



2010 Reliability Performance

Network Customer Meeting
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Kurt Weisman
Reliability Performance Project Manager

Helping to **keep the lights on**,
businesses running and communities strong®





ATC System Performance

- Reliability Performance Focus
 - Outage Frequency
 - Outage Duration
 - Customer Impact
 - Reliability Impact
- Industry Benchmarking – SGS Study



Weather, Weather, Weather

2010's Weather Challenges to the System

Some of Wisconsin's record setting weather for 2010

Rainfall

- 2nd wettest Summer - Milwaukee - 19.38" (average 10.19")
- 4th wettest Summer - Madison - 20.28" (average 8.6")
- Wettest July Milwaukee - 10.93" (record was 7.66" in 1964)

Temperature

- 3rd hottest Summer – Milwaukee – 73.3 (average 67.5)

Wind

- 3rd busiest year for tornados (45)

Lightning

- 84% increase in Lightning flashes (all of 2009 vs. 2010 thru August 16th), but the number of outages per 1000 flashes is down from 4.8 to 3.4 (29%)
- September 2009 zero lightning outages; September 2010 – 25 lightning outages

System Performance

Under Challenging Weather Conditions YTD

2009/2010 System Performance by Cause Code						
Cause Code	2009		2010		% Change from 2009	
	Outages	Storm Related	Outages	Storm Related	Outages	Storm Related
Substation Equipment	23	1	14	5	-39%	400%
System Protection	21	1	12	0	-43%	-100%
Lines	42	16	34	20	-19%	25%
Weather	13	13	31	31	138%	138%
Lightning Only	87	87	149	149	71%	71%
Unknown	30	7	24	4	-20%	-43%
Vegetation	15	10	18	15	20%	50%
External	27	2	20	4	-26%	100%
Other	49	2	34	2	-31%	0%
Operator Action	3	0	30	5	900%	500%
Totals	310	139	366	235	18%	69%

