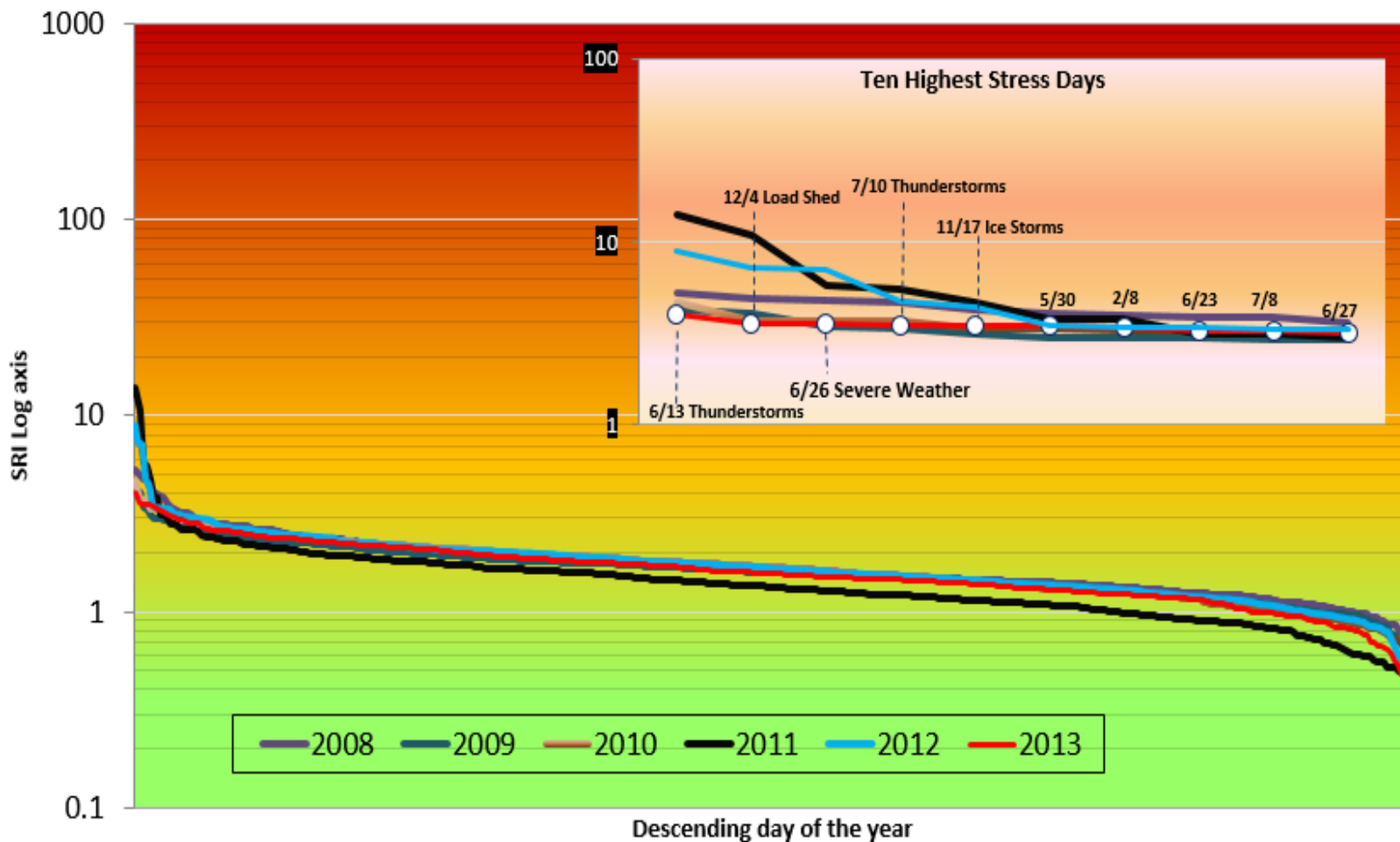
May 28, 2014

**RELIABILITY | ACCOUNTABILITY**



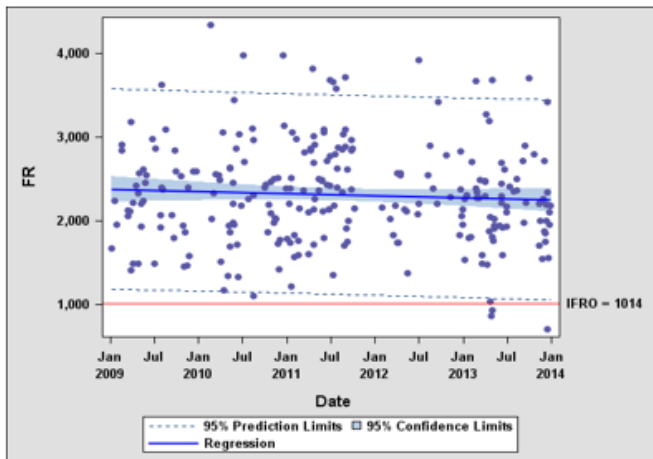
- Purpose – Independent view of performance
- Identify trends and risks to reliability
- Provide recommendations
- Serve as risk-informed input to:
  - RISC project prioritization
  - Standards projects
  - RAI
  - Event analysis, reliability assessment, and CIP

