

# Operational Forum- 15th June 2005

## Reserve Review

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# Agenda

- Background to Reserve Review
- Where we are in the process
- Views from the industry
- What we have looked at so far
- NGC's current thinking on way forward
- Next Steps in the review process
- Points for discussion today

# Why are we reviewing reserve procurement?

- Current suite of Balancing Services have developed over time
- Products and procurement mechanisms established in response to specific energy market changes, e.g.
  - Pool to NETA - warming contracts
  - 3.5 to 1 hour GC - PGBTs
- PGBT Review - need a more holistic review of reserve procurement
- Reserve Review - consider whether current products, procurement mechanisms and information provision are the most appropriate

# Objectives of Review

- To ensure System Operator has an appropriate suite of Balancing Services which it can use to meet its operational reserve requirements
- To ensure these Services are procured in a efficient and economic manner, via market based mechanisms where competition exists
- To ensure that parties are not unduly discriminated against in the provision of these Services
- To ensure these Services are procured and used in a way which compliments the energy market
- To ensure that Market Participants understand when and how these Services will be required, procured and used

# Scope of Review

## In Scope

- Current Services
- New Services
- Procurement Timescales
- Procurement Mechanisms
- Information Provision

## Out of Scope

- The requirement for reserve
- Reserve levels
- Gate Closure
- Capacity Mechanisms
- Frequency Response, Fast Reserve

**The focus is on services which establish the availability of general operational reserves for call-off in Balancing Mechanism timescales**

**Scope of review will not explicitly consider services procured against specialist requirements such as Frequency Response and Fast Reserve**

# Where are we in the Review process?

23rd February

: Reserve Workshop

7th - 25th March

: Bilateral focus meetings

13th April

: Interim Operational Forum - Progress Feedback

**15th June**

: **Extended Operational Forum**

**End August**

: Issue of Reserve consultation - Outlining background, options and NGC proposals

**The review stage**

**End September**

: Propose Industry code changes where appropriate

**Process dependent on affected codes**

# The remainder of today's session

- Presentation
  - Views from industry
  - What we have looked at so far
  - Current thinking on a way forward
- Discussion
  - Open floor discussion
  - Have we interpreted your views correctly?
  - Feedback on our current thinking

# Inputs to the Review Process

Glenn Bryn-Jacobsen

Electricity Balancing and Energy Trading

# Inputs to the Review Process

- Reserve Review workshop
  - variety of interested parties - around 50 attendees
  - high level steers and some new ideas
- Bilateral meetings with Market Participants
  - over 10 meetings - Gencos, Demand side, Vertically Integrated, traders, consultants
  - more detailed discussions regarding service provision & different options
- Ofgem's Cash-Out Review Working Group
  - Initial steer - no formal conclusions reached as yet
  - Desirable payment structures of reserve related balancing services

# Messages from the Reserve Workshop

## 23rd February 2005

### Headline themes from the Reserve workshop breakout session

- Not all reserve could/should be bought on-the-day / day-ahead with some classes of providers needing the long term firm income to justify the existence of their plant
- NGT should take into account a forecast provision of available headroom in assessing the quantity of procurement of reserve on the day
- The pricing structure of contracted reserve should be based around an option (availability element) plus utilisation (energy element)
- Recognition that the choice is between few products, hence liquid market, Vs freezing out / penalising different classes of providers who do not fit the product
- Importance of the interaction with cashout
- Transparency : Participants wanted a clearer / closer to real time understanding of the requirement, options available to NGC, and actions taken to satisfy the requirement

# Messages from Bilateral Meetings

## Market Behaviour

Majority view: **NGC actions should be complementary to energy market operation**

1. Plant may be part-loaded as consequence of demand following and contingency provision I.e. general market operation under NETA.
2. It is efficient for this 'headroom' to count towards reserve requirement
3. There was concern over any proposals which may increase the potential for pollution in the energy market.

# Messages from Bilateral Meetings

## Timing of NGC actions

Overall: **Participants need to understand the whole reserve procurement framework**

1. A recognition of the distinction between the drivers behind year-ahead procurement and the day-ahead/within day procurement of reserve
2. Confusion over within-year procurement: Drivers, assessment, value in relation to 'Year-Ahead' Procurement
3. Day-ahead/Within day procurement : Participants expressed an understanding of the trade off being between liquidity and certainty in managing NGC's reserve requirement, and the overall volume required

# Messages from Bilateral Meetings

## Within-day Procurement

**Majority view :** Procuring within-day products 'as and when required' against the decaying reserve requirement allows NGC to minimise the number of within-day actions.