 % Increase

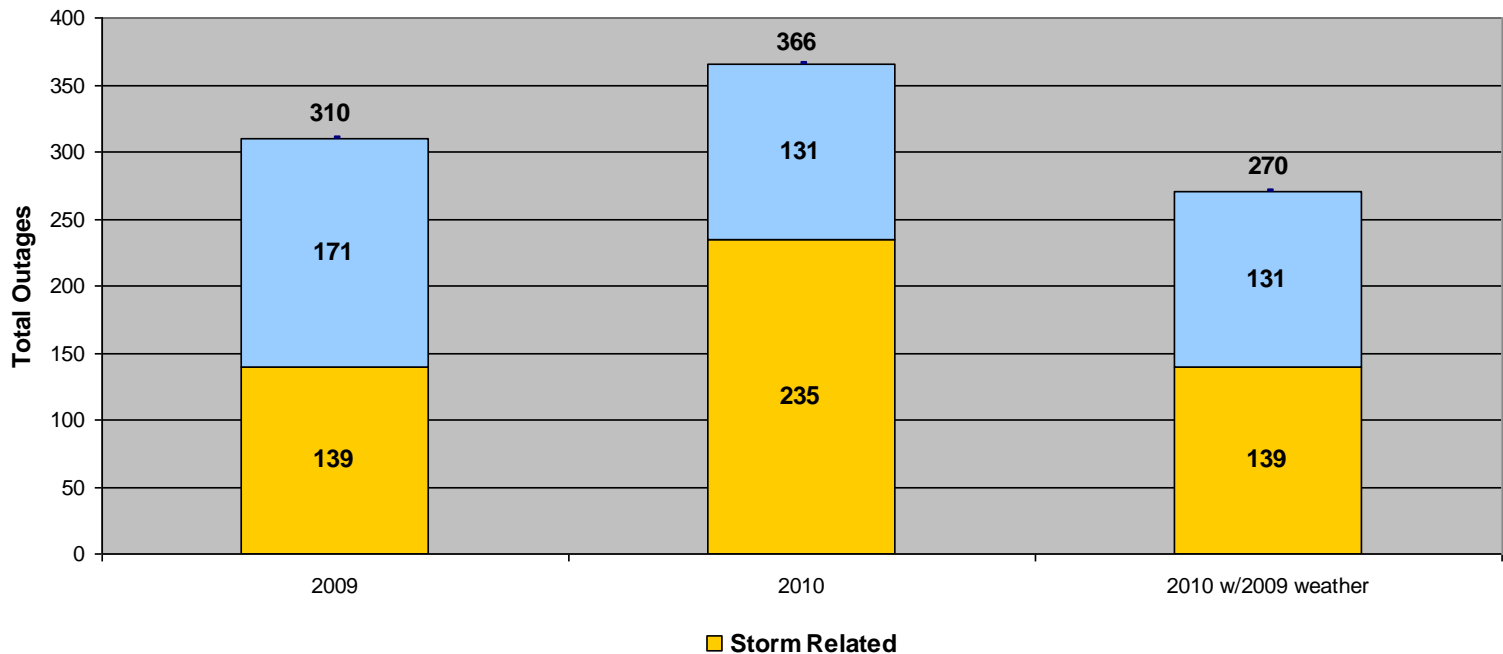
 % Decrease

- 2010 Weather and Lightning increased by 80 (80%)
- Due to saturated soils resulting from record rainfall caused trees with shallow root