



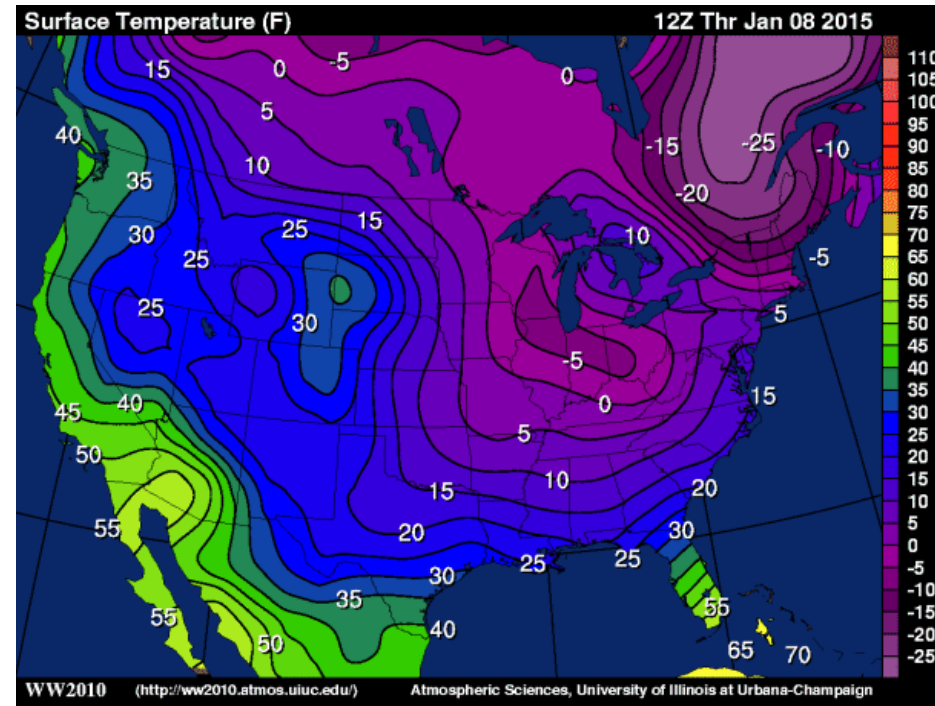
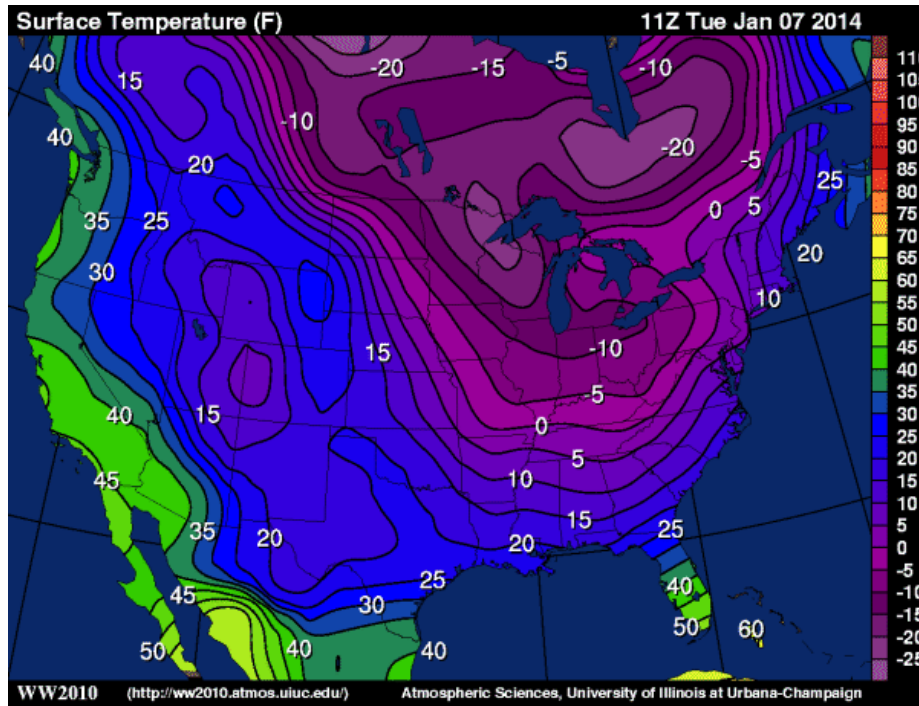
Winter Operations January 2015