**Minority view :** Desire to only procure reserve via a firm day ahead/ within-day mechanism with a commitment by NGC to procure a minimum volume

# Messages from Bilateral Meetings

## Information Provision

Majority View: **Participants need clarity of definition and timeliness of information**

1. Providers generally satisfied with current level of information content
  - comments related to ability to interpret information and the timeliness of its provision
2. General concerns over the media of communication
  - Consideration of downstream system costs

**“Finding the balance”**: Information should be released if it:

1. Removes unfair commercial advantages by facilitating a level playing field
2. Improves market efficiency by enabling accurate assessment of commercial & operational risk profile

# Messages from Ofgem's Cash-out Review Working Group (CORWG)

No firm conclusions have been reached by the CORWG, as work is still ongoing but during the initial discussions the following points were made:

- Structure of reserve products/contracts should ideally be separated into an option form with firm 'availability' and 'utilisation' payments
- Ideally, the total costs of reserve utilisation (including any availability fee) should feed into cashout prices at the time that the reserve is utilised
- Creating reserve may deliver energy to the system - the potential to treat this energy differently in cashout may be useful

# Potential developments

Duncan Burt

Optimisation and Risk

# So what does this translate to?

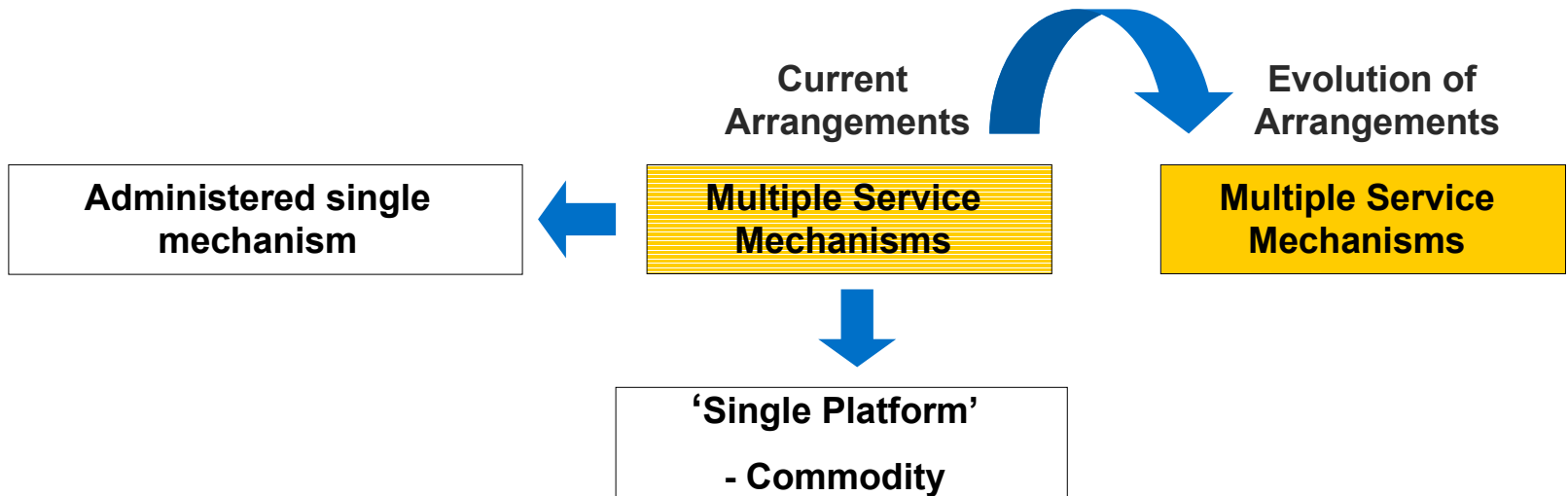
- Investigated a broad range of potential alternatives to current framework using a variety of sources:
  - Broad themes and specific ideas generated at Reserve Workshop
  - Proposals presented at Bilateral Meetings
  - International comparisons
  - NGT internal development
- Primarily based on the principles of:
  - Market/competitive solution where competition exists
  - NGC driven procurement
  - Efficient & Economic:
    - Minimise risk of 'gaming'
    - Good 'fit' with NGC balancing requirements and principles

