

EMR and DSR: Ofgem's Perspective

Demand Side Working Group
23rd September 2011

DECC's Electricity Market Reform

- The Government is attempting to address the key challenges highlighted in Project Discovery for the electricity market
 - Carbon incentives, security of supply, investment risk
- The key challenge is to meet the huge investment required at least cost to consumers
- White Paper released in July 2011
- Technical update expected at the end of the year
- Legislation to be introduced in 2012

Ofgem interactions with EMR

- Electricity Market Reform is a **Government** programme
 - although Ofgem has been consulted and has provided advice
- Ofgem is responsible for some closely related projects
 - Interventions to increase liquidity
 - Potential reform of electricity cash out
 - TransmiT (transmission charging)
- Ofgem *may* have some role in implementing, delivering or regulating future arrangements
- Our overriding objective is to ensure that any reformed arrangements are in the interests of current and future consumers

EMR – Decarbonisation

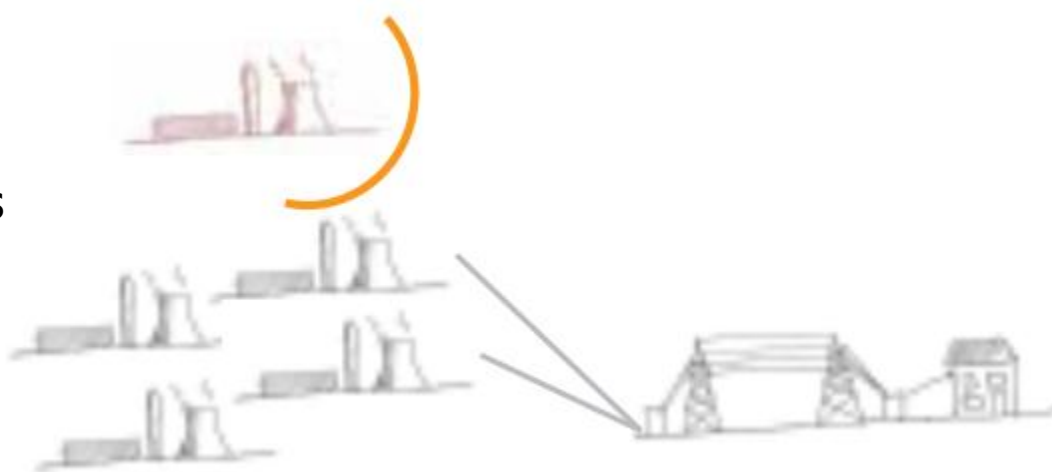
- **Carbon Price Floor**
 - Electricity generation will no longer be exempt from the Climate Change Levy
 - An effective floor starts at around £15.70/tCO₂ in April 2013 and then rises in a straight line to £30/tCO₂ in 2020
- **Feed-in Tariff with Contracts for Difference**
 - Key mechanism to support low-carbon generation
 - Provides greater long term certainty, intended to decrease cost of capital
- **Emissions Performance Standard**
 - A limit on the amount of emissions that a new fossil fuel generator can produce
 - Aimed at unabated coal-fired plant

EMR – Security of Supply

- **A capacity mechanism** to provide for overall resource adequacy (as distinct from operational flexibility)
- The government has stated that a capacity mechanism should incentivise both generation and non-generation (DSR) approaches
- Two options currently under consultation
 - A targeted mechanism → **Strategic Reserve**
 - A market-wide mechanism → **A Capacity Market**
- DECC consultation on possible models for the capacity mechanism closes **4th October 2011**

A targeted mechanism - Strategic Reserve

- Capacity is centrally procured, removed from the market, and used only in certain circumstances
 - Choice of despatch price is critical
- DSR which can guarantee reduced energy use according to the specifications required could bid to act as part or all of the Strategic Reserve
 - What should these specifications be?
 - How long should the lead time for Strategic Reserve capacity procurement be?