systems to be susceptible to high winds

2009 / 2010 Outage Comparison YTD

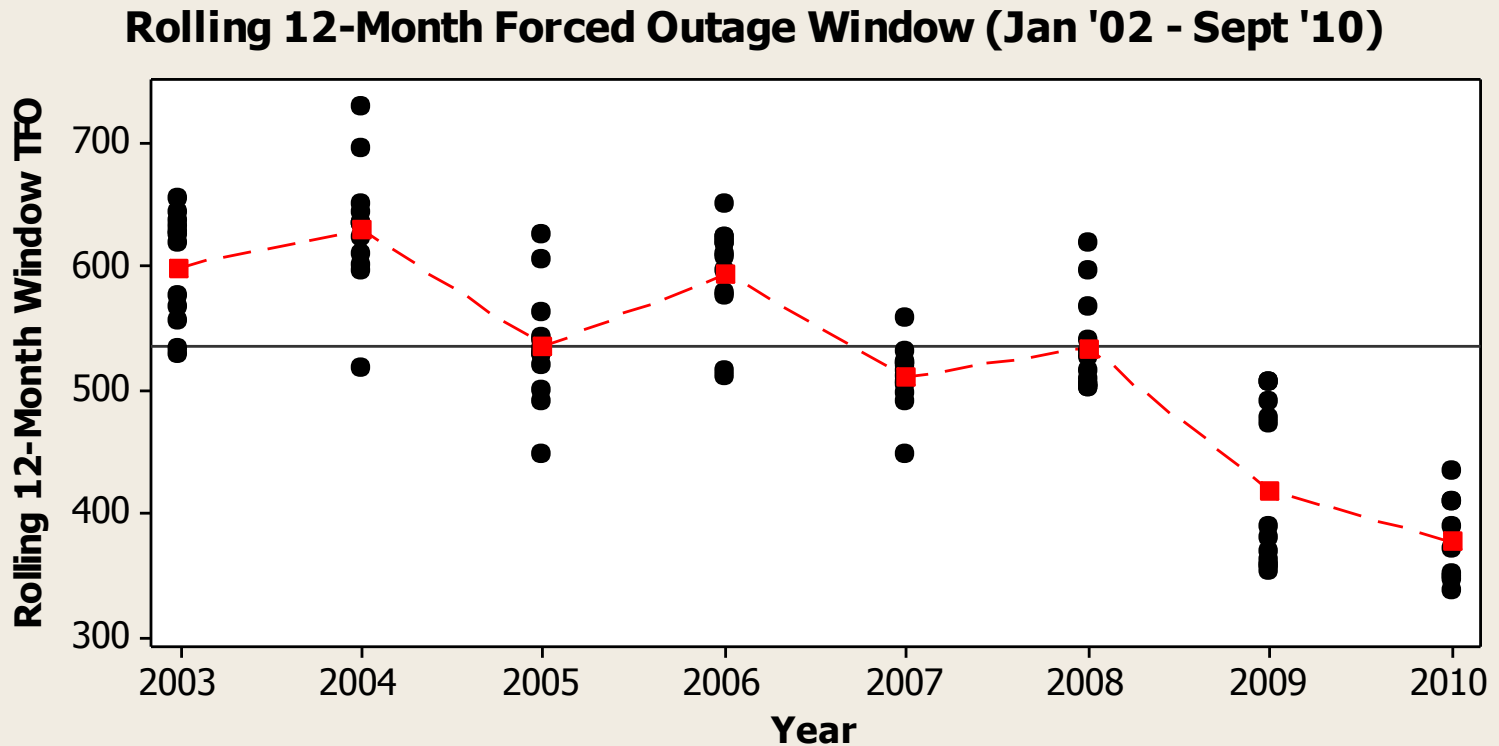
- In 2009 ATC experienced favorable weather conditions and set record lows for reliability

