Public

P305 POST IMPLEMENTATION REVIEW

Webinar

16 March 2017

Emma Tribe

Who we are

Presenter

- **Emma Tribe**
- **Market Analyst**

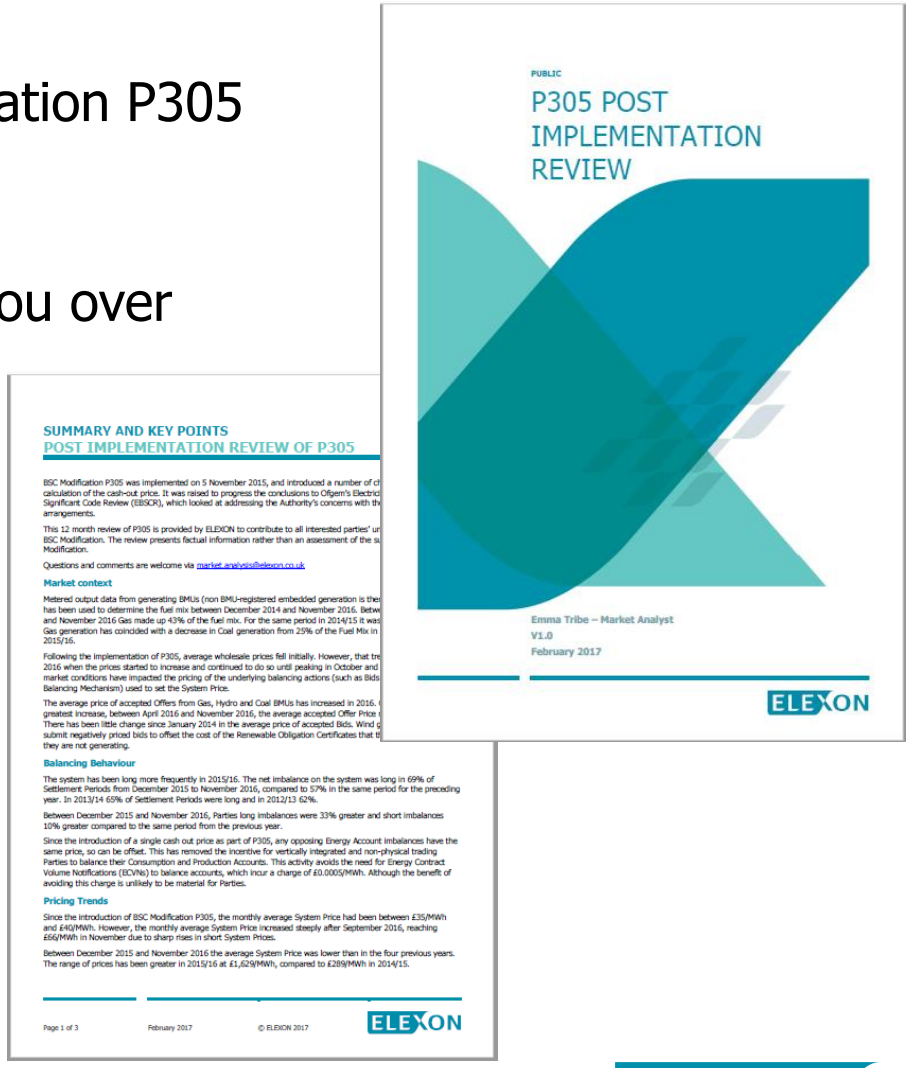
Answering questions

- **Roger Harris**

- **David Thomas**

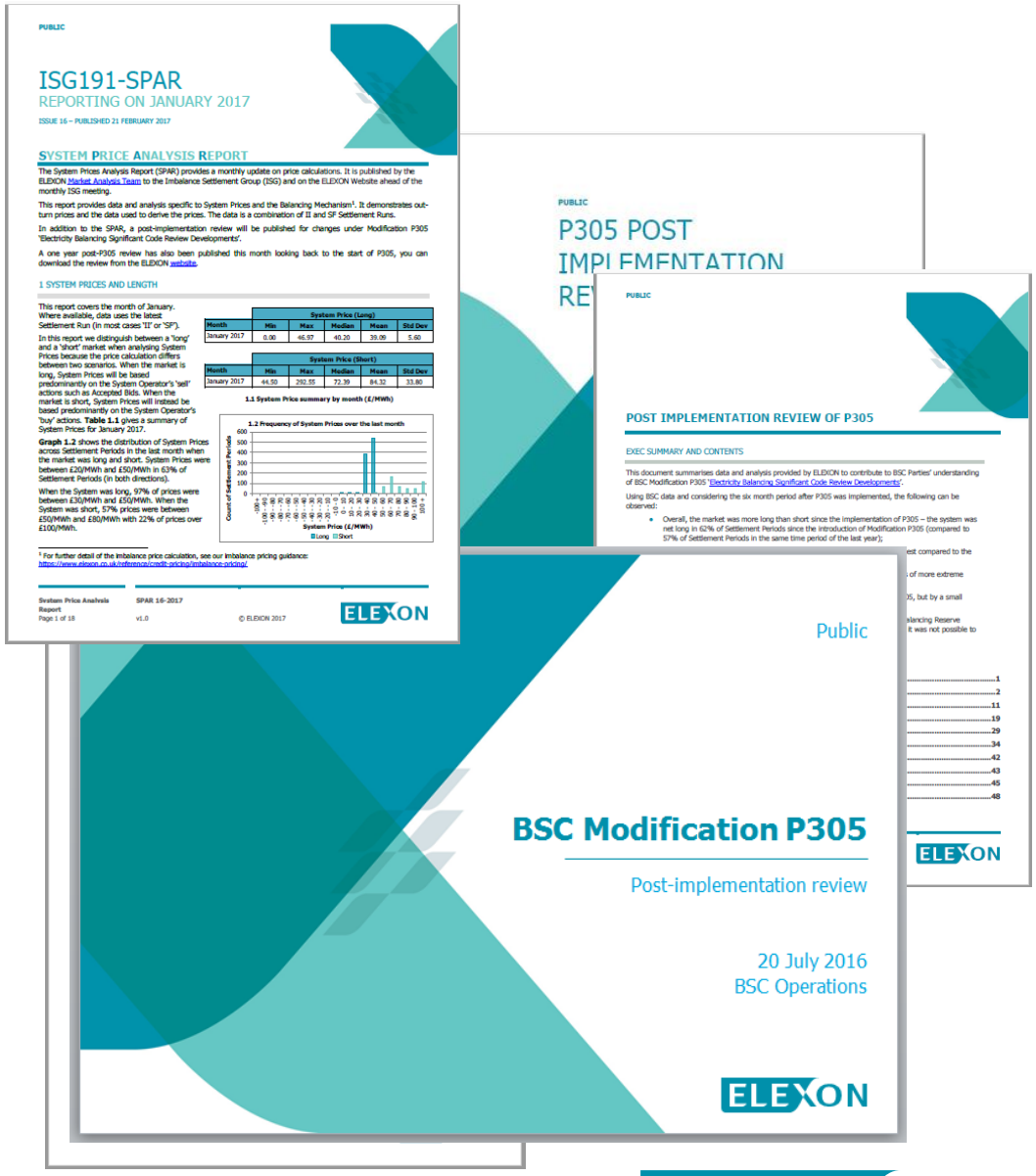
What I'm going to cover

- Analysis and information on System Prices
- What the review covers
- Pricing changes as a result of BSC Modification P305
- Some of our analysis from the report
- Answer questions at end, or get back to you over email and Q&A document



Previous reviews and analysis

- Continuous analysis in System Price Analysis Report (link at end of presentation)
- A six month post implementation review was conducted,
- Webinar with introduction to P305 and key analysis from the six month review

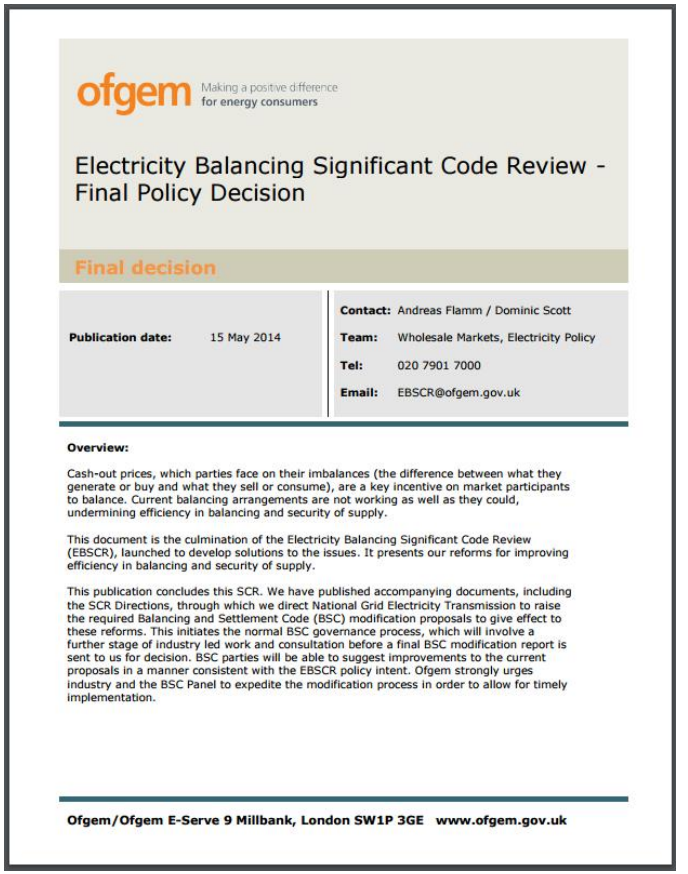


What the review covers

- We don't conclude whether P305 has been a success or not
- Present analysis on Balancing and Settlement data up to 30 November 2016
- Sections:
  - Background including Market Context Data
  - Balancing Behaviour
  - System Prices
  - Trading Charges
  - Parameter Analysis

Background to BSC Modification P305

- BSC Modification P305 was raised to progress the conclusions to Ofgem's Electricity Balancing Significant Code Review (EBSCR), and implemented on 5 November 2015.
- Reform to improve efficiency in balancing and security of supply
- EBSCR Final Policy Decision:
  a) Make cash-out price 'marginal'
  b) Include a cost for disconnections
  c) Improve the way reserve costs are priced
  d) Move to a single cash-out price



ofgem Making a positive difference for energy consumers

Electricity Balancing Significant Code Review - Final Policy Decision

Final decision

Publication date: 15 May 2014

Contact: Andreas Flamm / Dominic Scott
Team: Wholesale Markets, Electricity Policy
Tel: 020 7901 7000
Email: EBSCR@ofgem.gov.uk

Overview:

Cash-out prices, which parties face on their imbalances (the difference between what they generate or buy and what they sell or consume), are a key incentive on market participants to balance. Current balancing arrangements are not working as well as they could, undermining efficiency in balancing and security of supply.

