

State of Reliability Report

Thomas Burgess

Vice President and Director, Reliability Assessment and Performance Analysis

FERC/NRC Joint Commission Meeting

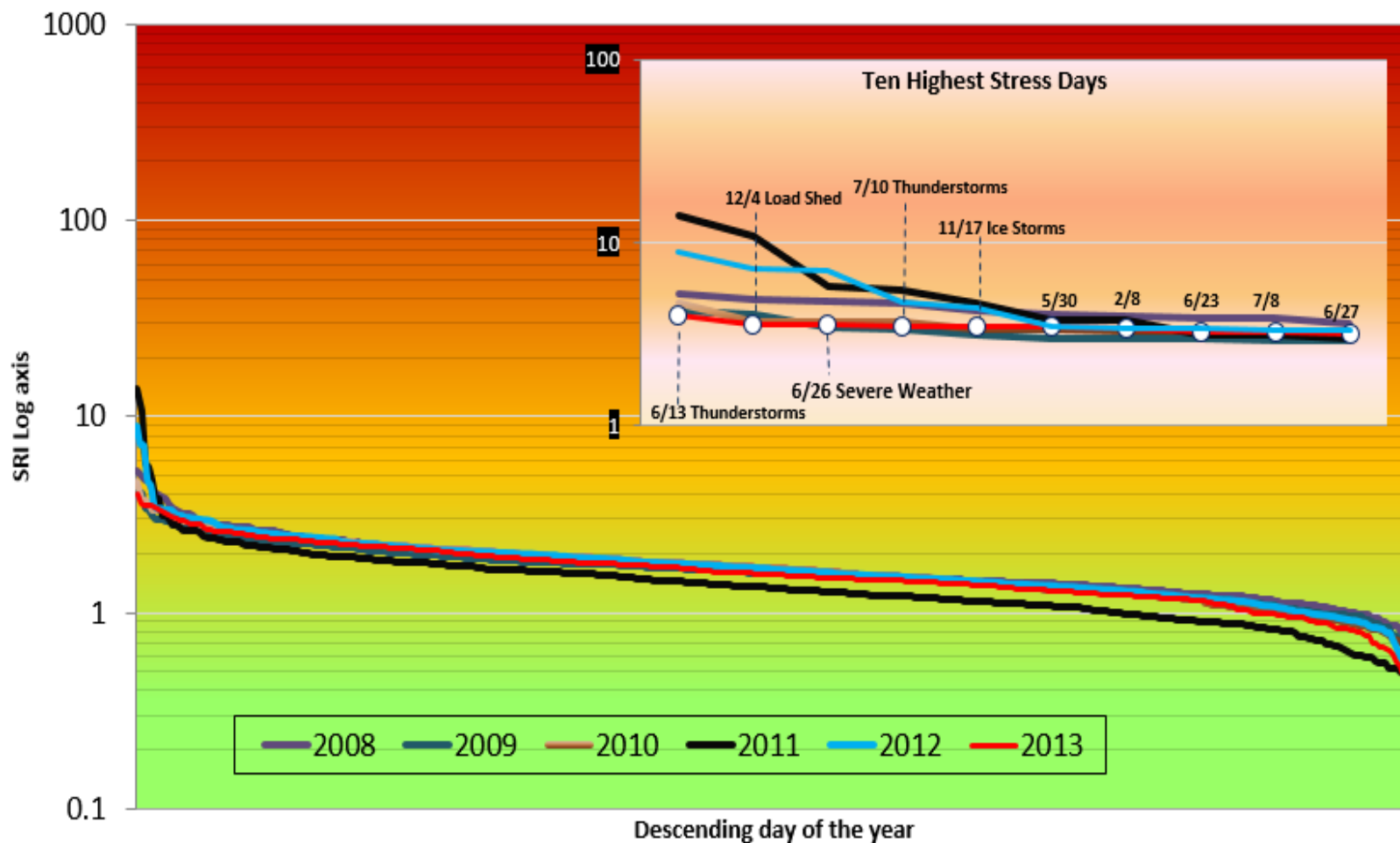
May 28, 2014

RELIABILITY | ACCOUNTABILITY



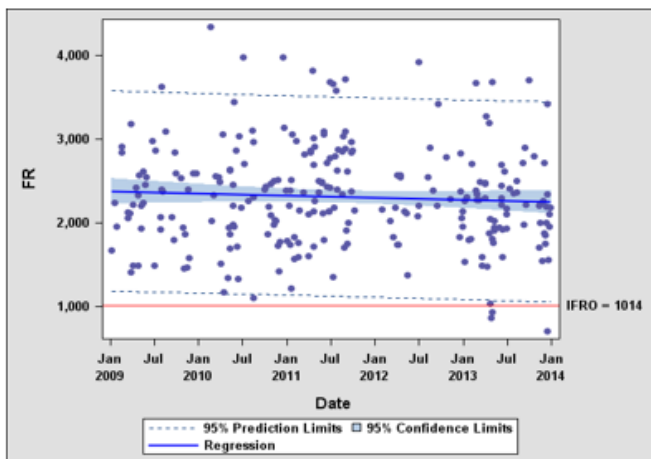
- Purpose – Independent view of performance
- Identify trends and risks to reliability
- Provide recommendations
- Serve as risk-informed input to:
 - RISC project prioritization
 - Standards projects
 - RAI
 - Event analysis, reliability assessment, and CIP