2009 / 2010 Outage Comparison thru Sept 30th



- Using 2009 weather for 2010 ATC showed a 13% improvement in performance over 2009

Total Forced Outage History

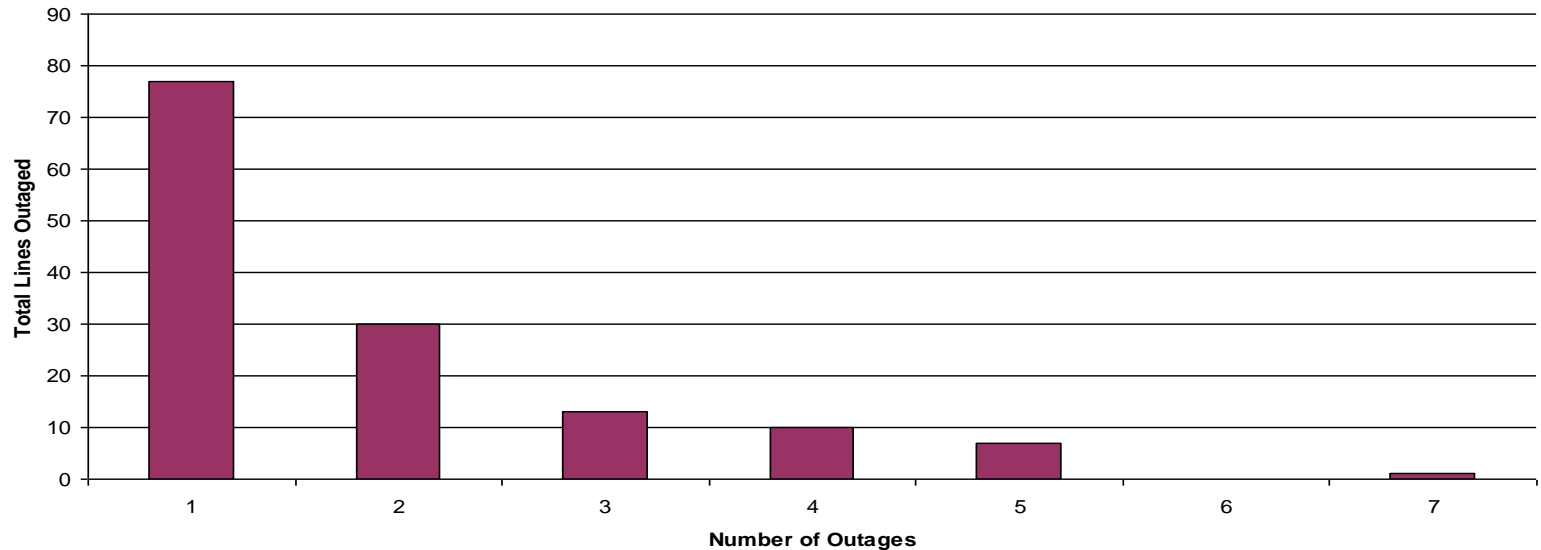


Number of runs about median:	2
Expected number of runs:	5.0
Longest run about median:	4
Approx P-Value for Clustering:	0.011
Approx P-Value for Mixtures:	0.989

Number of runs up or down:	6
Expected number of runs:	5.0
Longest run up or down:	2
Approx P-Value for Trends:	0.830
Approx P-Value for Oscillation:	0.170

Direct Customer Impact (DCI) Outages

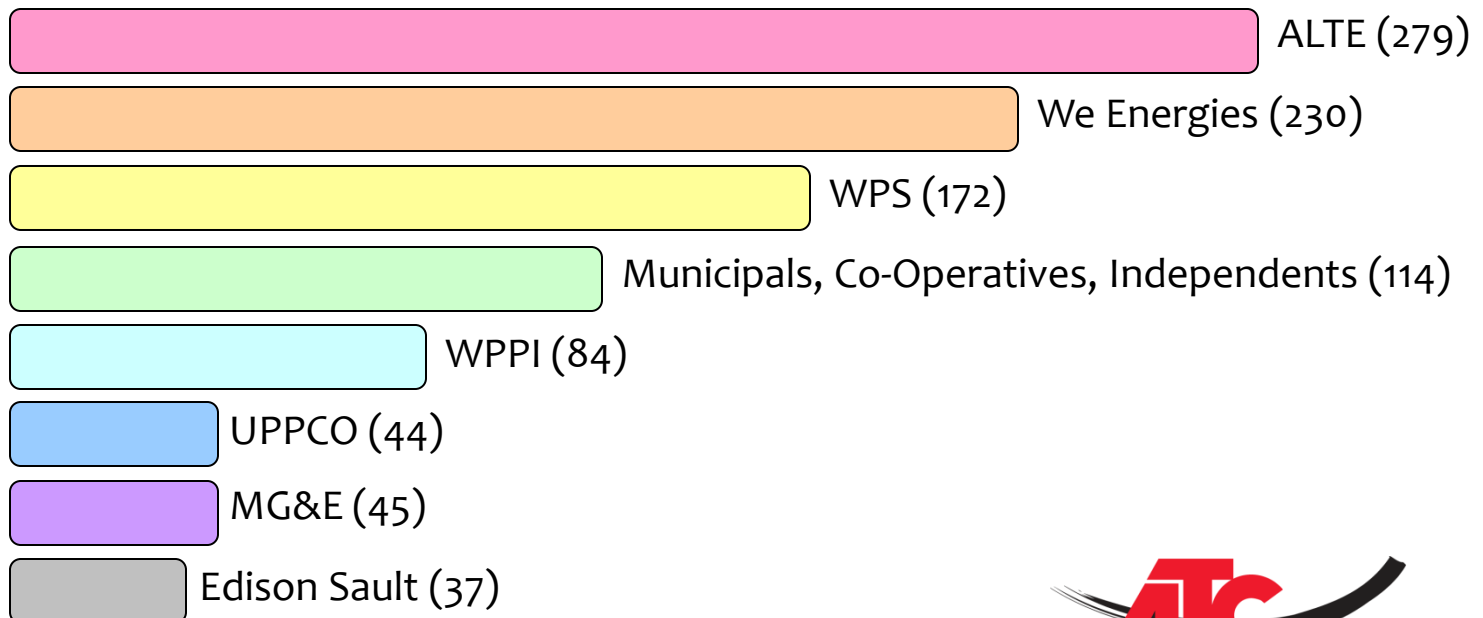
2010 DCI Line Outages (thru Sept. 30th)