This document is the culmination of the Electricity Balancing Significant Code Review (EBSCR), launched to develop solutions to the issues. It presents our reforms for improving efficiency in balancing and security of supply.

This publication concludes this SCR. We have published accompanying documents, including the SCR Directions, through which we direct National Grid Electricity Transmission to raise the required Balancing and Settlement Code (BSC) modification proposals to give effect to these reforms. This initiates the normal BSC governance process, which will involve a further stage of industry led work and consultation before a final BSC modification report is sent to us for decision. BSC parties will be able to suggest improvements to the current proposals in a manner consistent with the EBSCR policy intent. Ofgem strongly urges industry and the BSC Panel to expedite the modification process in order to allow for timely implementation.

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Two step changes in BSC Modification P305

- Changes introduced make cash-out prices 'more marginal':
  1. A reduction in the **Price Average Reference (PAR)** value to 50MWh and the Replacement PAR (RPAR) value to 1MWh upon implementation
  2. A price for **Short Term Operating Reserve (STOR)** actions using a **Reserve Scarcity Price (RSP)** determined by a 'static' Loss of Load Probability (LoLP) function
  3. A price for **Demand Control** actions at **Value of Lost Load** (currently £3,000/MWh)
  4. A **single imbalance price** for each half-hour

- Further changes from **1 November 2018**:
  1. A further reduction to the PAR value to 1MWh on 1 November 2018.
  2. Increase the VoLL to £6,000/MWh
  3. A 'dynamic' LoLP function

Terminology and acronyms

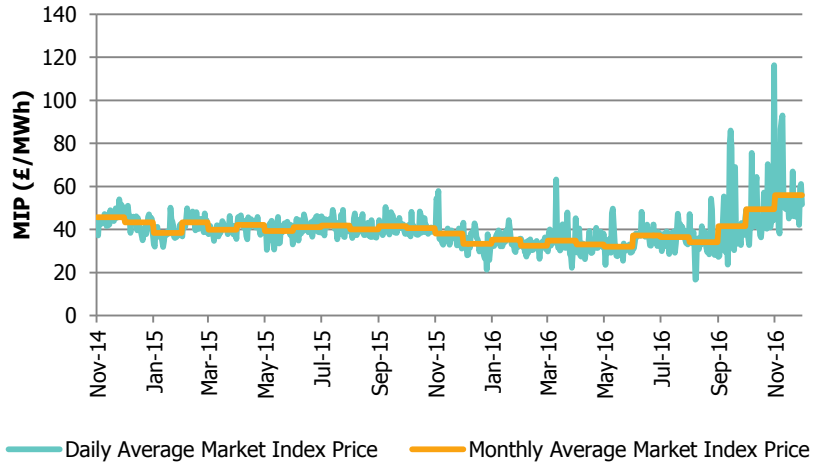
- **System Price**, **Imbalance Price** and **Cash-out Price** are the **same thing**
- **Long** and **short**, when talking abut the market and a Party
- **De-Rated Margin** a measure of available excess capacity.

- **RSP** – Reserve Scarcity Price
- **STOR** – Short Term Operating Reserve
- **BMU** – Balancing Mechanism Unit
- **LoLP –** Loss of Load Probability
- **VoLL –** Value of Lost Load

