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Electricity Cash-Out

Demand Side Working Group

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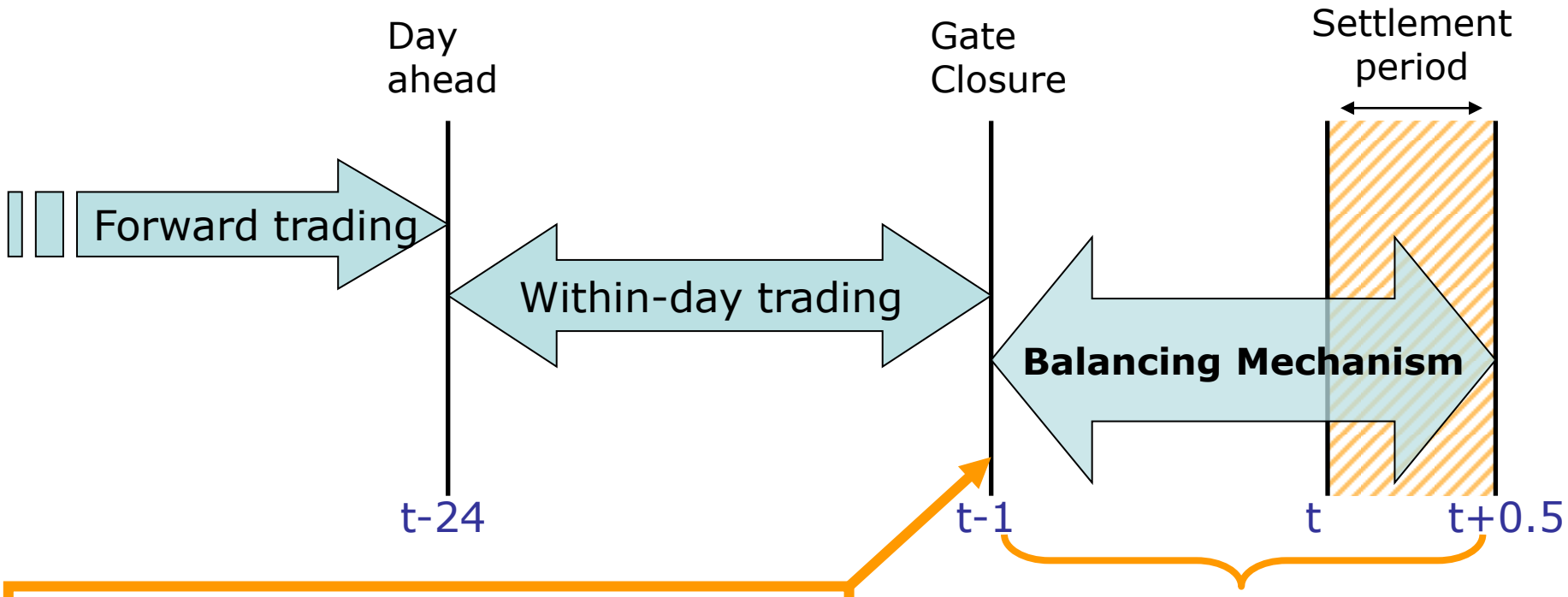
Balancing the system



Parties submit
- **Final Physical Notifications (FPNs)** – level of generation or demand that a BMU expects to produce or consume
- **Contract Notifications** – details the volume of any energy bought and sold between participants – their 'contracted position'
- **Bids and Offers –** to turn up/down in the BM

