Electricity Balancing SCR
Opening Seminar

07 Sept 2012
Introduction

- First of four stakeholder workshops
  - Part of electricity balancing significant code review (SCR) initial consultation

- Opening seminar sets context and introduces workshop format

- Workshops will focus on discussion of SCR ‘considerations’

- Workshops aim to:
  - inform stakeholders of SCR scope and initial design considerations
  - discuss the policy considerations and the pros and cons of options
  - seek suggestions on available evidence and analytical focus
Steps leading to SCR launch

2010: Project Discovery highlighted long-standing concerns

November 2011: Electricity cash-out issues paper published

March 2012: Decision to launch SCR of electricity balancing arrangements announced

April 2012: Stakeholder event held on scope of SCR

August 2012: SCR launched with publication of initial consultation
Reasons for launching the SCR

- Dampened and inaccurate prices may provide insufficient incentives to balance and invest

- Failing to consider potential reform could harm future security of supply and unnecessarily increase system balancing costs

- Need to ensure arrangements remain fit for purpose in light of large challenges in energy markets

- Reviewing now:
  - assists input into EU developments and consideration of how target model will be implemented
  - allows changes to complement the Electricity Market Reform capacity mechanism
SCR Objectives

- SCR launched with three high-level objectives:
  - incentivise an efficient level of security of supply
  - increase the efficiency of electricity balancing
  - ensure arrangements are compliant with European Target Model and complement EMR Capacity Mechanism

- These objectives are consistent with Ofgem’s principal objective and statutory duties
SCR Scope: Primary Considerations

- SCR launched with a wide scope

- Initial consultation highlights ‘considerations’ to improve balancing arrangements
  - 8 primary (focus of SCR)
  - 6 secondary (focus dependent on design choices under primary)

- Primary considerations separated between:
  - Changes to existing balancing arrangements
  - Improvements to price inputs
  - New balancing arrangements
SCR Scope: Primary considerations

**Changes to existing arrangements**
- More marginal main cash-out price
- Single or dual cash-out price
- Single or separate trading accounts
- Pay-as-Bid or Pay-as-Clear for energy balancing services

**Improvements to price inputs**
- Attributing a cost to non-costed actions
- Improved allocation of reserve costs

**New balancing arrangements**
- Balancing Energy Market
- Alternative arrangements for renewables
SCR Scope: Primary considerations

Changes to existing arrangements

- More marginal main cash-out price
  - Cash-out price may not fully reflect scarcity on system

- Single or dual cash-out price
  - Dual cash out price has large spread: increases risk and complexity

- Single or separate trading accounts
  - Combining imbalance settlement could improve efficiency for parties

- Pay-as-Bid or Pay-as-Clear for energy balancing services
  - Current arrangements could lead to inefficient despatch of balancing services
SCR Scope: Primary considerations

- **Improvements to price inputs**
  - Attributing a cost to non-costed actions
  - Improved allocation of reserve costs
  - Reserve costs targeted more accurately into periods where used

- Some balancing actions not currently reflected in cash-out price
SCR Scope: Primary considerations

- New balancing arrangements
  
  Could allow energy imbalances to be cleared in isolation from system imbalances

  May be more efficient for intermittent generation to be aggregated and balanced centrally

  Balancing Energy Market

  Alternative arrangements for renewables
SCR Scope: Secondary Considerations

- Improved information provision
- Reserve Market
- Amending gate closure
- RCRC
- Reverse price
- Information imbalance charge

Secondary considerations
## Potential policy packages

<table>
<thead>
<tr>
<th>More market-like</th>
<th>Single or dual cash-out?</th>
<th>Main price calculation</th>
<th>Pay-as-bid or clearing price in the BM</th>
<th>Single or separate trading accounts?</th>
<th>Important secondary considerations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dual (ex-post)</td>
<td>PAR 500</td>
<td>Pay-as-bid</td>
<td>Separate trading accounts</td>
<td>RCRC, Reverse Price</td>
</tr>
<tr>
<td>3</td>
<td>Single (ex-post)</td>
<td>Marginal price</td>
<td>Pay-as-clear</td>
<td>Single trading account</td>
<td>Information imbalance charge</td>
</tr>
<tr>
<td>4 “BEM”</td>
<td>Single cash-out price (ex-ante)</td>
<td>Marginal price (based on forecast of imbalance)</td>
<td>Pay-as-clear</td>
<td>Single trading account</td>
<td>Information imbalance charge, forecast of NIV, gate closure</td>
</tr>
</tbody>
</table>
# Indicative criteria for assessment of potential reform options