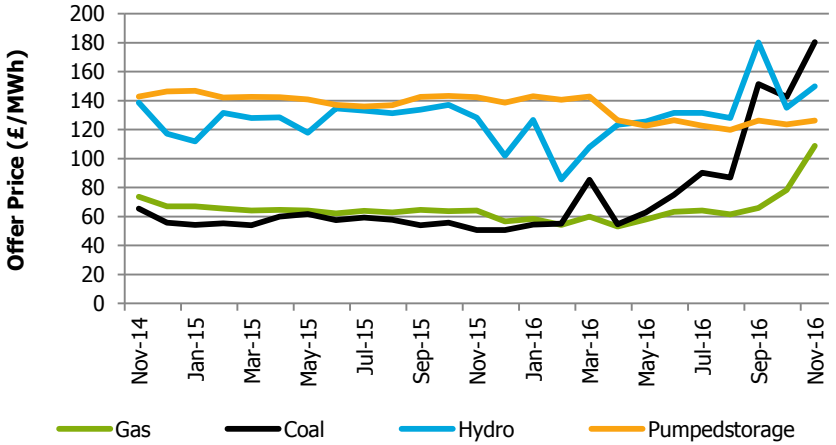
Key analysis from the review

Trends in market prices

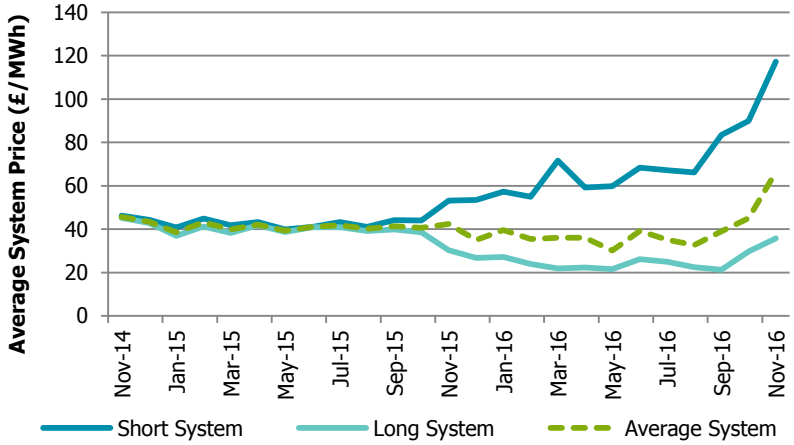
Market Index Price (proxy for wholesale prices)



Average Offer Price



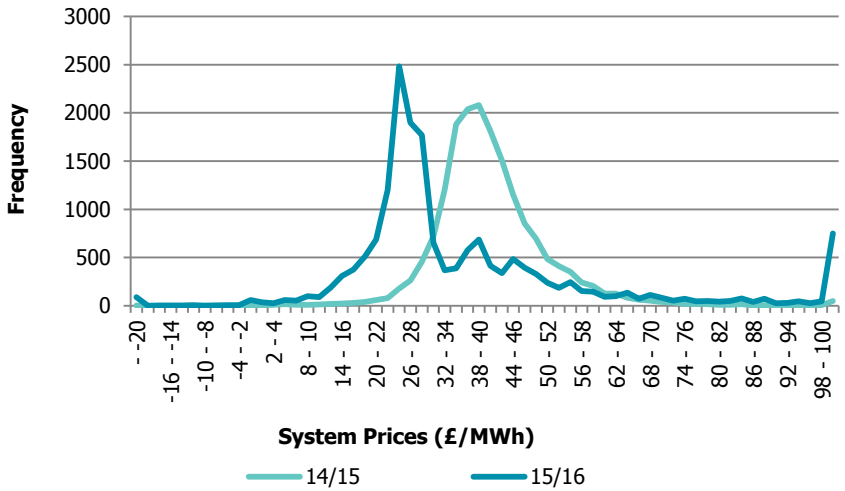
System Prices



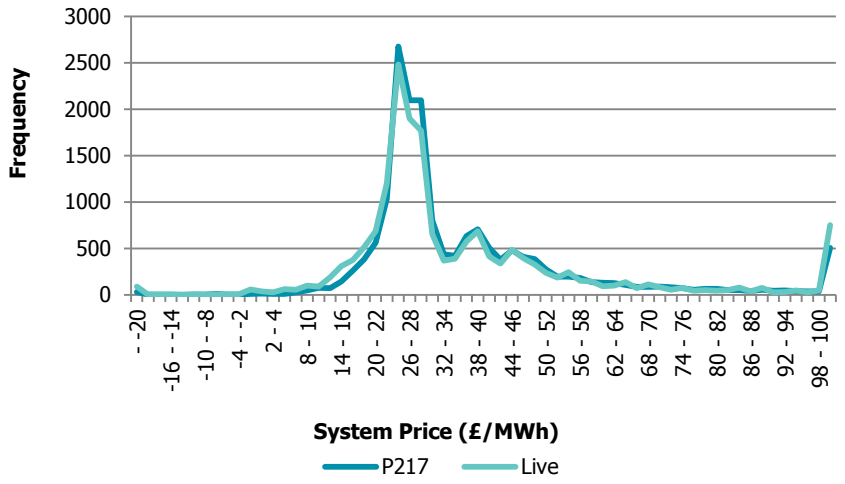
- Market, Offer and System Prices increased in Autumn
- Spread of prices in Long vs Short System post P305
- Lower average System Price