NG accepts bids/offers to balance the system

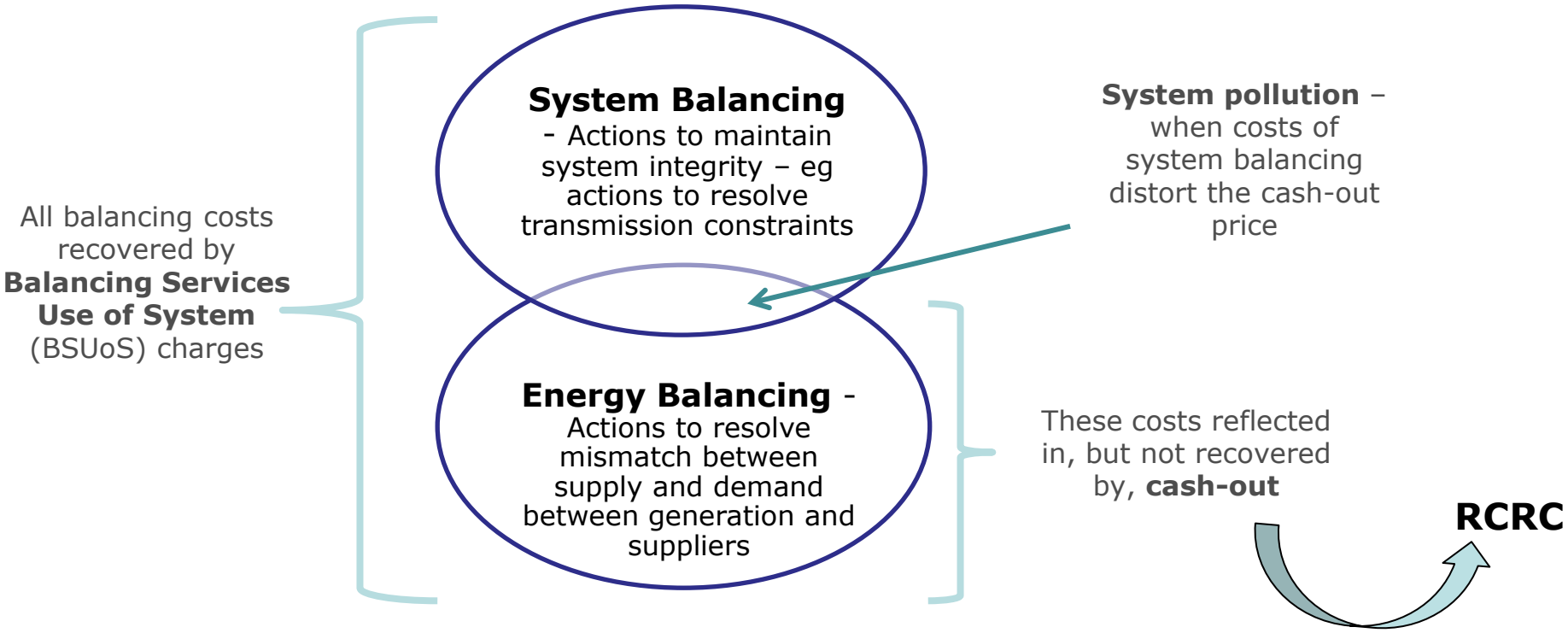
What is cash-out?

- Imbalance settlement or cash-out is the process by which BSC Parties pay or receive monies for their imbalances in each half-hourly settlement period

- A party is in balance where its:

Contracted position *(Contract notification)* = **Physical position** *(actual generation/demand)*

Interactions between balancing costs and cash-out



Dual Cash-Out Prices

- Two Energy Imbalance Prices
  - **System Buy Price** (SBP) – price paid by participants
  - **System Sell Price** (SSP) – price paid to participants
- Each of these can have different calculations (either '**main**' or '**reverse**' depending on Party's position in relation to the system)

Reverse Price

- Set to the Market Index Price (MIP) derived from the price of within-day trades on the APX exchange

Main Price

- A **partially marginal** (or 'chunky marginal') price
- Based on an average of the top 500MW of energy balancing actions (Price Average Reference, or PAR)

		System Imbalance	
		Long	**Short**
Party Imbalance	**Long**	Paid SSP (Main Price)	Paid SSP (Reserve Price)
	Short	Pay SBP (Reverse Price)	Pay SBP (Main Price)