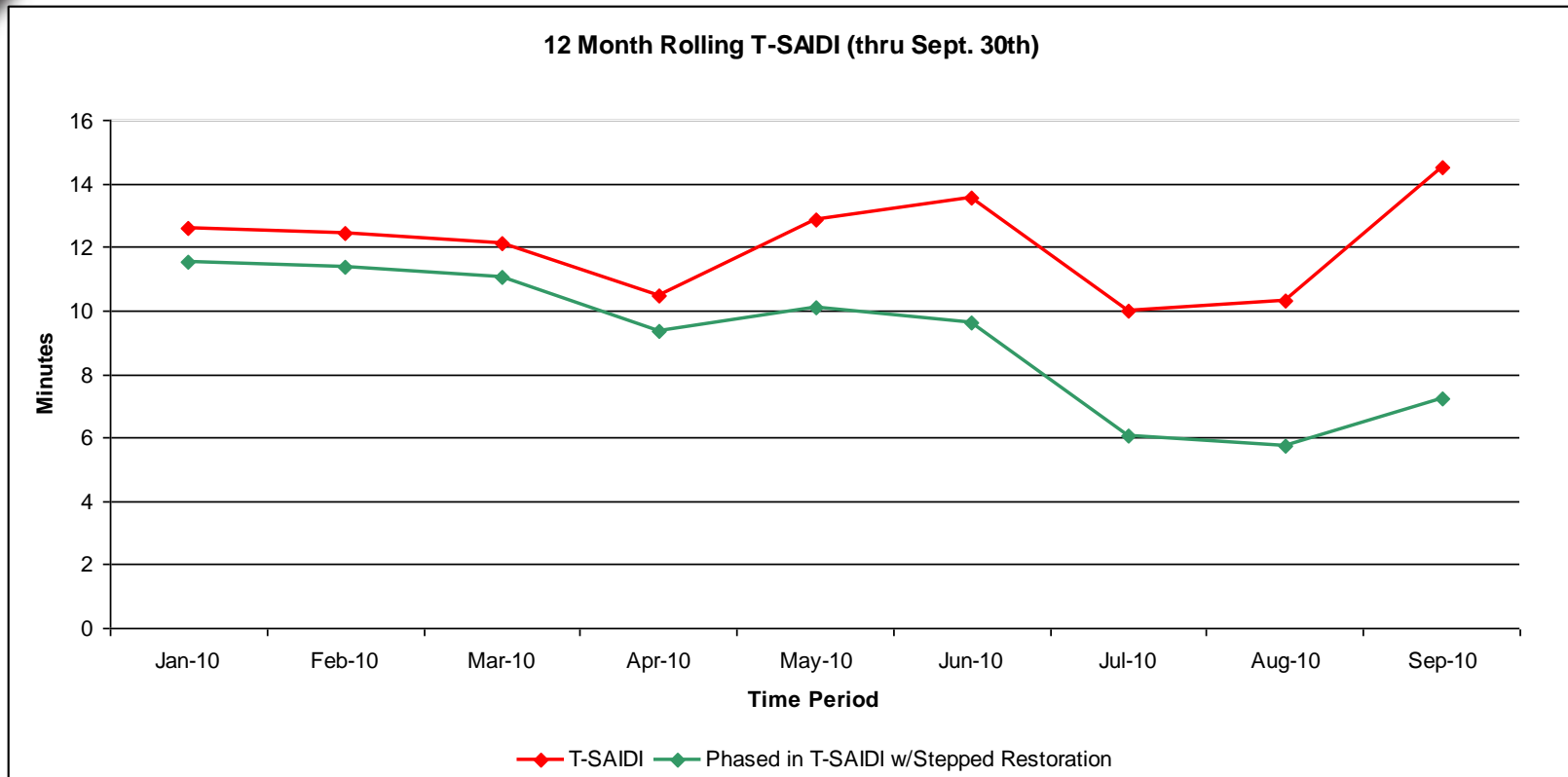
- 40% of DCI Lines experienced an Outage
- 521 Delivery Points were impacted (762,285 customers)

