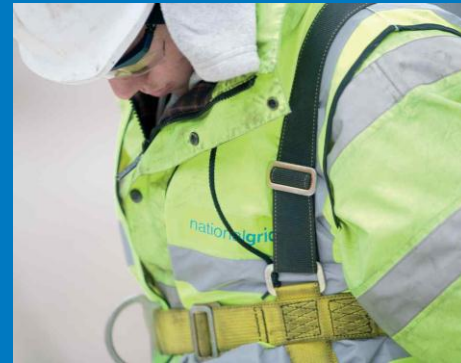


Commercial Balancing Services Group



4th June 2015

Chair: Mike Edgar

Introductions and welcome

- Introductions
- Admin
 - Fire alarm
 - Lunch
- Agree minutes of last meeting

Agenda

- Review of previous actions
- Development of Ancillary Service for Pumped Storage
- Negative Reserve Service
- AOB

Previous Actions

- Update on Rapid (<5s) Frequency Response – AS
- Impact on market of testing for SBR – AS
- Feedback on balancing service development priorities - All

Development of Ancillary Services for Pumped Storage



Steve Miller

Summary

- Problem Statement
- Current Market
 - Firm
 - Optional
- Use of Optional Services
 - Why Review/Change ?
- Options
- Next Steps

Problem Statement

- **The volume of non-tendered services has grown, does the current framework realise benefits under an optional procurement model...**



Fast Reserve – Current Market

- Absolute Firm requirement ~300MW between 06:00-23:00
 - Actual requirement between 300-600MW
 - Up to 300MW met by units providing Optional Services
 - Availability Fee/Nomination Fee & Capped response energy fee
- No intention to change Firm Market for Fast Reserve

Optional Services (Non-Tendered)

- Optional requirement
 - No obligation on either party
 - Enhanced RUR/RDR submitted by providers
 - Enhanced Rates Fee (NOT PUBLISHED) and Optional Energy Price paid on utilisation

Why Review/Change

- Understand the Use
 - Define the requirement
- Open the requirement up to other potential providers
- Non-Tendered Services are becoming the 'norm'
- Limit Market Distortion
- Transparency
- Enhance Value
- Provide Certainty

Options

- Do Nothing (Status Quo)

Bilateral		
Market		
	Short	Long

Next Steps

- 4th June CBSG – Round Table discussion
- 8TH June NG Energy Steering Group
- 24th June NG Internal Workshop
- 30th June Feedback from CBSG
 - Consolidated feedback and update at next CBSG
- Industry Forum for interested Providers?

Negative Reserve Service

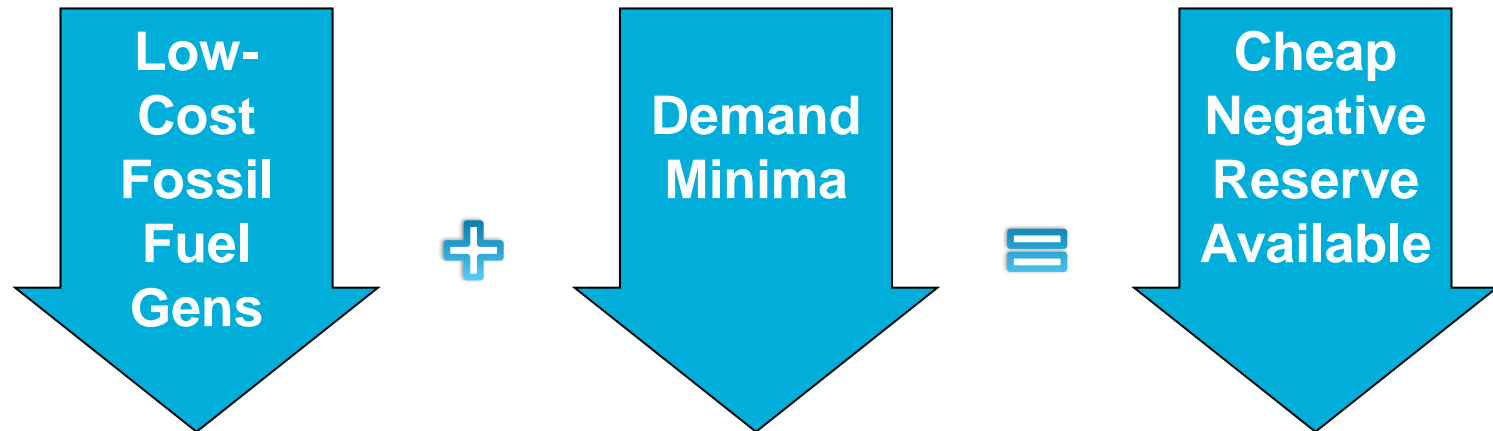


Adam Sims

Negative Reserve – Background

- The ability to reduce generation/increase demand as a result of a system need
- Capacity required in the opposite direction to other reserve products such as STOR
- Historically not procured directly; sufficient capacity from generation operating above SEL
 - Occasional requirement to BOA a low cost unit above SEL