Sustained High BPS Performance

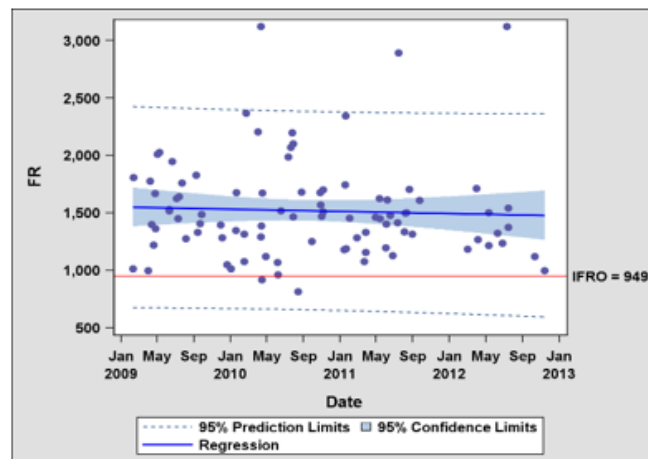


Frequency Response Remains Stable

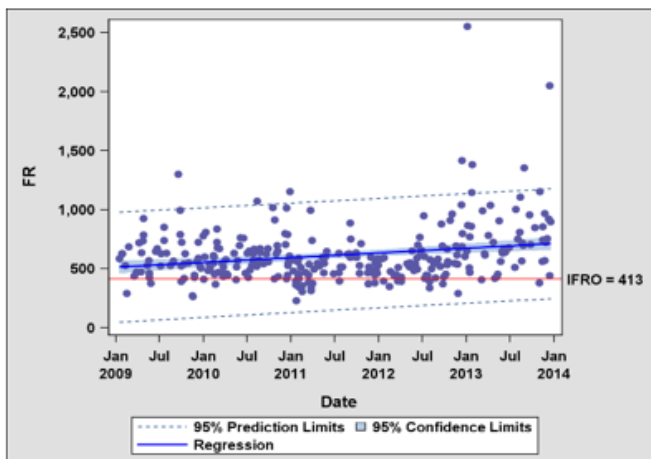
Eastern Interconnection