BRC: February 3, 2015

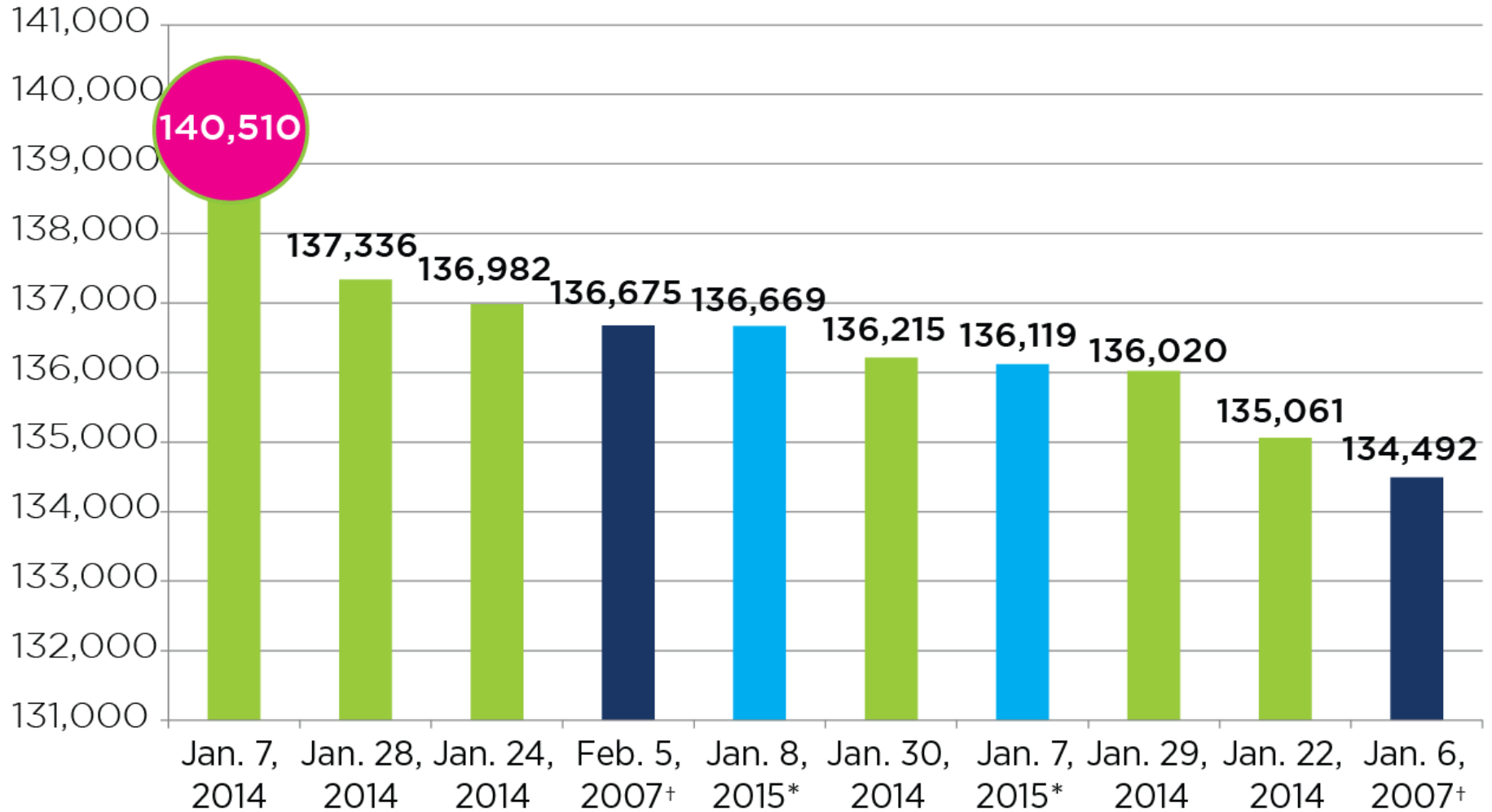
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PJM Interconnection, LLC

Polar Vortex 1/7/2014

1/8/2015



MW



*Preliminary Data

[†]Includes coincident not-yet-integrated zones.