Negative Reserve – Future



Negative Reserve – Current Management

- NCC instruct generators to zero through BM for a short period (two-shifting)
 - Impact on cost as a result of BOAs
 - Impact on wear and tear of generation plant
- NCC use capacity on wind generators to secure negative reserve volume
 - Impact on cost as a result of BOAs if volume is required

Contracting for negative reserve is becoming economic

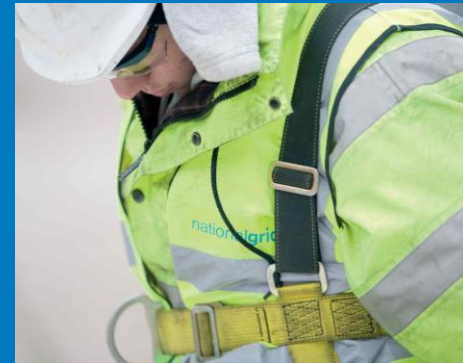
Negative Reserve – Next Steps

- Questions to be answered:
 - What volumes are required?
 - When are they required?
 - What is the long term forecast?
 - What would the industry need?
 - How should they be procured?
- Engage with interested parties
- Develop an appropriate strategy for contracting options

AOB



Balancing Services Standing Group



4th June 2015

Chair: Mike Edgar

Agenda

- Review of Volatility in the REP
- AOB

Current Response Energy Payment Defects

BSSG Presentation 4 June 2015
Joe Underwood – Joseph.Underwood@drax.com
Cem Suleyman – Cem.Suleyman@drax.com



Introduction/Background

- Generators submit a Holding Price and get paid a Response Energy Payment dependent on low or high FR:
 - Increased generation REP = $MIP * 1.25$ (paid to the generator by the SO)
 - Decreased generation REP = $MIP * 0.75$ (paid by the generator to the SO)
- CMP237 was raised by National Grid to address the unfairness of this REP payment method for the remuneration of FR for non-fuel cost generation
 - Non-Fuel Cost generators can choose the current method or £0/MWh
 - Fuel Cost generators stay with the current method