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Key Considerations</th>
</tr>
</thead>
</table>
| Ensure a secure and reliable electricity supply | • Impact on incentives for parties to balance  
• Duration, severity and probability of outages occurring |
| Impact on consumers                           | • Impact on costs of balancing and consumer bills  
• Arrangements where supplies are interrupted  
• Impact on vulnerable customers |
| Efficient balancing                           | • Efficiency of the cash-out price  
• Cost allocation of emergency balancing actions  
• Possibility for participation of demand-side response (DSR) |
| Impact on competition                        | • Impact on liquidity  
• Barriers to entry including credit requirements |
| Impact on investment                         | • Incentives for investment in capacity |
| Risks and unintended consequences           | • Probability of financial distress for market participants  
• Potential for gaming of balancing mechanism  
• Impact on SO incentives to procure balancing services  
• Impact on gas markets |
| Integration of European markets              | • Promotion of the internal market  
• Compliance with TM |
| Impact on sustainability                     | • Impact on sustainable development and management of transition to a low carbon economy |
| Other impacts, costs and benefits            | • Environmental impacts  
• Implementation costs  
• Ongoing administrative costs |
SCR Key interactions

- **European Target Model (TM)**
  - aim to ensure content/timing of any changes maximises opportunities to complement the TM, and complies with the TM legislation

- **EMR Capacity Mechanism (CM)**
  - before implementation of any reforms, we will consider impact on effectiveness of CM

- **Ongoing BSC modifications**
  - Raised pre-launch: normal modification process applies
  - Raised post-launch: GEMA will decide if it falls within the scope of the SCR
EU TM Interactions

- The Balancing Framework Guidelines aim to integrate, coordinate and harmonise balancing regimes within the EU
  - common principles on balancing energy pricing and selection, including marginal pricing (pay-as-cleared – unless pay-as-bid can be proved more efficient)
  - standardisation of balancing energy and reserve products
  - limit distortions in imbalance settlement between adjacent markets
  - imbalance settlement period not to exceed 30mins

- Balancing FG now with Board of Regulators

- Next steps: European Commission approval (end Sept), ENTSO-E to transpose into Network Codes
Indicative electricity balancing SCR process

2012
- Publish SCR launch statement & initial consultation – August 2012
- Receive responses to initial consultation – October 2012

2013
- Publish draft policy decision and draft impact assessment – Spring 2013
- Receive responses to draft policy decision – Summer 2013

Early 2014
- Publish final decision and impact assessment
- GEMA decision on BSC modifications/licence changes – Autumn/winter 2014
- Any new arrangements in place - 2015
**Initial consultation aims**

**Inform stakeholders of:**
- reasons for launching
- SCR scope
- initial design considerations
- plan for review and intended stakeholder engagement
- plan to handle interactions

**Seek stakeholder input on:**
- all aspects of the policy considerations
- sources available evidence
- SCR process and stakeholder engagement going forward
# Stakeholder events schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Scope of workshops</th>
<th>Date and Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening seminar and</td>
<td>• Balancing Energy Market</td>
<td>7 Sept 2012</td>
<td>Elexon, London</td>
</tr>
<tr>
<td>Workshop 1</td>
<td>• Improvements to price inputs</td>
<td>10:00 – 17:00</td>
<td></td>
</tr>
<tr>
<td>Workshop 2</td>
<td>• Single or dual cash-out prices</td>
<td>24 Sept 2012</td>
<td>QEII Conference Centre, London</td>
</tr>
<tr>
<td></td>
<td>• Pay-as-bid or pay-as-clear</td>
<td>10:00 – 17:00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Single or separate trading accounts</td>
<td>10:00 – 17:00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Alternative arrangements for renewables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workshop 4</td>
<td>• Policy packages</td>
<td>12 Oct 2012</td>
<td>Elexon, London</td>
</tr>
<tr>
<td></td>
<td>• Interactions with other market developments</td>
<td>10:00 – 17:00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Secondary considerations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential follow-up</td>
<td><strong>Discussion of events, responses and next steps</strong></td>
<td>November 2012 (TBC)</td>
<td>TBC</td>
</tr>
<tr>
<td>seminar</td>
<td><strong>TBC</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Structure of workshops

• Intended to be interactive, open and welcome views

• **Ahead of the workshop:**
  – agenda and slides sent out in advance

• **In the workshop:**
  – consideration introduced by Ofgem
  – discussion in smaller break-out groups
  – report back from group discussions to whole workshop

• Attendees encouraged to attend all sessions
Agenda for today

09:30 – 10:30: Opening remarks and Q&A
10:30 – 10:45: Coffee break
10:45 – 14:45: Session 1 – Improvements to price inputs
   10:45 – 12:00: Improved allocation of reserve costs - break-out discussions
   12:00 – 12:30: Roundup and conclusions
12:30 – 13:30: Lunch break
   13:30 – 14:30: Attributing a cost to non-costed actions - break-out discussions
   14:30 – 14:45: Roundup and conclusions
Agenda (2)

14:45 – 15:00: Coffee break
15:00 – 16:15: Session 2 – Consideration of a Balancing Energy Market (BEM)
   15:00 – 16:00: Break-out discussions
   16:00 – 16:15: Roundup and conclusions

16:15 – 16:45: Conclusions and close
Key messages and questions

- Hope to use stakeholder events to discuss with industry considerations under the scope of the SCR

- Stakeholder events are intended to be open and interactive:
  - Encourage all participants to contribute productively
  - All proposals and thoughts welcomed