# Broad categories of potential development

- Broadly developments divide into procurement timeframes with particular focus on, and complexity in, the within-day products and mechanisms
- Non-physical and physical products considered
- Variety of different procurement, call-off and dispatch methods up to week-ahead (for the within-day product)
- Potential developments to the current within-day market mechanisms fall into three broad categories:
  - **Fully administered**
  - **Multiple services** (procured as now)
  - **New, 'Single platform' mechanism** (like a 'BM for Reserve')

# What we have looked at so far

Illustrative layout of possible developments:



# Mechanism category examples

## Single administered Mechanism

- Managed through codes
- Cost - reflective and/or standardised technical requirements
- Not raised by any party as a possible way forward

However:

- Moves away from competitive process when sufficient interest/liquidity exists to allow competitive mechanism
- Would remove potential for gaming and/or cost increases

Therefore we will not be considering this further

# Mechanism category examples

## Arrangements as now

Maintain commercial arrangements, procuring a number of different services but with improved information provision

- Majority feedback:
  - Happier with 'substance' current framework of arrangements
  - Wanted more transparency
- However, minority feedback raised disadvantages:
  - Limitation of warming contracts to a certain 'group' limits wider provision and ability of a wider market to capture Reserve 'value'

# Mechanism category examples

## Single Platform examples

- Standardised product based fully traded mechanism
  - E.g. Standard Reserve firm product (X MWs for 1 half hour with minimum dynamics) traded at all timescales down to BM gate closure
- On-the-day, Reserve option product
  - E.g. Mechanism with single gate-closure to buy within-day Firm Reserve options with different exercise times down to real-time

## Multiple Services examples

- New 'BMU Reserve option' product
  - E.g. 'Optionisation' of current warming contract, with roll-out to all BMUs
- Evolution of existing products
  - E.g. Modifications to current warming contract, such as firm Energy price

# Translating your views to these broad mechanism categories

## Single Platform Mechanism

- For Example:
  - Define Standard firm Reserve contract:
    - (Availability of 1 MW for 1 half-hour with minimum dynamic parameters for dispatch up to real time within or outside BM)
  - Establish trading platform
  - Trade contract in different products from beyond year-ahead up to BM gate closure
- General feedback suggests only minority of enthusiasts - majority of participants unenthusiastic because they see:
  - Significant investment but with uncertainty, particularly as NGC is sole buyer for BM contract
  - Potential interactions with energy forward markets
  - Happier with multiple product arrangements
- However, has advantages:
  - Single price discovery mechanism
  - Clear and transparent

# Translating your views to these broad mechanism categories

## Multiple Services

- For Example:

- 'Optionalise' current Warming contract:
    - Firm Energy price
    - Hourly holding fee retained when option exercised
    - Increased information provision relating to actions taken
- 

- Majority feedback:

- Majority of participants happier with an 'evolution' to current arrangements
- Need to consider cash-out treatment
- Maintains current dispatch/call-off mechanisms

- However:

- Need to ensure widest possible opportunity to participate
- Would need transparency and information relating requirement, prices and procurement

# NGT's current direction

Strongly influenced by Industry feedback - and will continue to be....

This session and the consultation report will continue to evolve this opinion....

# NGT's current direction

## Single Platform

- Seems to deliver improved transparency and information
- Superficially looks good but has been found to be problematic in the detail - very complex interactions with current arrangements for planning and operating the system
- Currently difficult to see the significant benefits required to justify large change and little appetite for this in industry

## Multiple Services

- Would represent an evolution to current services, lower associated risks of implementation than 'Single Platform'
- Appears to capture many of the benefits of Single platform such as:
  - by opening out opportunity to provide Reserve service to more participants
  - increasing transparency
- However there are still 'unknowns' with respect to forward market interaction, risks of gaming and other 'unknown unknowns'

# NGT's current direction

- Based on feedback we are currently minded to propose developments in an 'evolutionary' direction
- Our current thinking as to what this would mean is presented in the following slides, ordered in terms of procurement timescale:
  - ⇒ Year ahead procurement
  - ⇒ Seasonal procurement
  - ⇒ Within-season procurement
  - ⇒ Within-day procurement

