

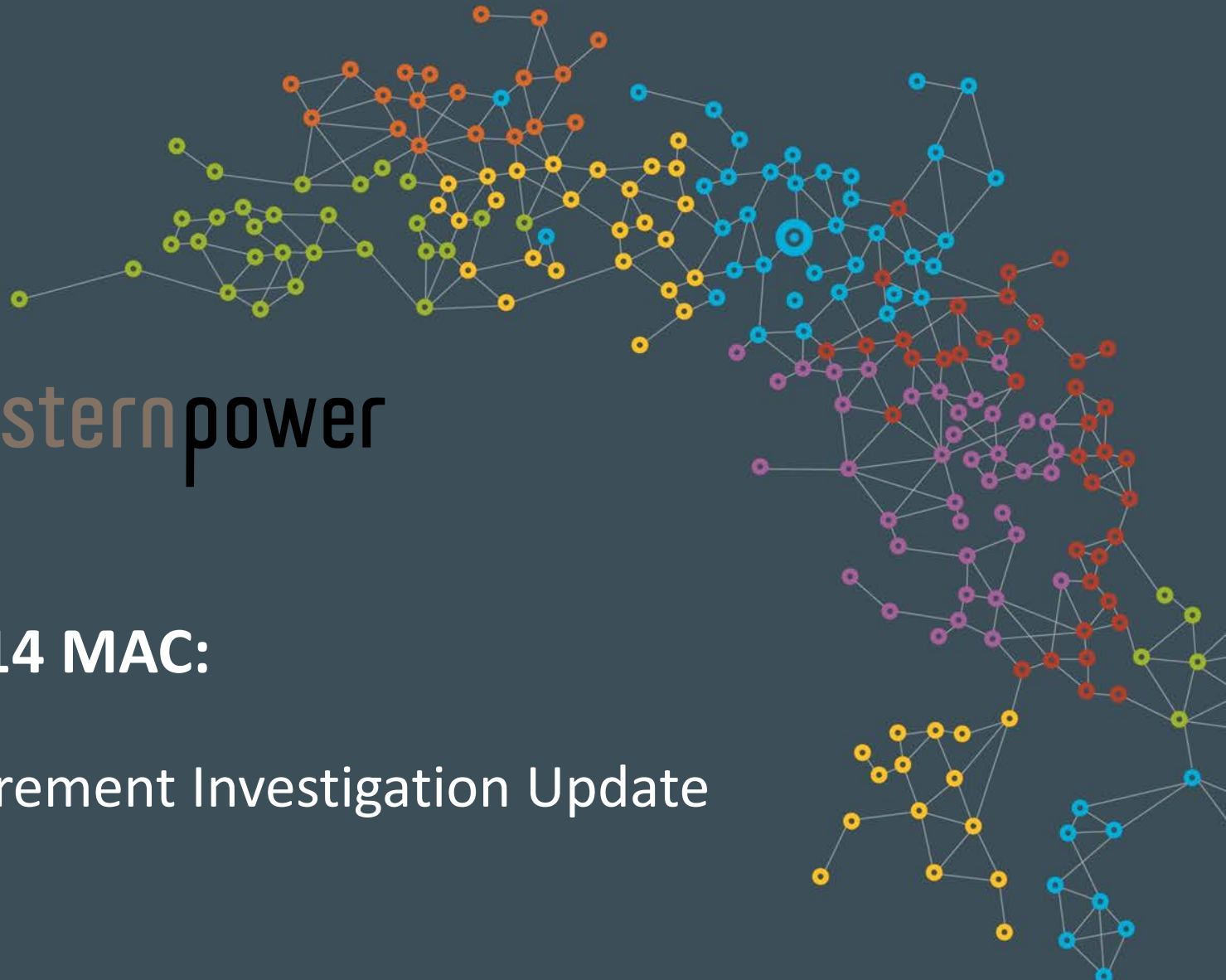


INDEPENDENT
MARKET
OPERATOR



March 2014 MAC:

LFAS Requirement Investigation Update



Monitoring of LFAS Sources and Usage

- Report measures for each month to MAC
- Change to load forecast analysis – SOI position consistent with RTDE
- Two new LFAS sources
 - Source 5: error in RTDE estimation of generator auxiliary load
 - Source 6: Dispatch Instructions + forecast auxiliary load <> generated forecast
- New sources to be added to monthly reporting
- Further work needed to assess extent and options to reduce impact

LFAS Sources: January – February 2014

Percentile	January Source 1 Load	February Source 1 Load	January Source 2 NSG	February Source 2 NSG	January Source 3 SG dev from DI	February Source 3 SG dev From DI
0.05%	-113	-88	-106	-83	-48	-55
0.50%	-72	-70	-43	-38	-37	-44
1%	-64	-63	-34	-30	-31	-38
2%	-55	-56	-25	-24	-25	-13
3%	-51	-52	-21	-20	-22	-9
4%	-47	-48	-19	-18	-20	-5
5%	-44	-46	-17	-16	-19	-4
10%	-36	-37	-12	-11	-5	0
50%	-9	-10	0	0	6	6
90%	17	18	11	11	16	17
95%	27	27	16	15	22	28
96%	30	30	18	17	24	41
97%	34	34	20	18	26	43
98%	40	39	23	21	28	45
99%	52	47	30	26	32	49
99.50%	68	55	37	32	35	60
99.95%	239	75	73	56	42	93

LFAS Sources/Usage: January – February 2014

Percentile	January Source 4 BMO Ramp	February Source 4 BMO Ramp	January Usage	February Usage
0.05%	-76	-74	-166	-128
0.50%	-52	-52	-94	-88
1%	-43	-44	-77	-75
2%	-34	-36	-64	-65
3%	-29	-31	-57	-58
4%	-25	-27	-52	-54
5%	-22	-24	-48	-50
10%	-13	-15	-34	-37
50%	0	0	4	1
90%	13	15	47	47
95%	22	24	61	64
96%	25	27	65	69
97%	28	31	71	75
98%	33	37	79	84
99%	45	47	93	98
99.50%	60	56	107	113
99.95%	101	89	156	145

Other activities

- 2014 Ancillary Service Standards and Requirements Study – selection of consultant
- Improvements to SM processes for detecting and correcting load forecast errors (agenda item 12)
- Meetings with wind farm operators on ramp rates
- Preliminary investigation of Dispatch Instruction processes for Forced Outages or deviations from Commissioning Test Plans
- PRC_2014_01: Improvements to the Energy Market (gate closure changes)

Current/upcoming work

- Meetings with wind farm operators on ramp rates
- Further investigation of DI processes for Forced Outages or deviations from Commissioning Test Plans
- Analysis of delays in advising SM of non-compliance with a Dispatch Instruction
- Continue investigation of Sources 5 and 6
- Options for sculpting the LFAS Requirement
- 2014 Ancillary Service Standards and Requirements Study
- Enhancements to presentation of LFAS measures