System prices

System Prices - 2014/15 vs 2015/16

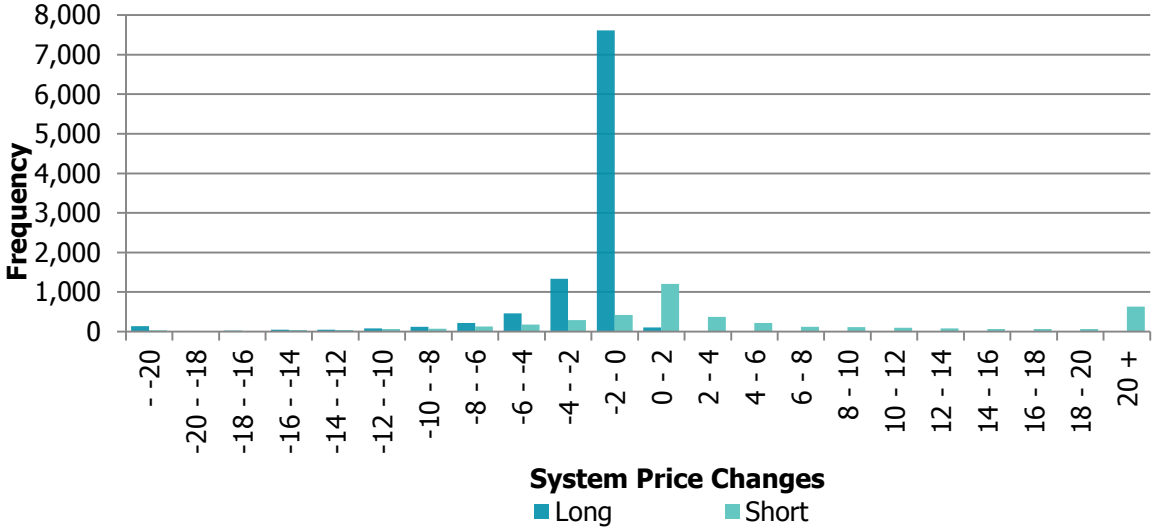


System Prices – P217 vs Live



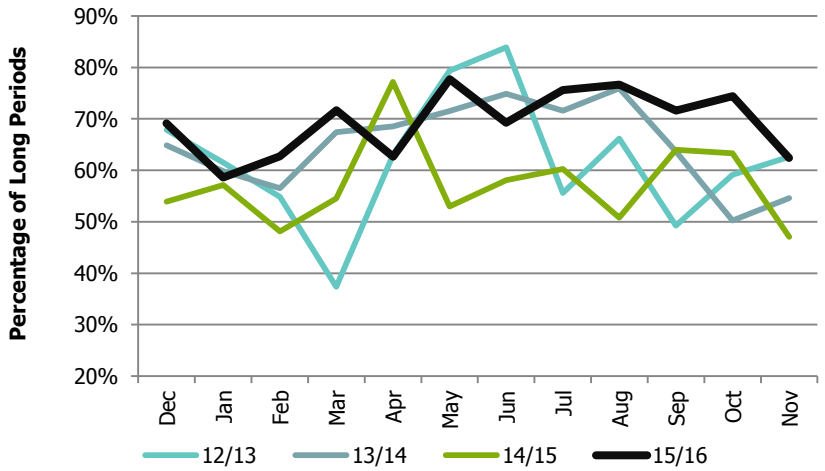
- £14/MWh difference in 2014/15 and 2015/16 distributions
- Small differences between P217 and Live price
- Differences over £20/MWh when market short

Differences between P217 price and live price

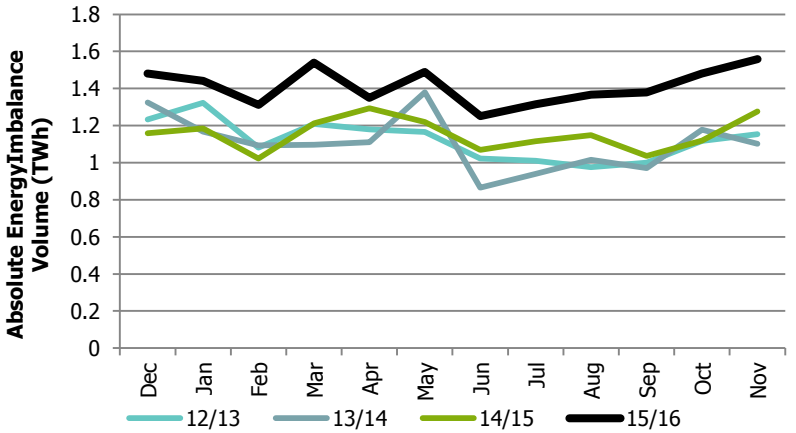


Balancing behaviour

Market Length

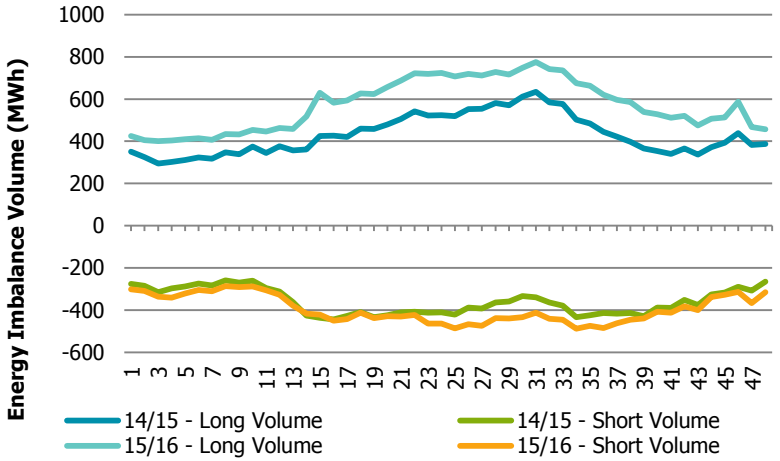


Absolute sum of Parties' Energy Imbalance Volumes



- More long Settlement Periods in 2015/16
- Greater Energy Imbalance Volumes for Parties