# Sustained High BPS Performance

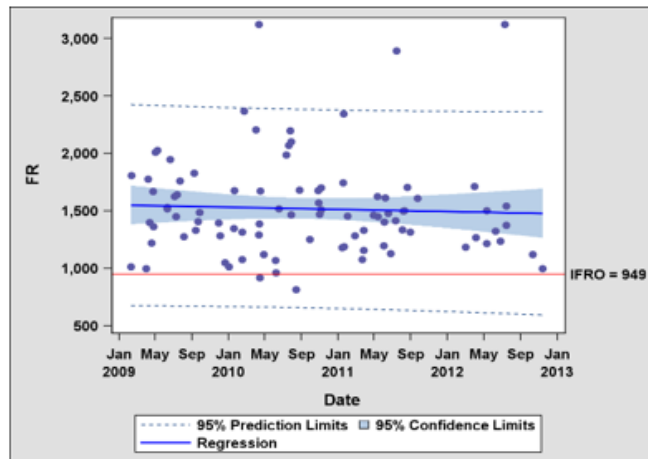


# Frequency Response Remains Stable

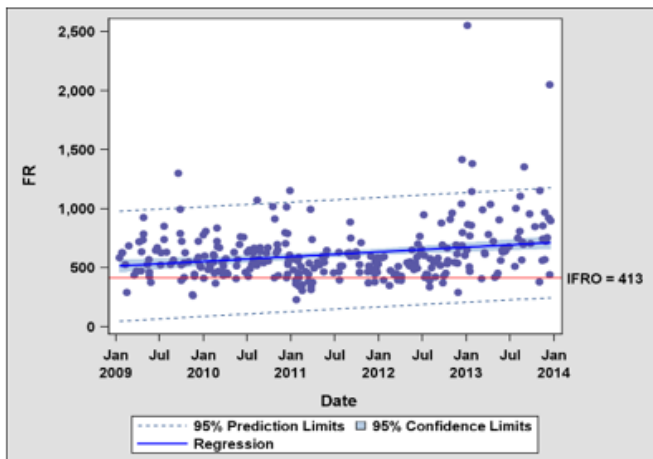
**Eastern Interconnection**



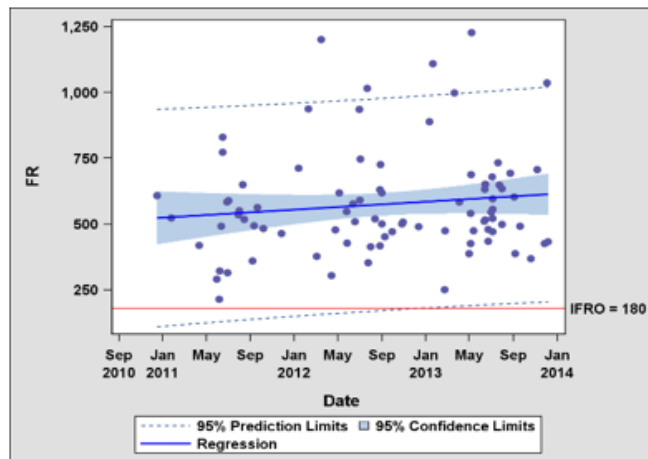
**Western Interconnection**



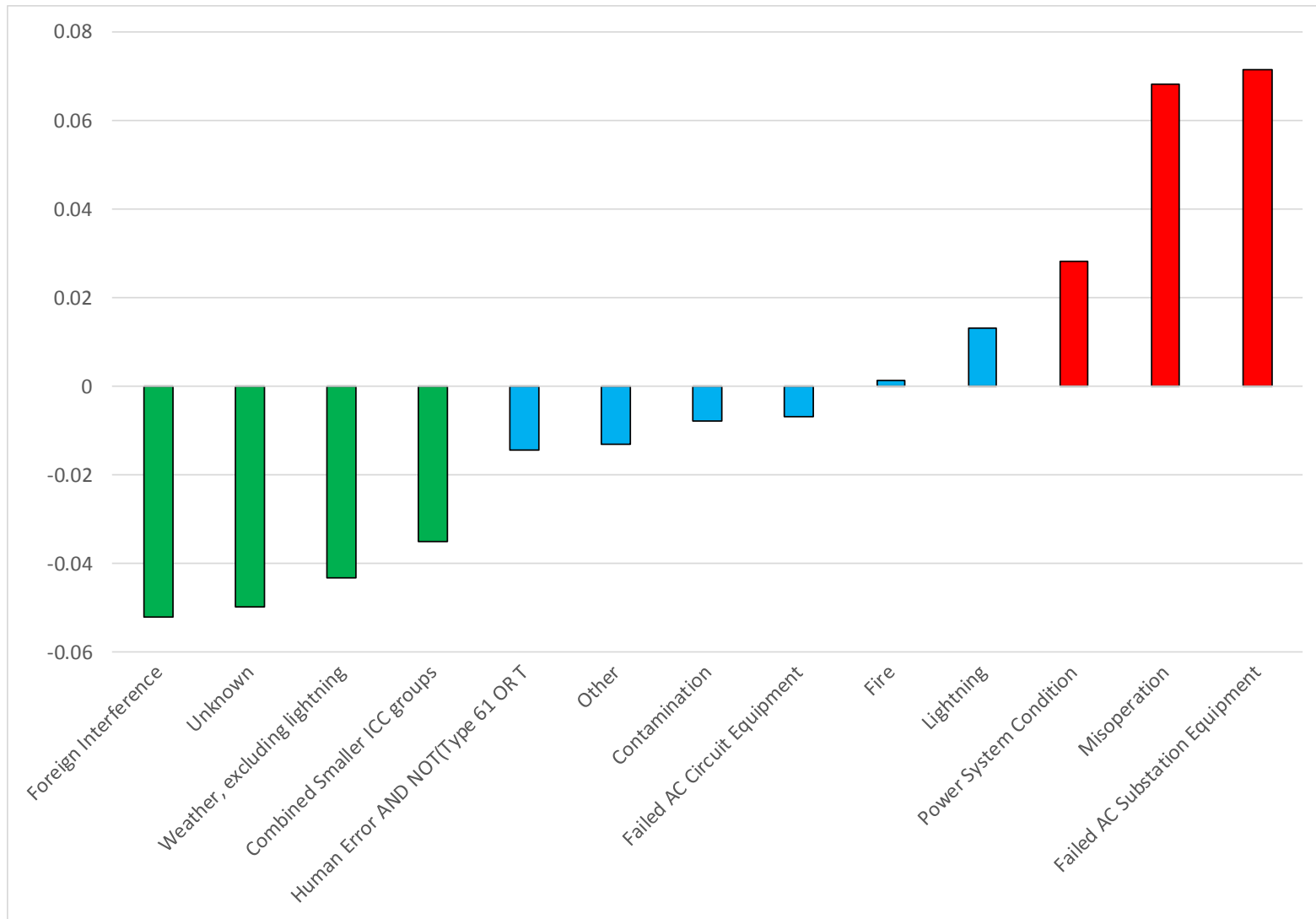
**ERCOT Interconnection**



**Québec Interconnection**



# Protection System Misoperations and Failed AC Substation Equipment





Number of Events	Year							
	2006	2007	2008	2009	2010	2011	2012	2013
NERC	7	23	12	41	11	23	15	7
FRCC	0	0	0	0	0	0	0	1
MRO	0	0	0	0	0	0	0	0
NPCC	0	0	1	1	0	0	0	0
RFC	0	3	1	0	2	0	1	0
SERC	4	14	2	3	4	2	7	0
SPP	1	5	3	35	4	15	6	2
TRE	0	0	0	0	0	1	0	0
WECC	2	1	5	2	1	5	1	4

- Integrate RISC control projects
- Physical and cyber security
  - Develop security performance metrics
- Integrating variable resources
  - Solar
  - Wind
- Changes in historical resource mix
  - Gas/coal
  - Demand as a resource
- Validate analyses using Events Analysis insights





# Questions and Answers