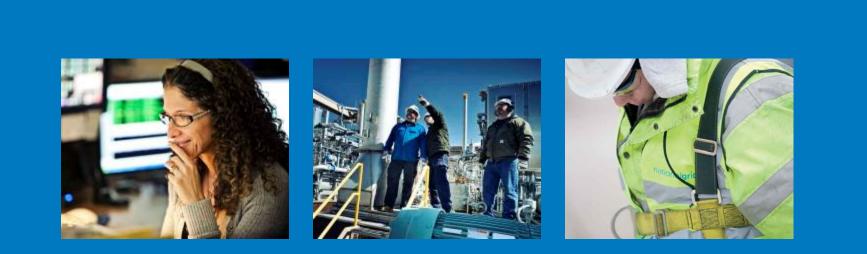


Frequency Management Update



Matt Magill, Trading and Assessment Manager April 2013

Downward Regulation, Inertia and Volts



Matt Magill, Trading and Assessment Manager April 2013

Tender History

- Summer 2012
 - Specific Olympic voltage requirements
 - Southern Voltage requirements
 - Focus on downward regulation in assessment of tenders
- Summer 2013
 - Southern Voltage requirements
 - System Inertia requirements
 - Focus on downward regulation in assessment of tenders

Downward Regulation, Inertia and national**grid Volts interaction**

	Local or System Issue	Resolving Actions
Downward Regulation	System	Less inflexible machines
System Inertia	System	More rotating mass
Voltage	Local	Machines with MVAr capability in local areas

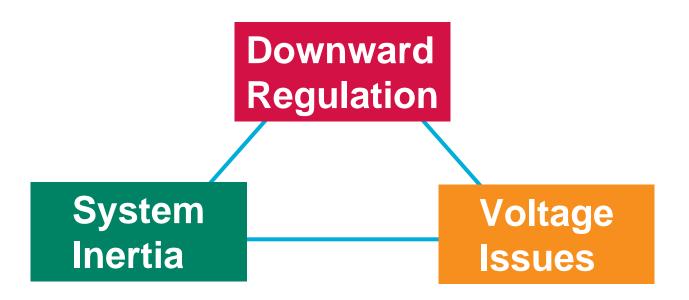
Frequency Management - Industry Workshops

- Open invitations issued to Workshops on "G83 and G59 Protection Requirements"
 - London 25th April

Glasgow – 8th May

- Workshops aimed at the many distributed generation stakeholders
 - Open to all interested parties
- Operational and Balancing Service Requirements updates will continue via the Operational Forum

Commercial Assessment



- Issues are all most prevalent overnight under high wind/import conditions
- System must be optimised to all three issues concurrently
- Internal tool has been developed which forecasts volumes and costs related to the optimisation of all three issues

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System Voltage

- What we know
 - Prevalent market conditions for coal as base load
 - Resultant geographical generation mix this summer results in expected requirements for plant in
 - South East of England
 - South Coast of England
 - General Southern England
- What we don't know
 - MVAr & MW capability from non-standard operating of machines
- Where we want it
 - Southern England, focus on South East

System Inertia

- What we know
 - Inertia values for all machines connected to the system in standard state
 - Overall inertia requirement to maintain frequency security standards
- What we don't know
 - Inertia values for non-standard operation that maybe available
 - Additional inertia that may be available from additional machines
- Where we want it

GB

Downward Regulation

- What we know
 - Reserve and Response requirements to maintain frequency system security standards
 - During any particular period the SELs, MELs and PNs of available units
- What we don't know
 - Of any machines that are able to offer parameters outside the normal operating range during these periods
 - Whilst preferably still offering the same amount of system inertia
- Where we want it
 - GB

Tender

- Downward Regulation, Inertia and Voltage Tender
 - Tender to be sent out this week
 - First Round Submissions to be returned by 26th April
 - Commencement beginning of June
- Please speak to your account manager if you have any questions
- We are also interested in talking about bi-lateral agreements for longer term inertia products

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