Delivery Point Statistics

- Total of 1005 ATC Delivery Points (DP)
 - Transmission: Load distribution interconnection point
- Breakdown:



12 Month Rolling T-SAIDI YTD (System Average Interruption Duration Index)



Record 12 month rolling T-SAIDI lows:

July 2010 – 9.992 minutes **w/o** stepped restoration

August 2010 – 5.749 minutes **w/stepped** restoration

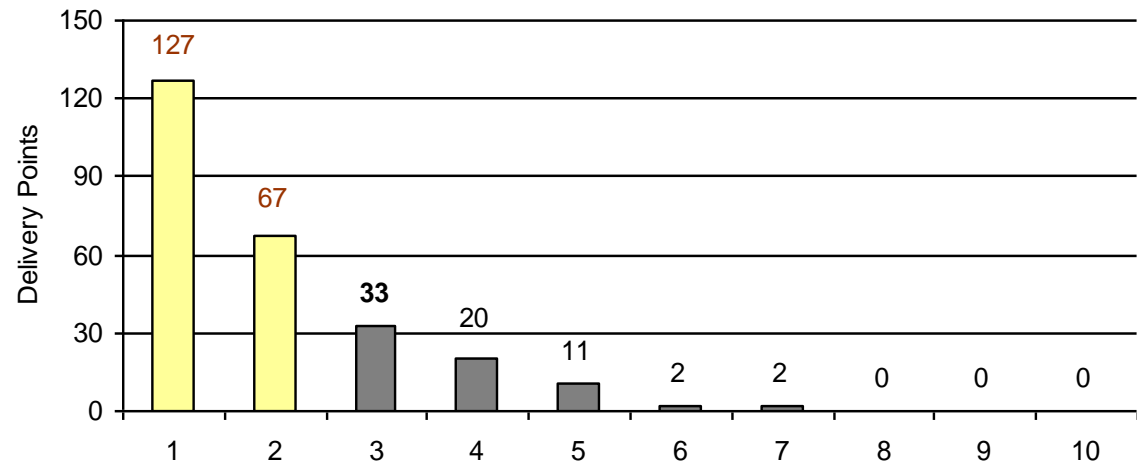
CEMSMI

(Customers Experiencing Multiple Sustained & Momentary Interruptions)

Purpose:

To identify customers experiencing > a specified number of total (sustained & momentary) interruptions.

Frequency of Sustained & Momentary (Total) Outages by Delivery Point (DP)