Cash-out issues paper

- Electricity cash-out issues paper (published 2 November) seeks views on whether we should conduct a **Significant Code Review (SCR)** into cash-out arrangements, and if so which approach should we take to a SCR:
  - 'Narrow approach' in the current direction of travel, or
  - Wide approach, which would consider more fundamental changes to the balancing arrangements (eg a balancing market)

- The paper also highlights what we consider to be the main issues with the cash-out arrangements

- Deadline for responses **24 Jan 2012**

Issues with the current arrangements

and approaches in line with the current direction of travel

1. Cash-out prices may not fully reflect scarcity at times of system stress

- Main cash-out price is not fully marginal due to concerns about distortion from system pollution
  - Improved mechanisms to separate system and energy costs may allow a more marginal price may be used
- Reserve costs are not accurately allocated
  - Method for allocating reserve costs could be improved
- Some actions taken by the SO are uncosted (eg involuntary demand side interruptions, voltage control)
  - A cost could be attributed to these actions (eg VOLL for involuntary demand side interruptions)

Issues with the current arrangements

and approaches in line with the current direction of travel

2. Cash-out may not provide the right incentives for DSR

- A more marginal/VOLL reflective cash-out price could encourage DSR
- Smart meters can improve the accuracy of the imbalance volumes to which cash-out prices are applied

3. Cash-out prices suffer from a lack of transparency and predictability

- Lack of information regarding the overall imbalance on the system
  - SO could be required to publish ex-ante forecast of Net Imbalance Volume (NIV)
- Cash-out prices are unpredictable
  - The SO could be required to publish indicative cash-out prices
  - Both cash-out prices could be derived from the market price

Issues with the current arrangements

and approaches in line with the current direction of travel

4. Dual cash-out prices have a large spread

- The amount of spread is related to how each of the prices is calculated.
  - Calculation of the main price could be improved
  - Calculation of reverse price could be improved (eg linked to the main price?)
  - Purpose/need for a reverse price could be reconsidered (move to a single price?)

5. Participants are not incentivised to provide accurate Physical Notifications

- Final Physical Notifications (FPNs) are submitted by participants at gate closure and detail their expected physical position. There is currently no financial penalty for an inaccurate position.
  - An Information Imbalance Charge could be introduced

Issues with the current arrangements

and approaches in line with the current direction of travel

6. Reconciliation cashflows are large and opaque

- Total SO balancing costs (energy and system) are recovered by BSUoS charges based on participants' energy volumes. **Residual Cashflow Reallocation Cashflow (RCRC)** spreads differences between cash paid and received from cash-out.
  - More transparency about how much of the SOs balancing costs are for energy and system could help identify if the RCRC mechanism is accurately rebating the cost of energy balancing.
  - A mechanism which could directly recover the SO's actual balancing costs from those with imbalances could mean that RCRC mechanism could be eliminated

Potential new approaches to balancing

1. Balancing Market

- Auction held at gate closure would match participants' bids and offers for the SO expected NIV → single marginal price for each period
- Participants would pay or receive the cash-out price based on the difference between their notified contract and metered position
- **Reserve market** could also be created – a day-ahead auction where participants could offer flexibility to turn up or down the next day

2. Centralised market for intermittent renewables

- Eg Spain

Out of scope

- A gross pool

Proposed Principles

- Cash-out arrangements should, as far as possible, allow and provide incentives for market participants to balance their positions without the need for unilateral actions to be taken by the SO
- The incentives for balancing should reflect the value of peak energy, ensuring that customers receive the level of security of supply that they would be willing to pay for
- SO actions should be adequately reflected and participants should be incentivised to reduce the cost of system actions
- More generally, the wider balancing arrangements (including balancing mechanisms and cash-out) should promote the most efficient operation of the system, including the active engagement of the demand side.

Interactions with other areas

- EMR
  - Capacity mechanisms, Cfd FiTs
- European context
  - Framework guidelines on cross-border trade
- SO incentives
- Settlement with smart metering
- Sustainable development
  - Cash-out should reflect costs that renewable generators' impose on the system without unduly penalising them
- Liquidity
- Gas market, Gas SCR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