Average of Parties' Energy Imbalance Volumes by Settlement Period



Production and Consumption Accounts

Energy Imbalance Volumes

5 MWh Production Account

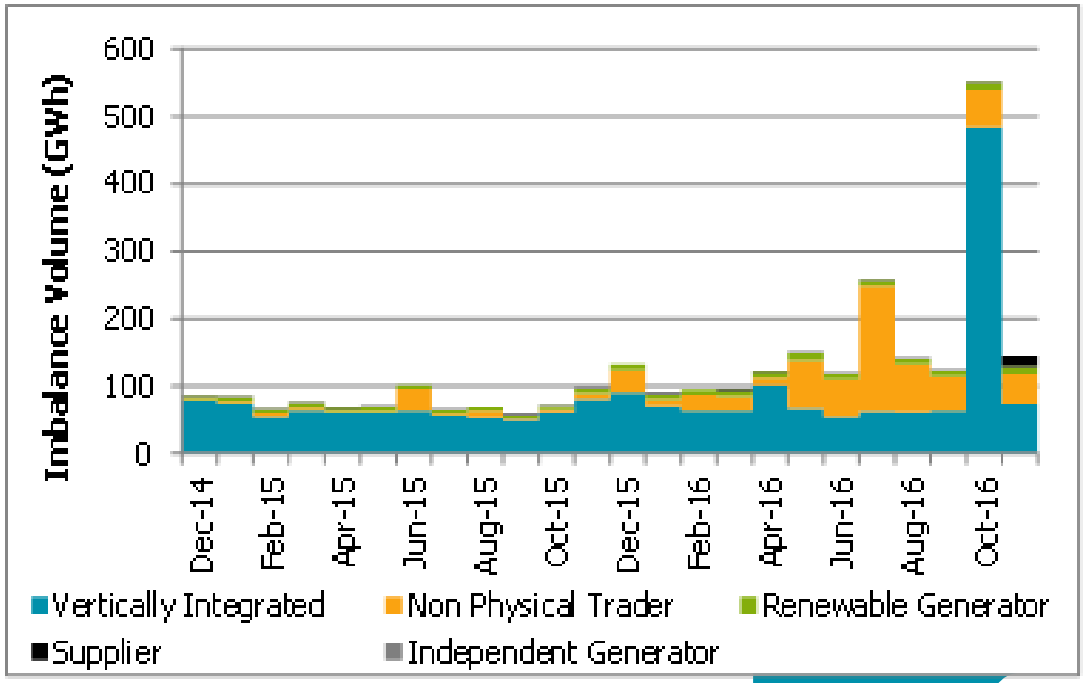
-3 MWh Consumption Account

Net Energy Imbalance Volumes for a Party

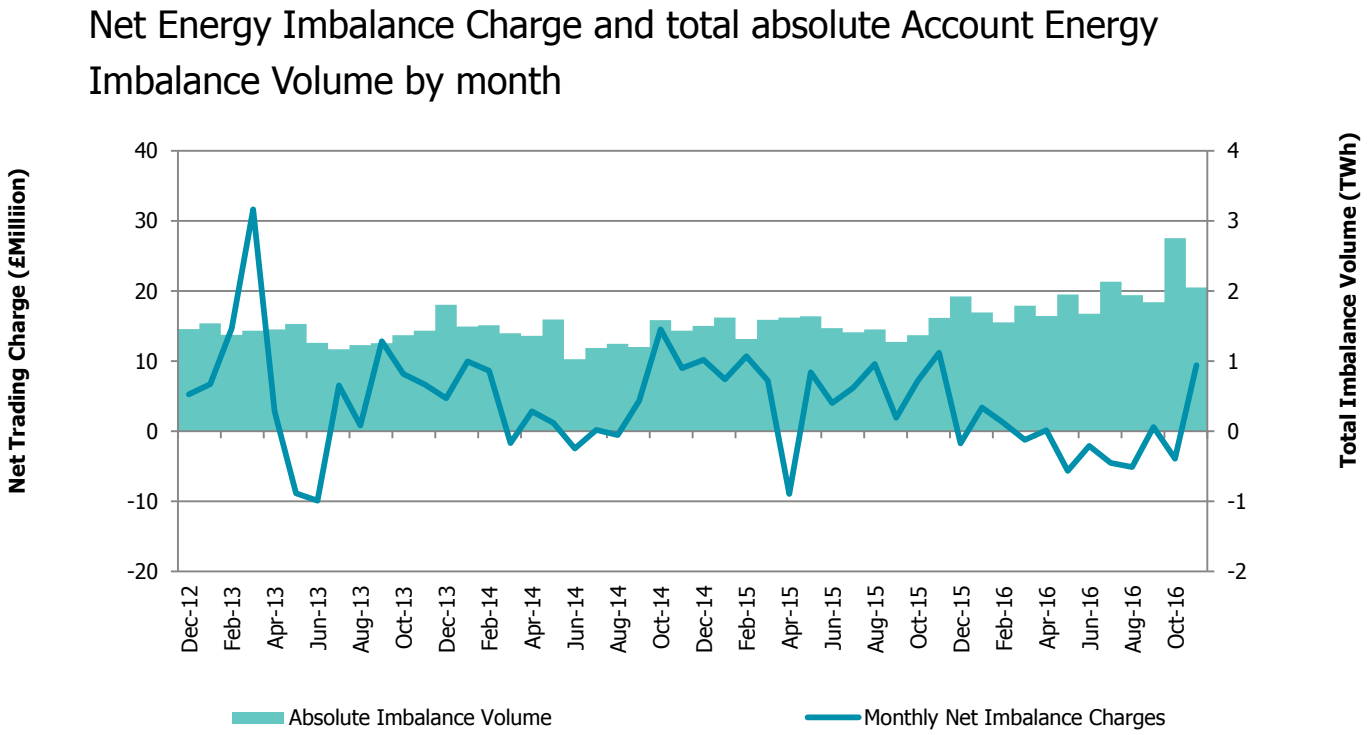
2 MWh Party's net position

3 MWh 'Netted off' Volume

- No need to balance Production and Consumption Accounts separately
- Still need to balance the net position