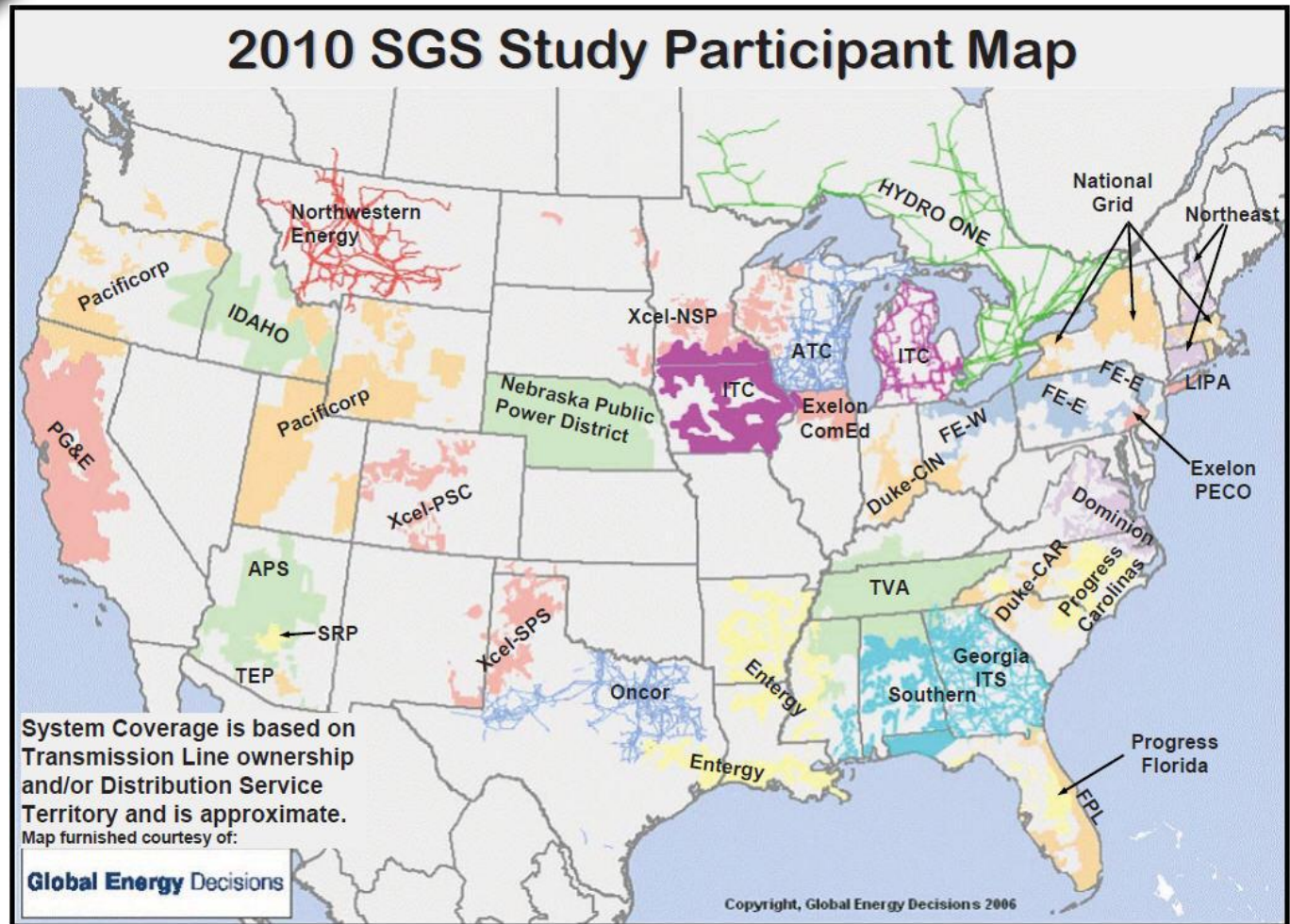


Outage Frequency - Note Corp CEMSMI metric is (n>2) or 3 & above

CEMSMI = 3.47%

- 3.47% of customers (68 DP's) have experienced >2 interruptions in 2010
- **Only 1 DP w/>2 sustained interruptions (CEMI=0.1%)**
- 77% of impacted DP's w/only momentary interruptions
- 74% of all DP's with zero interruptions

2010 Participant Map



- 26 systems participated
- Representing 47% of U.S. transmission grid

2010 SGS Study

ATC Rankings Based on Average Circuit Outages

Voltage Level	# of Lines	2009	2008	2007
All Voltages	733	1 st Quartile (Approaching 1 st Decile)	1 st Quartile	1 st Quartile
Subtransmission	307	1 st Decile	1 st Quartile	1 st Quartile
100-161 kV	379	1 st Best in Class	1 st Decile Second in Class	1 st Decile Third in Class
230 kV	3	1 st Best in Class	1 st Best in Class	4th Quartile
345-500 kV	44	2 nd Quartile	2 nd Quartile	2 nd Quartile



QUESTIONS