Date	Total Forced Outages for <u>ALL</u> fuel types (MW)	Forced Outage Rate	Total Forced Outages for <u>GAS</u> Units (MW)	% of forced outages due to gas issues (*preliminary estimate)
1/4-1/6 (avg)	7,599	4.10%	1,468	19.32%
1/7/2015 Evening	13,481	7.27%	6,215	46.10%
1/8/2015 Morning	18,861	10.18%	9,481	50.27%
1/8/2015 Evening	16,349	8.82%	7,059	43.18%
1/9-1/11 (avg)	12,708	6.85%	2,629	20.69%

168 units with a total of amount of 9,919 MW (11,054 MW ICAP) performed the cold weather generation operational exercise:

Week of:	Units Exercised		Success Rate (by unit count)
	Units	MW	
Dec 1st	21	659	81%
Dec 8th	48	2893	98%
Dec 15th	48	2737	96%
Dec 22nd	3	222	100%
Dec 29th	31	2468	94%
Jan 5th	17	940	94%
Total	168	9919	94%

Scheduling of units continued into first week of January due to many cancellations in December related to weather

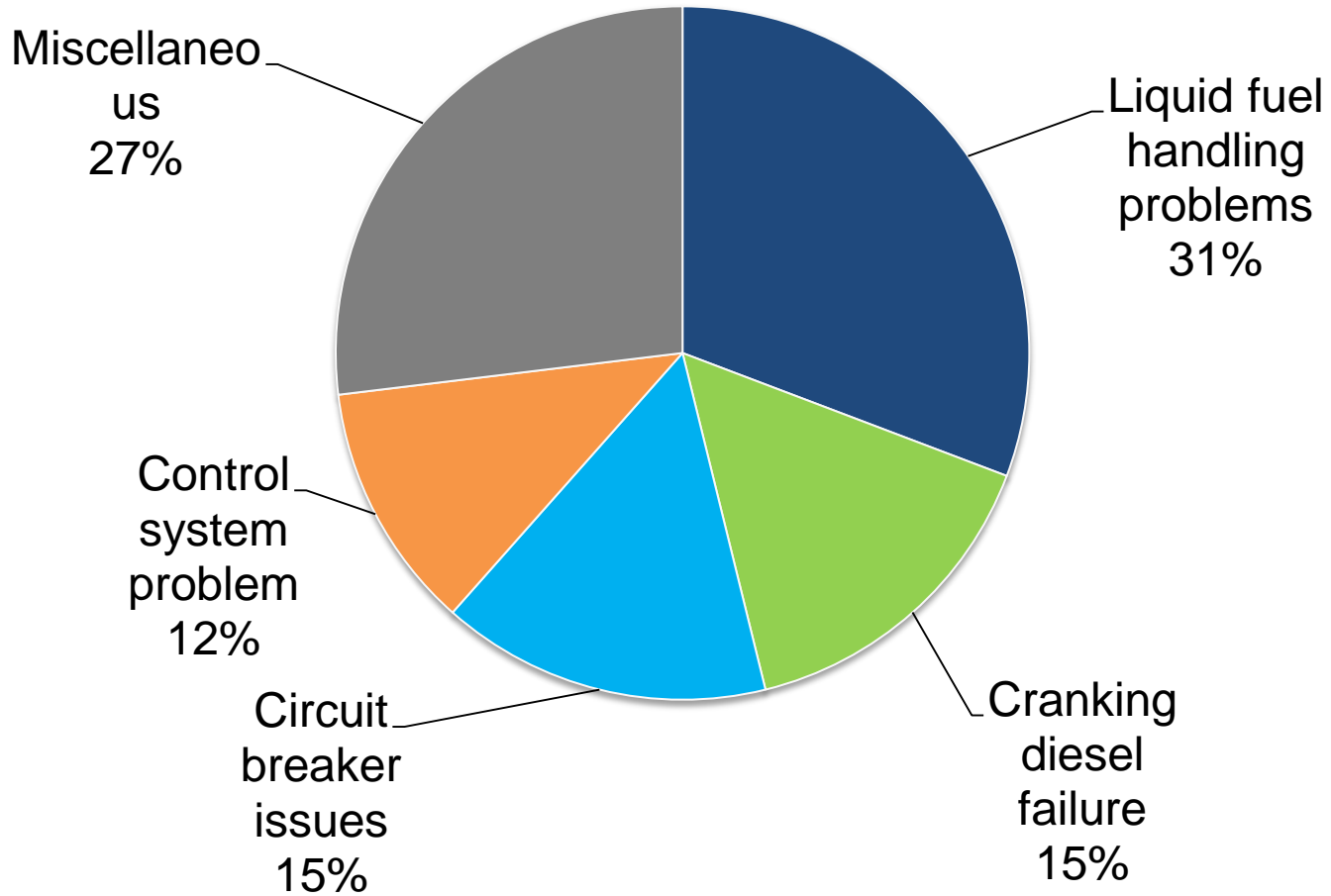
Breakdown of eligible units, after initial eligibility projections and cold weather in Nov 2014:

