

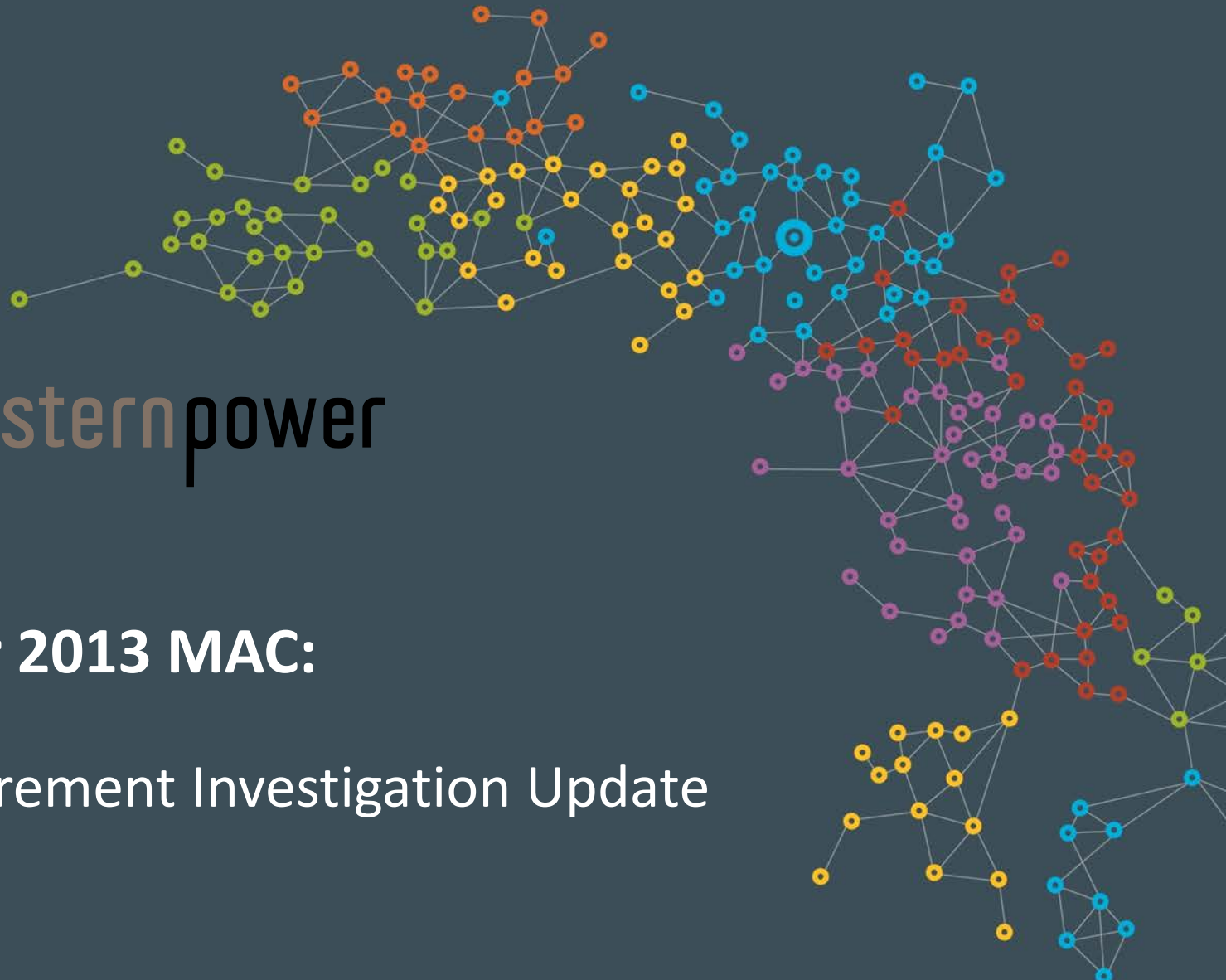


INDEPENDENT  
MARKET  
OPERATOR



**December 2013 MAC:**

**LFAS Requirement Investigation Update**

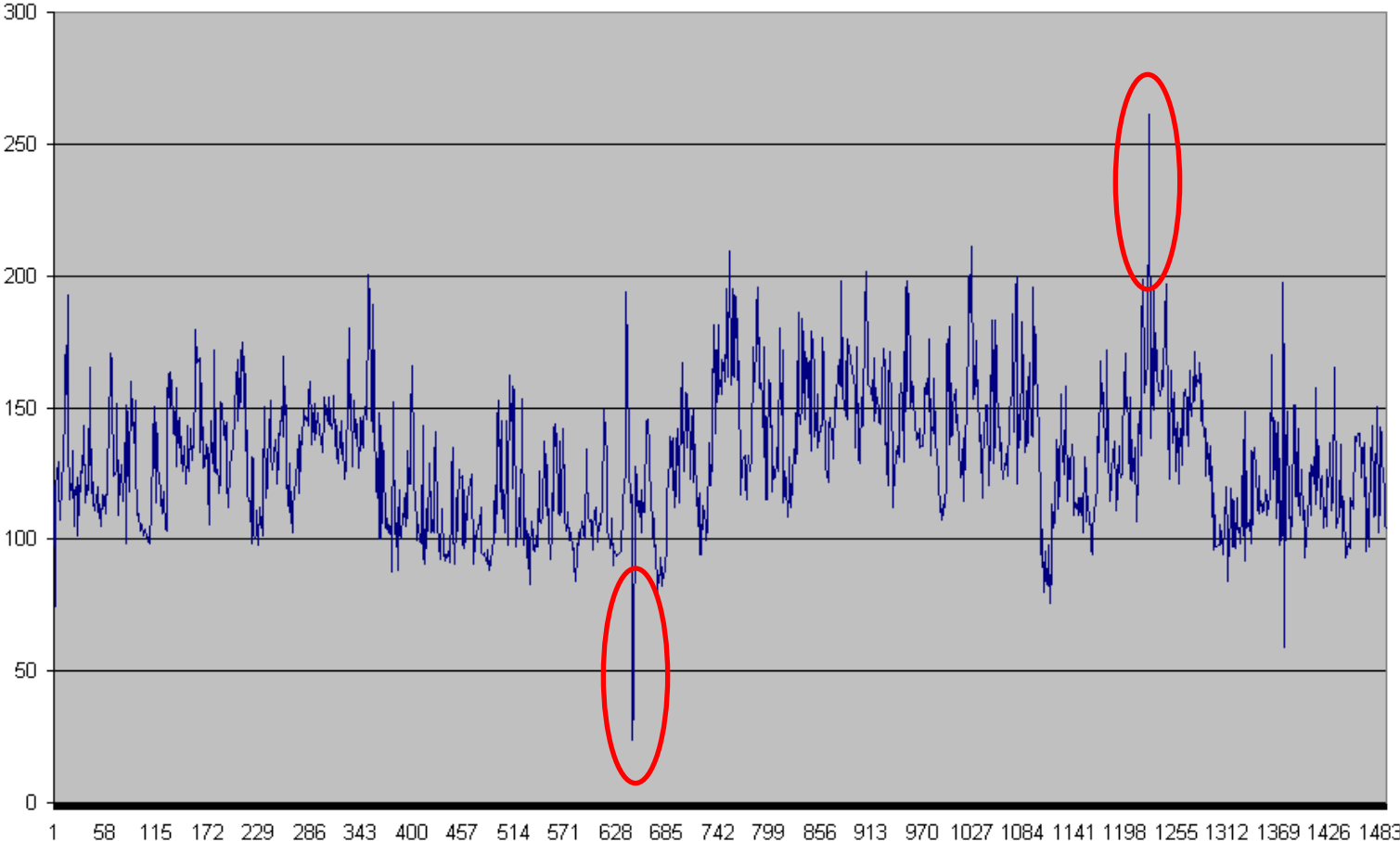


## Consider Sapere Suggestions

- Consider Sapere's suggestions for enhancement: IMO and SM, report back to December MAC
- Consider the effects of the generated to sentout conversion forecast error as a source of LFAS, being Generated less Sentout Dispatch requirement vs actual measurement
- Examinations of this were performed for March and July
- Outliers were found in both months and so need consideration as a source