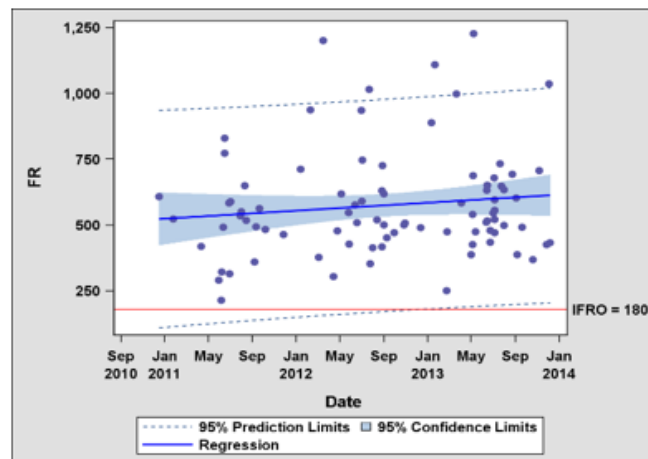
Western Interconnection



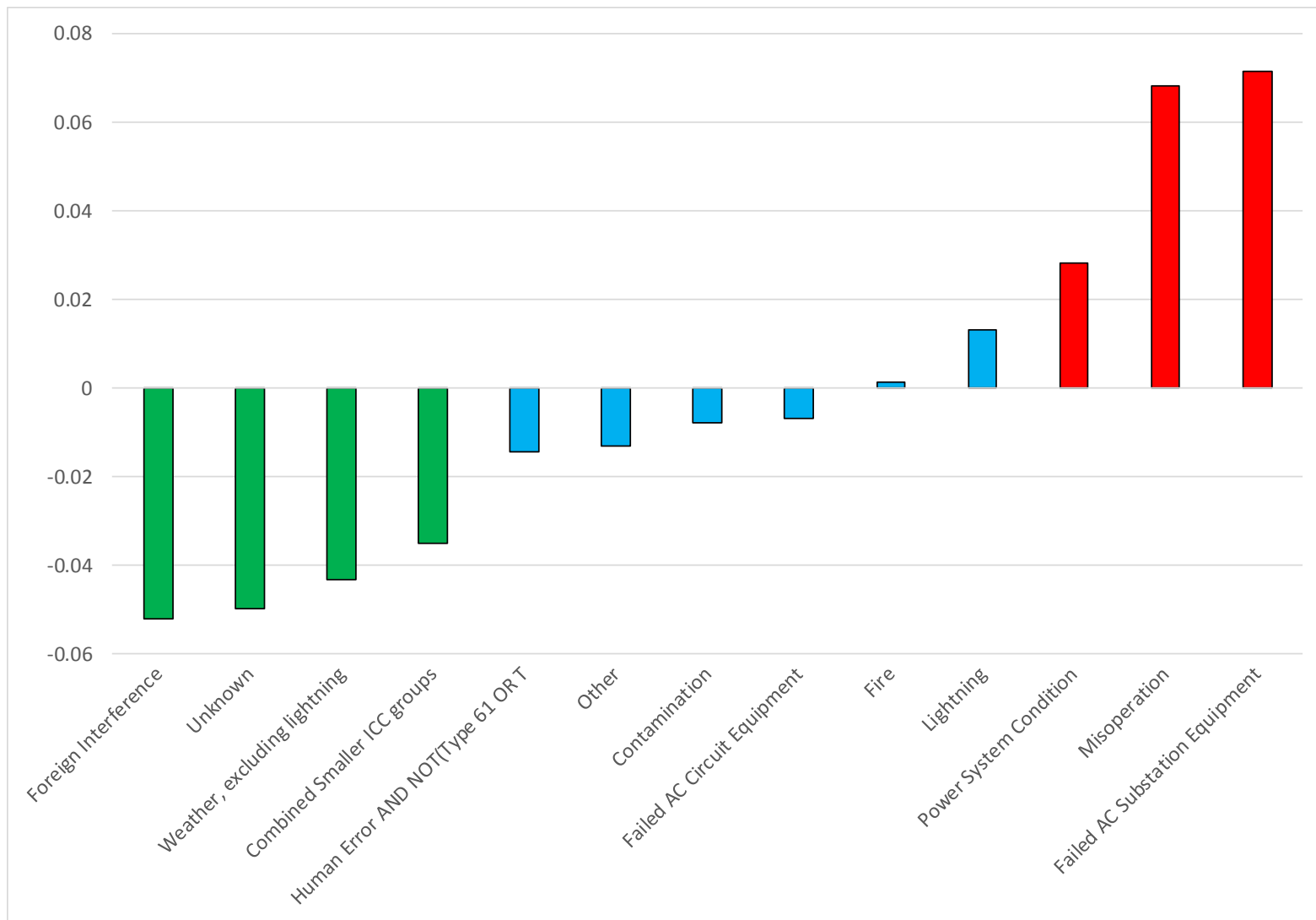
ERCOT Interconnection



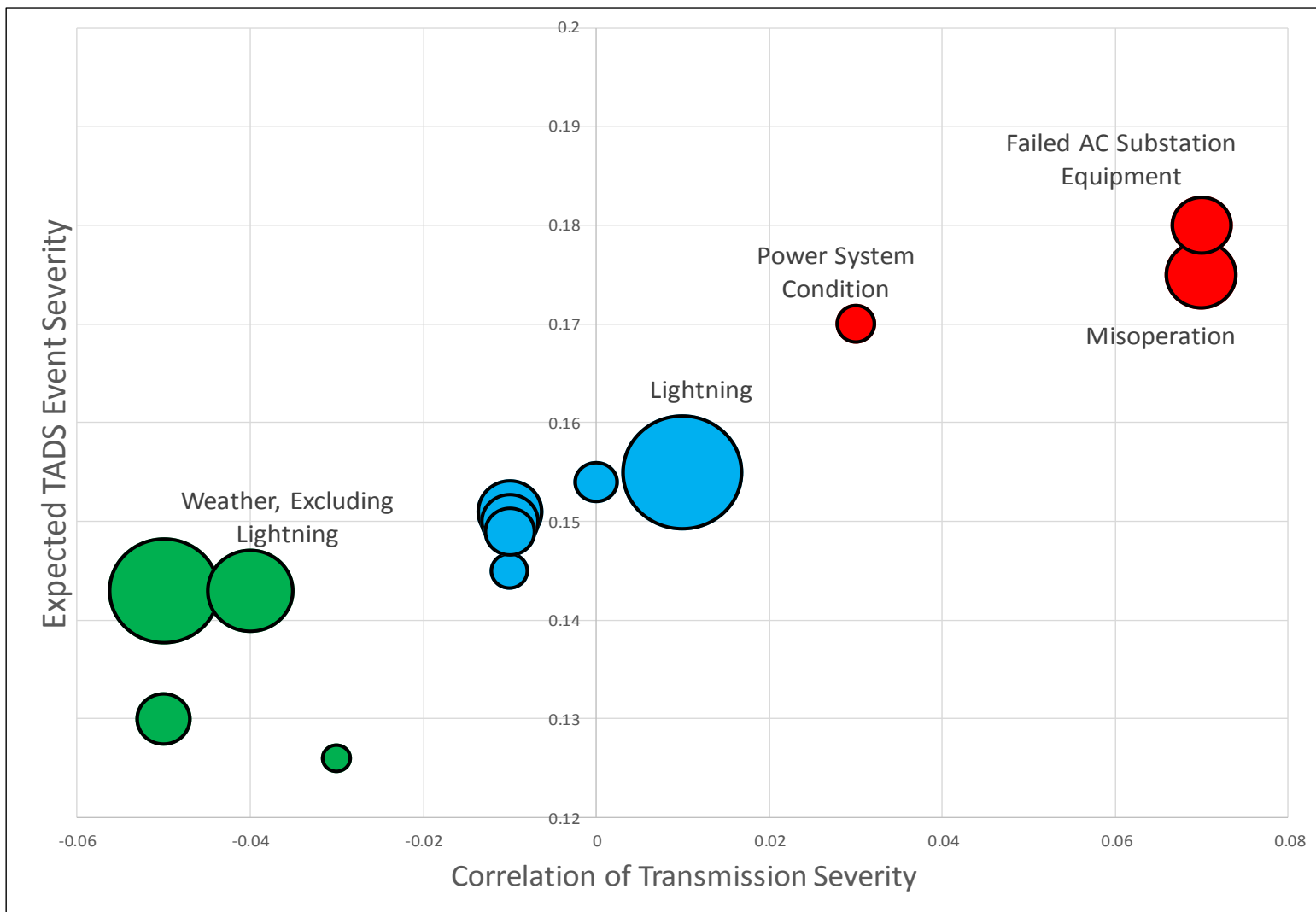
Québec Interconnection



Protection System Misoperations and Failed AC Substation Equipment



Transmission Outage Severity Correlation



Use of EEA Level 3 Declines

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