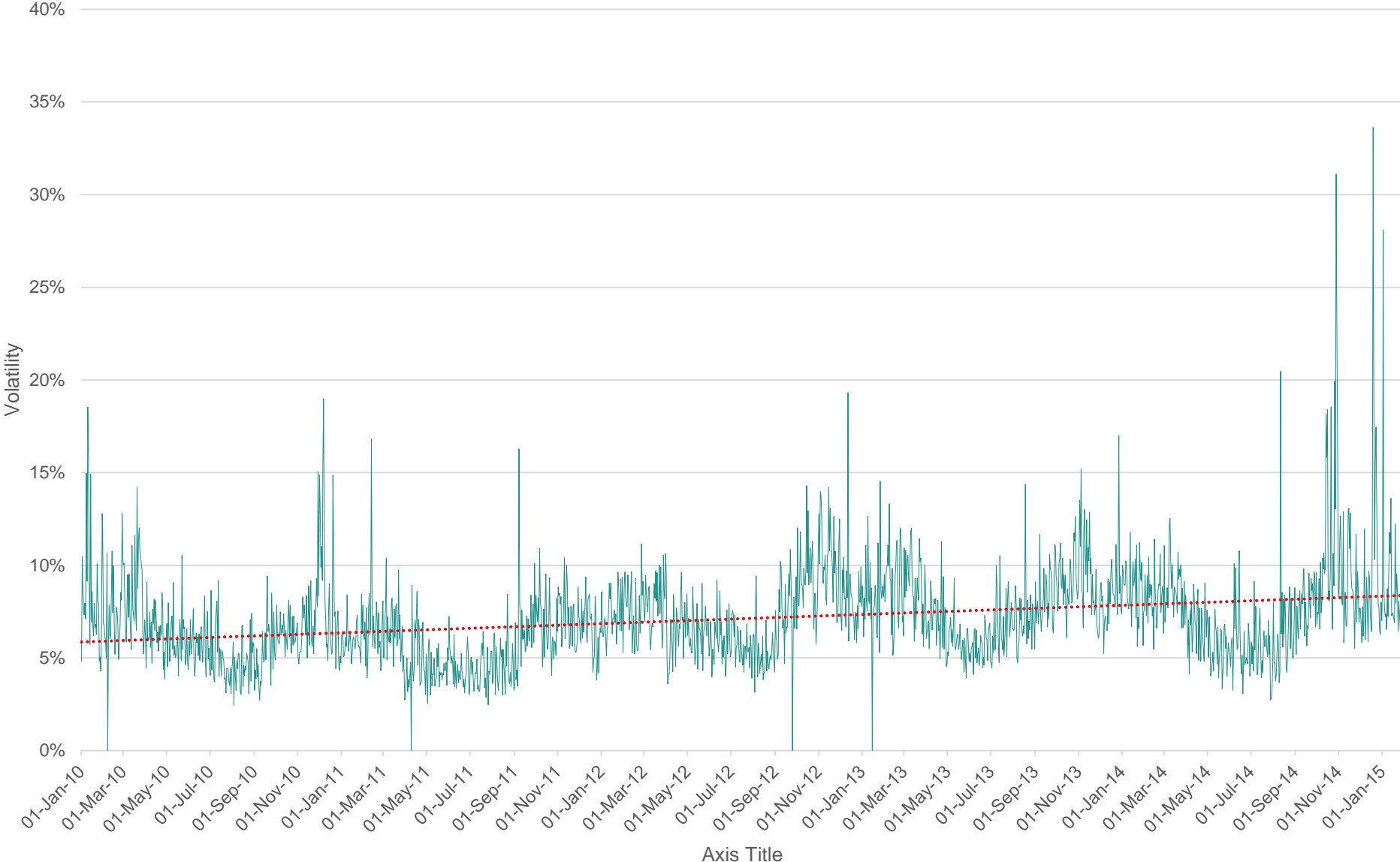
CMP237 Technology Categorisation

Fuel Cost	No Fuel Cost
Gas	Onshore Wind
Coal	Offshore Wind
Oil	Solar
Nuclear	Tidal
Biomass	Wave
Electricity Storage Technologies (inc. pumped storage, batteries)	Hydro

MIP Volatility Defect

- The current method is best suited to a time where conventional generation dominated the system
 - Marginal costs of generating technologies were similar
- But generation mix is changing fast with increase in renewables
 - A divergence in the marginal costs of different generators
- The change in generation mix is driving increased volatility of the MIP (as will cash out reform)

Daily MIP Volatility from Jan '10 - Jan '15



Price Risk & CMP243

- The increased volatility of the MIP is increasing price risk for FR providers
- CMP243 raised to address the price risk defect
- All FR providers given an option of:
 - Retaining the current REP pricing method
 - Switching to a fixed price, initially suggested at £0/MWh
- Solution simple and low cost
- CMP243 a similar solution to that proposed by CMP237, but addresses different defect
- Nevertheless CMP243 is compatible with the CMP237 defect

Volume Risk Defect

- While CMP243 tackles the price risk defect it does not solve a further defect – volume risk
- FR providers do not know the volumes at which they will be utilised for both low and high FR
- This places FR providers at risk of incurring losses and/or loss of profitable opportunities
- This will deter participation and competition for FR services
- Will make the SO's role increasingly difficult

Volume Risk Solution

- All generators should be able to submit their own Holding Price *AND* Response Energy Payment. This:
 - Removes volume risk reducing overall FR cost
 - Will enable more generators to provide FR better facilitating National Grid's ability to efficiently procure FR
 - Overall better outcomes for the end consumer

Difficulties with Proposed Solution

Two main objections raised: cost and feasibility of the optimisation

Cost

- NG estimate £10m program/£30k feasibility study

Feasibility of optimisation

- Difficulty with optimising different Holding Payments *and* REPs to determine most cost effective providers
- Related to this - if optimisation is undertaken on Holding Price alone, generators could increase their REP further complicating optimisation process

Drax Rebuttal

Cost

- System costs associated with similar CAP107 solution far lower (~£600k)

Optimisation

- NG can optimise on Holding Prices alone as REP volumes will tend to zero in the long run as system must operate at 50Hz. Net costs of FR utilisation should be small
- Generators don't know whether they will be utilised for low or high FR and in what quantities. Therefore likely to submit prices = to MC to mitigate risk of losses/lost opportunity

Questions/Discussion

AOB



Future BSSG/CBSG Meetings



Chrissie Brown

Next BSSG/CBSG Meeting

- First week of September
- If you would like to raise a topic for discussion, please contact adam.sims@nationalgrid.com or christine.brown1@nationalgrid.com