2014 Winter Exercise Participation Unit Counts				
	Total Eligible Units as of 12/1/2015	Eligible Units that Wanted to Participate	Eligible Units that Declined to Participate	Eligible Units that did not Respond
Unit Count	443	214	210	19
Total ICAP MW	45604	14558	29598	1448

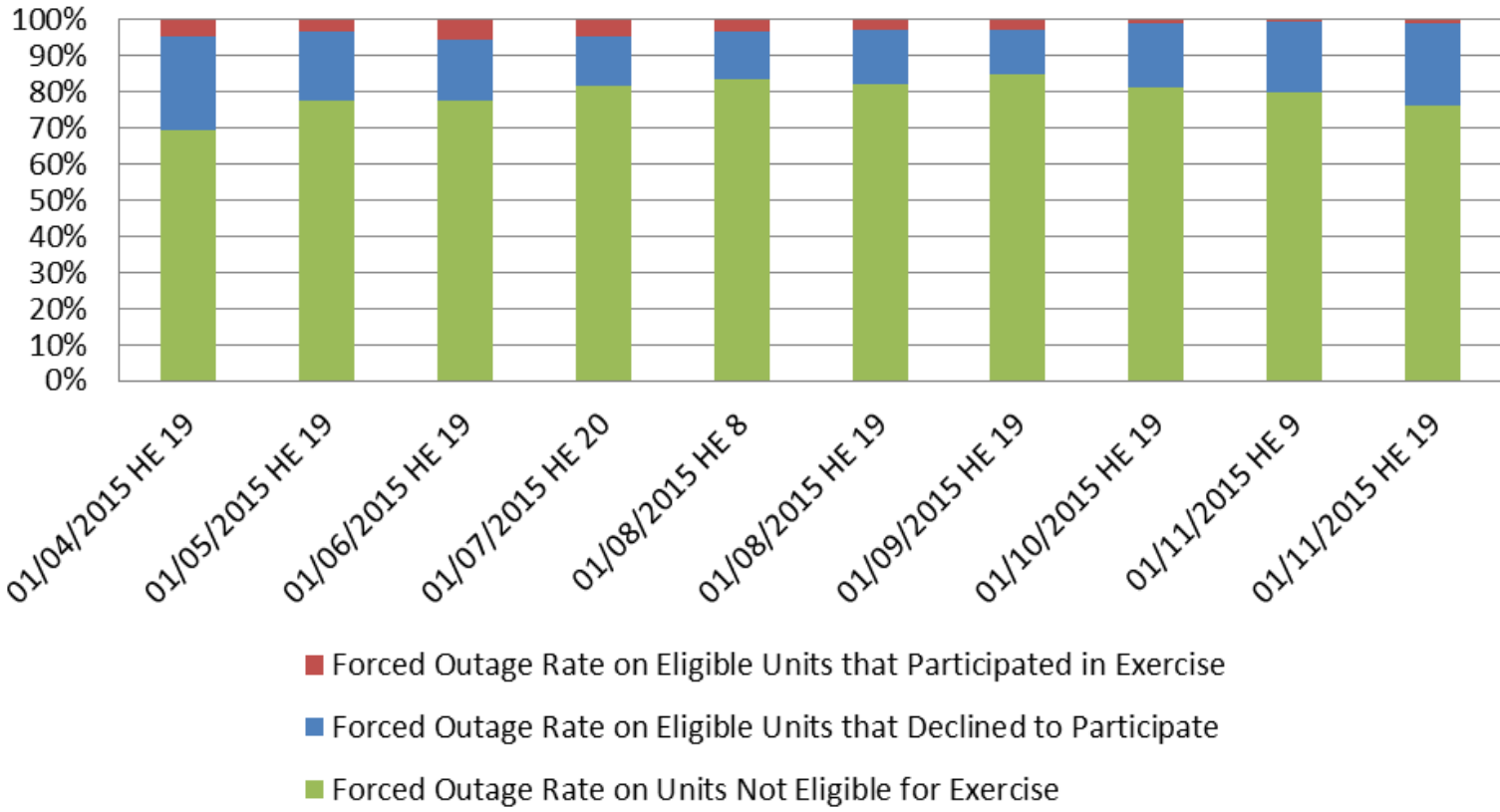
Of the 214 units that were eligible and wanted to participate, 46 units either couldn't be rescheduled after being canceled due to weather, or ran during the month of December, resulting in the final number of 168 units exercised.