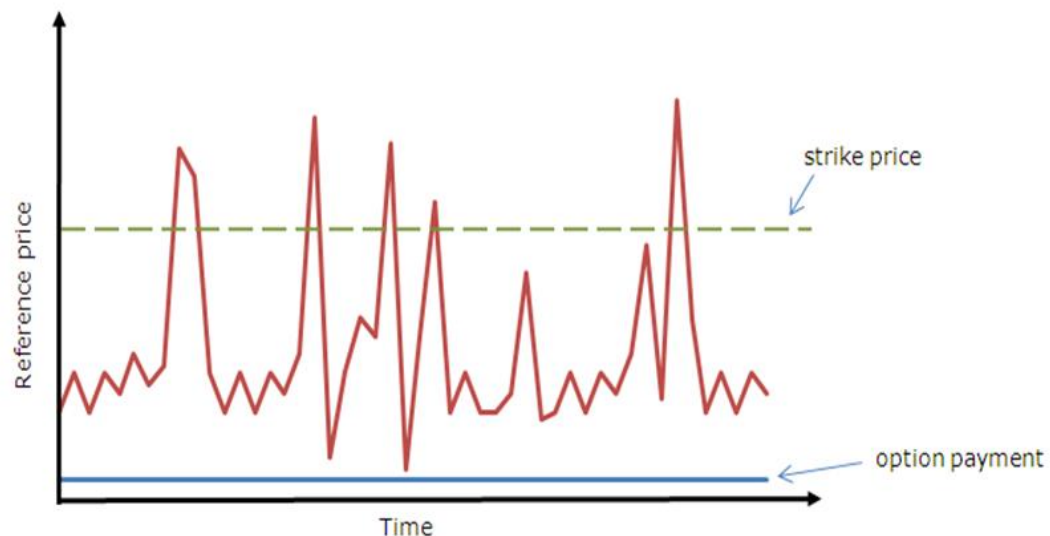


A market-wide mechanism – Capacity Market

- Volume of capacity required is determined centrally 4 years ahead
- All capacity providers (including DSR) willing to sell their capacity can do so. In turn they receive a capacity payment for availability.
- A number of different forms of capacity market
 - Price based or volume based?
 - Capacity bought centrally (ie through an auction) or by suppliers (ie bilaterally)?
 - How should penalties for non-availability be applied?
 - Should secondary markets be allowed? Should there be a series of auctions leading up to a delivery year?

One form of Capacity Market – A Reliability Market

- A capacity market in which financial incentives (rather than central administration) are used to incentivise availability
- Capacity providers receive a regular payment (on top of their revenue from the market) but must pay the difference if the energy price rises above pre-determined strike price.
- Availability is therefore incentivised at times when prices are high
- No physical back-up needed in theory, but selling at the reference price provides a hedge against paybacks
- **Key question:** How could DSR participate in this mechanism?



Capacity Market – Questions for DSR

- How should penalties for non-availability be structured?
 - How could firmness be assured for security of supply without discouraging DSR participation?
- Which reference market should be used?
- How long should contracts and lead times be?
 - Would a shorter contract duration and lead time better suit DSR?
- Should there be a secondary market for capacity?
 - Should DSR participate in primary or secondary markets? Secondary markets may be more accessible for DSR? Alternatively DSR could reduce obligations on suppliers?
- For a reliability market, what level of physical back-up would be required?

Capacity Mechanism interactions with STOR

- Most large-scale DSR currently active participates in the Short-term Operating Reserve (STOR) mechanism
- STOR focuses on short-term operational security, administered by National Grid
- Relationship between a Capacity Mechanism and STOR may need to be carefully considered
- Do the technical requirements for STOR preclude more participation of DSR? Could the requirements for a Capacity Mechanism be such that more DSR could participate?

Overall Thoughts

- Ofgem shares the high level objectives of EMR with Government and is keen to help realise these objectives
- We agree that it is important that non-generation capacity can play a fair and equivalent role in a Capacity Mechanism
- The Capacity Mechanism is just one way that DSR will be encouraged
- It is important that the electricity market provides adequate signals for DSR to react directly to prices

The background of the slide is a composite image. On the left, there are rows of solar panels under a bright sun. On the right, a hand is shown holding a white document. In the bottom left corner, a blue gas burner is visible. The overall theme is energy and customer service.

ofgem

Promoting choice and value
for all gas and electricity customers