- Any questions before commencing workshop 1
## Discussion Groups

### Group 1

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaf</td>
<td>National Grid</td>
</tr>
<tr>
<td>Tom</td>
<td>Gazprom</td>
</tr>
<tr>
<td>Andrew</td>
<td>SSE</td>
</tr>
<tr>
<td>Whestly</td>
<td>Energy UK</td>
</tr>
<tr>
<td>Jakob</td>
<td>Dong</td>
</tr>
<tr>
<td>O. Olawoye</td>
<td>Independent consultant</td>
</tr>
<tr>
<td>Sarah</td>
<td>Centrica</td>
</tr>
<tr>
<td>Colin</td>
<td>Smartest Energy</td>
</tr>
<tr>
<td>Bill</td>
<td>RWE</td>
</tr>
<tr>
<td>Duncan</td>
<td>RedPoint (Baringa)</td>
</tr>
<tr>
<td>Lars</td>
<td>NEAS</td>
</tr>
<tr>
<td>Elsa</td>
<td>Statoil</td>
</tr>
<tr>
<td>Steve</td>
<td>Elexon</td>
</tr>
</tbody>
</table>

### Group 2

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas</td>
<td>Dalkia</td>
</tr>
<tr>
<td>Michael</td>
<td>ESBI</td>
</tr>
<tr>
<td>Libby</td>
<td>International Power</td>
</tr>
<tr>
<td>Roger</td>
<td>Elexon</td>
</tr>
<tr>
<td>Robert</td>
<td>Cornwall Energy</td>
</tr>
<tr>
<td>Martin</td>
<td>EDF</td>
</tr>
<tr>
<td>Melissa</td>
<td>InterGen UK</td>
</tr>
<tr>
<td>Stuart</td>
<td>Scottish Power</td>
</tr>
<tr>
<td>Anthony</td>
<td>Swanbarton</td>
</tr>
<tr>
<td>Cem</td>
<td>Drax</td>
</tr>
<tr>
<td>Nicola</td>
<td>DECC</td>
</tr>
<tr>
<td>Lisa</td>
<td>Welsh Power</td>
</tr>
</tbody>
</table>
Promoting choice and value for all gas and electricity customers
# Mapping of issues and policy considerations

<table>
<thead>
<tr>
<th>Issue identified</th>
<th>Potential policy considerations to address issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash-out prices may not fully reflect scarcity at times of system stress</td>
<td>- More marginal cash-out prices</td>
</tr>
<tr>
<td></td>
<td>- Improvements to price inputs</td>
</tr>
<tr>
<td>Cash-out prices may not provide the right incentives for DSR.</td>
<td>- More marginal cash-out prices</td>
</tr>
<tr>
<td></td>
<td>- Pay-as-bid or pay-as-clear</td>
</tr>
<tr>
<td></td>
<td>- Improvements to price inputs</td>
</tr>
<tr>
<td>Cash-out prices suffer from a lack of transparency and predictability.</td>
<td>- Balancing energy market</td>
</tr>
<tr>
<td></td>
<td>- Improved provision of information</td>
</tr>
<tr>
<td>Dual cash-out prices have a large spread, resulting in imbalance risk and hampering the formation of reference prices.</td>
<td>- Single or dual cash-out price</td>
</tr>
<tr>
<td>Participants are not incentivised to provide accurate physical notifications.</td>
<td>- Improved provision of information</td>
</tr>
<tr>
<td></td>
<td>- Information imbalance charge</td>
</tr>
<tr>
<td></td>
<td>- Alternative arrangements for renewables</td>
</tr>
<tr>
<td>Reconciliation cashflows are large and opaque, potentially causing inefficient allocation of costs to participants.</td>
<td>- Single or dual cash-out price</td>
</tr>
<tr>
<td></td>
<td>- Single or separate trading accounts</td>
</tr>
<tr>
<td></td>
<td>- Balancing energy market</td>
</tr>
<tr>
<td></td>
<td>- Amending Residual Cashflow Reallocation Cashflow (RCRC)</td>
</tr>
</tbody>
</table>
P217A Preliminary Analysis

- Modification P217A was implemented in November 2009 and sought to remove system pollution from the calculation of cash-out prices.

- Our preliminary analysis of P217A considered the impacts of the removal of system pollution, under the P217A flagging methodology, on cash-out prices.

- We also investigated some of the impacts of moving to a more marginal calculation of the cash-out price.

- To assess these we used price data over a 2 year period since implementation (data provided by Elexon and NG).
  - A live price series was compared to price series’ over the same period which used the calculation methodology prior to P217A, and which reduced the PAR volume.
P217A Preliminary Analysis

Key findings:
- The extent to which cash-out prices reflect the cost to the SO of energy balancing has improved under P217A. It has done this by reducing the influence of system pollution on the cash-out price.
- On average, P217A has made prices less sharp. This impact has come as a consequence of improving efficiency of cash-out prices.
- Under P217A, cash-out prices have provided a more efficient signal for parties to balance.
- Moving to a more marginal cash-out price would make prices more sharp. This increases the incentive for participants to balance and strengthens the signal to invest in additional flexible capacity.