Week of:	Total Units Exercised		Failures		Success						Success Rate by Unit Count	Success Rate by MW Total
	Total Units	Total MWs	Failures by Unit Count	Failures by MW	Success		Initial Failure; Success		Total Success			
					Units	MW	Units	MW	Units	MW		
Dec 1st	21	659	4	59	13	520	4	80	17	600	81%	91%
Dec 8th	48	2893	1	90	44	2502	3	301	47	2803	98%	97%
Dec 15th	48	2737	2	92	46	2645	0	0	46	2645	96%	97%
Dec 22nd	3	222	0	0	2	42	1	180	3	222	100%	100%
Dec 29th	31	2468	2	115	24	2008	5	345	29	2353	94%	95%
Jan 5th	17	940	1	41	13	824	3	75	16	899	94%	96%
Total	168	9919	10	397	142	8541	16	981	158	9522	94%	96%

26 units out of 168 experienced initial failures; 16 of those 26 units experienced an initial failure, corrected the issue and completed the exercise; total success rates include the corrected failures.



January 2015 Forced Outage Rates by MW



Eligible units that performed the exercise had a significantly lower magnitude of Forced Outages during the first week of Jan 2015.

Number of Winter Testing Days in December 2014	December 2014 Total Winter Testing Make Whole \$
13	\$ 4,212,993.48

Number of Winter Testing Days in January 2015	January 2015 Total Winter Testing Make Whole \$
3	\$ 670,278.02

Unit that completed cold weather checklist or the checklist in PJM Manual M14D:		
	All Generation Resources	CT / Diesel / Steam / Combined Cycle Units
Unit Count (%)	91%	98%
Total ICAP MW (%)	98%	99%

Note: For the units that experienced failures in the Cold Weather Generation Operational Exercise, approx. 90% of these units completed a checklist, however, the majority of these were dual fuel, which may have contributed to the failure.

- Some gas Gen owners still calling PJM to ask about day-ahead commitments without updating parameters.
 - Fewer than 2014; Operators response: “Update unit parameters in eMKT’
- Wind Generation during the cold weather event was very good
 - 2,500MW-5,300 MW during peak hours
- No units have changed their cost intraday as of now (Manual process currently, System Changes 2/9/15 –WebEx Review 2/4/15)
 - Only one eligible day (RTO Wide Cold weather alert (7th into 8th))
- Some units have been submitting for Parameter Limited Schedule (PLS) exceptions because of gas constraints