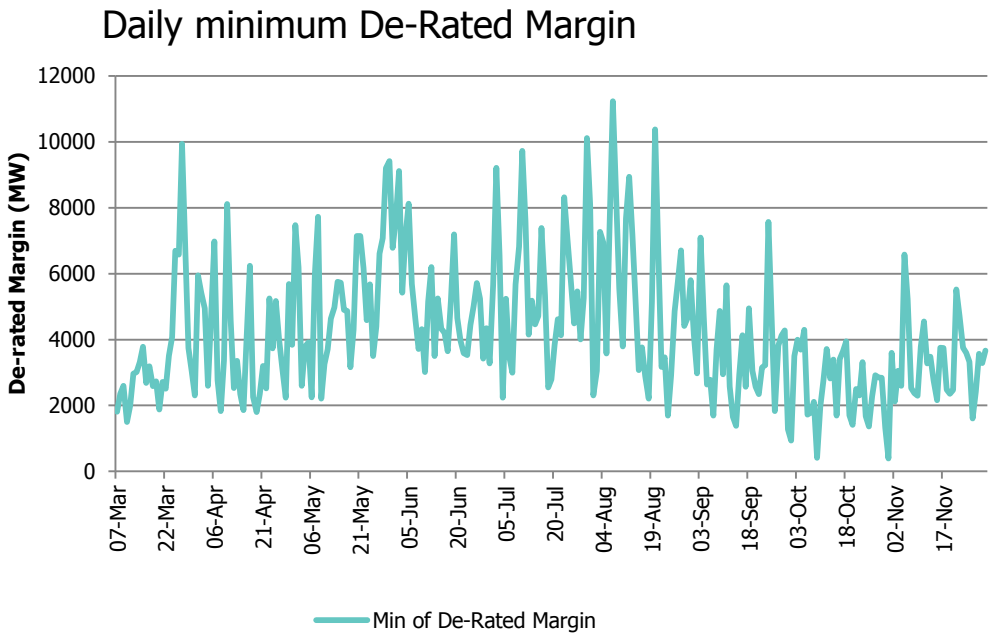
Trading charges



- Net credit Energy Imbalance Charges to Parties in 2015/16;
- Highest Account Energy Imbalance Volumes in 2015/16

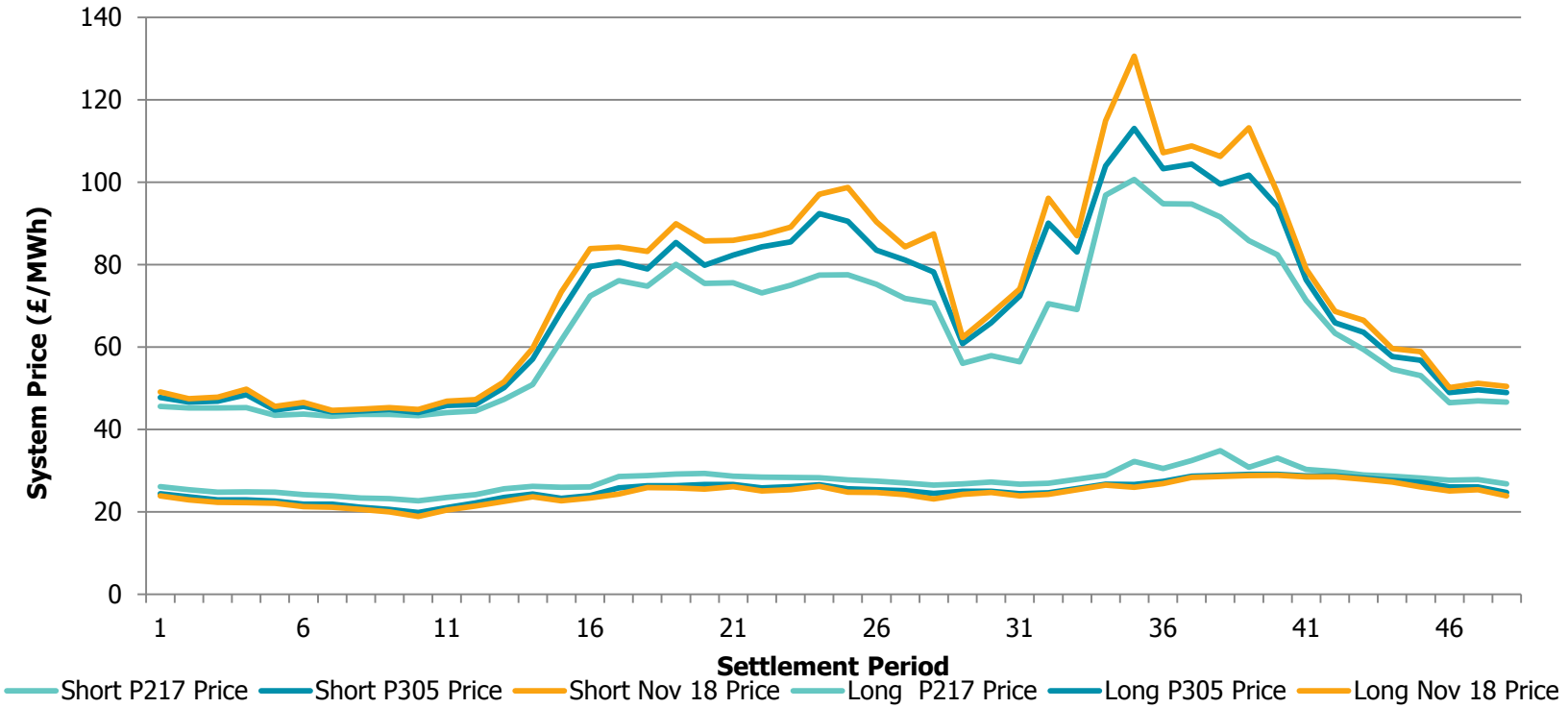
Reserve Scarcity Price (RSP) repriced STOR actions