# Year Ahead Procurement

- Steer from Market participants is that some annual procurement is appropriate
- Contract form well established and understood
- Provides Firm / certain income for provider
- NGC certainty
- Competitive, open, degree of flexibility
- Therefore we are minded to continue with annual procurement, but..
- we are investigating:
  - expanding the tendered dynamics. For example, create two tendered delivery timescales, one 20 minutes and a second delivery timescale similar in principle to current SSR
  - multiple-year tenders

# Seasonal Procurement

- Strong steer that, if used, this must form part of a clear, coherent procurement framework, that is known in advance. I.e. Providers will know seasonal tenders are an alternative when deciding on whether to tender for the annual service

Therefore:

- Establish stable mechanism for procurement that ‘fits’ with the year-ahead procurement of Standing Reserve
- Seasonal (e.g. quarterly) appears to work better than monthly
- Publish requirement / ITT
- Publish volume purchased

# Within-Season Procurement

- Occasionally proves efficient/economic to procure within-season, typically week-ahead, as a result of variations in plant availability, step changes in weather and energy markets etc that significantly effect market and system conditions
- Doesn't occur often enough to warrant fixed tender procurement mechanism, however, would be inefficient to secure at longer timescales.
- We would like to establish a process for buying firm reserve when this gap occurs. A weekly tender would be inefficient as we would procure only rarely, resulting in little participation in any tender

# Within-Season Procurement

Therefore, instead of developing a rarely-used weekly tender:

- It may be possible to establish a standard contract form that can be used as and when required
- This would be backed up by regular information updates on potential for requirement and publication of any procurement via new standard contract or via any other product, such as BMU-specifics
- Would be a standard procurement process - publication of requirement ex-ante, and identification and publication of purchases post-procurement but ahead-of-day

# Within-day Procurement

- As highlighted any non-physical within-day procurement has the most complex interactions to current systems, processes and market arrangements
- NETA advocated the benefits of closer to real-time market balancing, with the introduction of within-day gate
- To allow NGC to plan & operate the system, BMU participants provide indicative information in relation to their expected positions at gate-closure from 11am day-ahead

# Within-day Procurement

- An operating margin assessment begins at day-ahead, with a contingency proportion decaying towards the final planning stage (approx. T-4hrs)
- NGC cannot access all available plant within BM timescales
- Therefore NGC needs to perform actions on a BMU-specific basis ahead of the BM for additional accessible availability and/or for system constraints
- Therefore to be economic and efficient within this framework NGT manages its overall within-day requirements against this preliminary information and takes actions on the premise of 'last time to order' as this may, at times, negate the original requirement as our reserve requirement decays

# Within-day Procurement

- NGC uses a number of contractual forms to access this plant within-day which are unable to participate within the balancing mechanism
- Due to the nature of a decaying contingency requirement the primary mechanism is a 'warming contract' which is, in effect, an availability contract
- In essence therefore, NGC treats within-day actions as an enabler for BM participation which is the market place for potential utilisation
- Designing any within-day reserve procurement process therefore has to take into account the physicality of balancing the system. In particular, the potential for creating perverse incentives on necessary information provision, and the possibility of creating a market around a product which is fundamentally not suited to a competitive process

# Within-day Procurement

- Therefore as stated previously, at this time we are minded to progress an evolutionary stage to our current processes which, without major fundamental changes to way which NGC plans & operates the system, is the most economic solution
- In particular we are investigating the potential of 'Optionalising' the current Warming contract whilst widening the set of applicable plant
  - Firm Energy price
  - Hourly holding fee retained when option exercised
  - Profiling holding costs, reflecting the cost of provision
  - Increased information provision relating to actions taken

# Summary of NGC's development direction

- 'Year-Ahead' we are investigating:
  - Expanding the tendered dynamics
  - Introducing Multiple-year tenders
- 'Season-Ahead' we are investigating:
  - Establishing a stable mechanism for procurement that fits with the 'year-ahead' procurement of Standing Reserve
- 'Within-Season' we are investigating:
  - Establishing a standard contract form that can be used as and when required
  - Developing a standard procurement process
  - Developing regular information updates on the requirement potential
- 'Within-Day' we are investigating:
  - 'Optionalising' the current Warming contract whilst ensuring the widest possible opportunity to participate

# Next Steps

- Receive feedback on work to date
- Pull together and publish a document which presents the findings of the review and our proposals on a way forward
- Invite industry responses to the document
- Progress changes via normal governance routes as appropriate

# Open Floor Discussion

- Points of clarification
- Have we interpreted your views correctly?
- Your views on our current direction