# Consider Sapere Suggestions

July 2013 used on works



## Consider Sapere Suggestions

- Approx 1% of intervals in July were suspect.
- This is likely due to system failures and needs closer examination.
- These would possibly lead to “errors” in dispatch instructions or notional instructions to VBP.
- These normally go to the Verve Balancing portfolio so there is a reduced impact
- These may give an overstatement of LFAS Usage and so may be excluded from usage reporting
- SM to look to ways to eliminate these and reduce this source by examining better forecasts

# Review Process for Load Forecast Error Monitoring

- Review SM processes for detecting and correcting load forecast errors: IMO and SM, by end of year
- The current process is manual observation by the controller of actual versus forecast via a computer display
- Any divergence is corrected by LFAS in the first instance and then a manual reset of the forecast by the controller

# Review Process for Load Forecast Error Monitoring

- In order to aid the Power System Controller an alarm when divergences are detected will be commissioned

# Load Forecast Improvement with shortened Lead Time

- Forecast lead times - 15-20 mins vs 25-40 mins ahead: SM, report back December MAC
- November Analysis results shown below

		Forecast Difference - Percentiles									Overall Statistics			
Look Ahead		P1	-2 Std Dev	P5	P10	Mean	P90	P95	+2 Std Dev	P99	MAD	MAPE	Std Dev	Num Obs
Proposed DI Option	Pred 0:30,0:00 15mins before	-48.8	-39.9	-30.8	-23.3	-0.2	24.6	32.5	40.3	50.8	14.8	0.7	19.5	1191
	Pred 0:20,0:50 15mins before	-59.3	-47.0	-38.6	-29.2	-4.5	20.8	27.1	34.9	42.2	16.0	0.7	20.3	1192
	Pred 0:10,0:40 20mins before	-54.9	-44.2	-37.5	-29.8	-2.6	24.4	34.6	42.6	58.0	17.2	0.8	22.5	1193
Current DI	Pred EOI - 15mins before	-48.8	-39.9	-30.8	-23.3	-0.2	24.6	32.5	40.3	50.8	14.8	0.7	19.5	1191
	Pred EOI - 25mins before	-63.9	-53.5	-42.1	-31.5	-2.5	26.9	37.9	49.2	56.7	18.6	0.8	23.9	1192
	Pred EOI - 40mins before	-74.2	-62.2	-50.0	-38.4	-3.3	32.7	48.5	62.4	74.4	22.8	1.0	30.1	1193

# Load Forecast Improvement with shortened Lead Time

- Results Synopsis
- Reducing forecast timing to be at end of dispatch step compared to end of interval gives improvement in load forecast accuracy
- 10 minute dispatch step about 30%
- 20 minute dispatch step 20%
- This reduces LFAS source due to load forecast from actual variations



# Review Process for facilities not complying with Dispatch Instruction (DI)

- Review DI processes for Forced Outages or deviations from Commissioning Test Plans: IMO and SM, workshops scheduled for mid November and early December
- The current process when a DI is not adhered due including after a forced outage or during commissioning is a message is sent each minute to the participant. Ideally the participant will return to required position or call the Power System Controller and advise of current capability so a new dispatch instruction can be sent to the generator in question as well as other generators to adjust to the new capability.

# Review Process for facilities not complying with Dispatch Instruction (DI)

- A delay in advising SM means that LFAS makes up the difference rather than re balancing
- Trends in non compliance will be examined
- Unreasonable delays in notifying SM may attract participant scrutiny