- 130 STOR actions repriced in September and October



- Two Settlement Periods where RSP repriced actions set the System Price; under November 2018 scenario this would increase to four
- Parties can change behaviour in anticipation of a high RSP

Looking forward to November 2018



- Largest difference between live and November 2018 Price during morning and evening peaks when market short
- 500MWh to 50MWh has greater impact on average than 50MWh to 1MWh
- Cannot predict how market conditions will change

PAR 1 Prices available on Portal: https://www.elexonportal.co.uk/article/view/8668?cachebust=eayf00rf8l

Summary

- P305 raised to process EBSCR conclusions
- Market prices have changed since the implementation of P305
- Between December 2015 and November 2016:
  - System Prices were on average lower
  - More long Settlement Periods
  - Greater Energy Imbalances for Parties
  - Implications of a Single Imbalance Price on dual accounts
  - Energy Imbalance Charge - net Credit
  - RSP only used in September and October
  - Recalculated prices with the November 2018 scenario

Any questions?

Questions or comments?

- Communications@elexon.co.uk

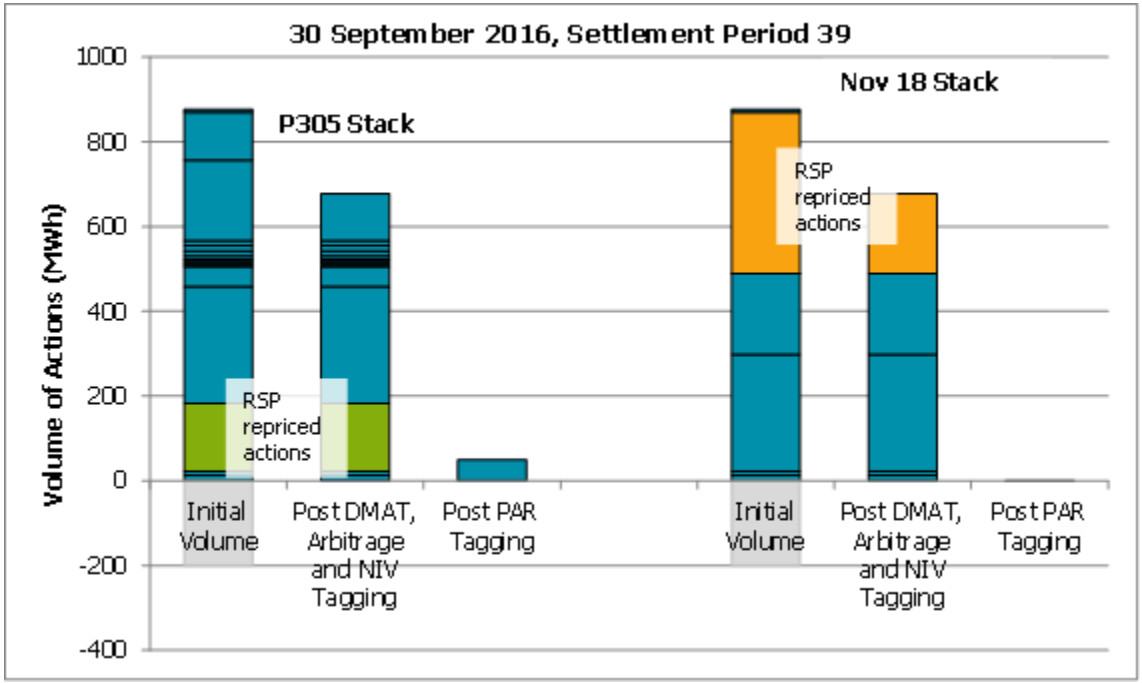
Technical queries?

- Market.analysis@elexon.co.uk

- Imbalance Pricing Guidance for full detail about the System Price calculation: www.elexon.co.uk/reference/credit-pricing/imbalance-pricing/

- System Price Analysis Report at: https://www.elexon.co.uk/reference/technical-operations/trading-operations-report/

Repriced STOR actions under November 2018 calculation



- RSP £102/MWh in live scenario, System Price £143/MWh
- RSP £204/MWh in November 2018 scenario, System Price £207/MWh