ISG201-SPAR

REPORTING ON NOVEMBER AND DECEMBER 2017

ISSUE 26 – PUBLISHED 16 JANUARY 2018

SYSTEM PRICE ANALYSIS REPORT

The System Prices Analysis Report (SPAR) provides a monthly update on price calculations. It is published by the ELEXON Market Analysis Team to the Imbalance Settlement Group (ISG) and on the ELEXON Website ahead of the monthly ISG meeting.

This report provides data and analysis specific to System Prices and the Balancing Mechanism[1]. It demonstrates out-turn prices and the data used to derive the prices. The data is a combination of II and SF Settlement Runs. This report refers to November and December pricing data, rather than just one month of reporting, due to ISG meeting dates and data availability at the end of 2017.

The new System Price Analysis Dashboard is now available on the ELEXON website, and allows customers to model System Prices under post 1 November 2018 scenarios.

1 SYSTEM PRICES AND LENGTH

This report covers the months of November and December. Where available, data uses the latest Settlement Run (in most cases 'II' or 'SF').

We distinguish between a 'long' and a 'short' market when analysing System Prices because the price calculation differs between two scenarios. When the market is long, System Prices are based predominantly on the System Operator's 'sell' actions. When the market is short, System Prices are based predominantly on the System Operator's 'buy' actions. **Table 1.1** gives a summary of System Prices for November and December.

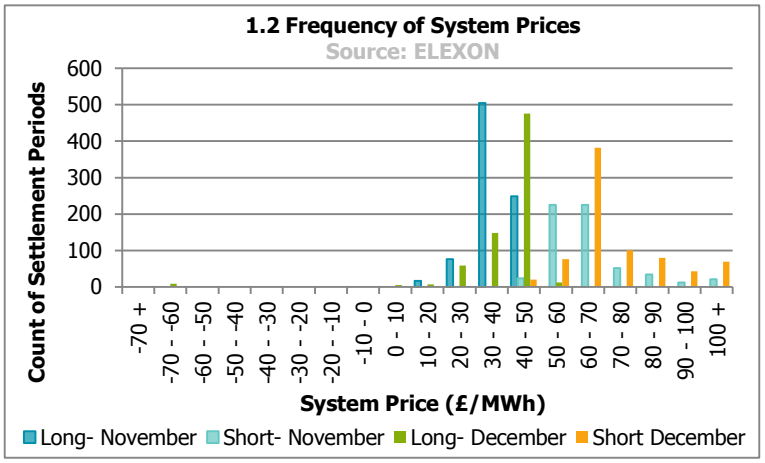
	System Price (Long)				
Month	**Min**	**Max**	**Median**	**Mean**	**Std Dev**
November 2017	13.31	46.88	38.60	37.04	5.17
December 2017	-68.91	65.98	42.40	39.00	14.13

	System Price (Short)				
Month	**Min**	**Max**	**Median**	**Mean**	**Std Dev**
November 2017	42.39	120.95	62.00	64.75	12.86
December 2017	42.39	178.00	66.95	73.30	18.10

1.1 System Price summary by month (£/MWh)

Graph 1.2 shows the distribution of System Prices across Settlement Periods in November and Decemberfor a long and short market.

In November, 75% of System Prices were between £20/MWh and £60/MWh, regardless of system length. When the system was long, 89% of prices were between £30/MWh and £50/MWh. When the system was short, 76% of prices were between £50/MWh and £70/MWh, with 4% of prices over £100/MWh.



[1] For further detail, see our Imbalance Pricing guidance: https://www.elexon.co.uk/reference/credit-pricing/imbalance-pricing/

SYSTEM PRICE ANALYSIS REPORT

The highest System Price for November 2017 was £120.95/MWh, occurring in Settlement Period 37 on 15 November. This was set by a Balancing Services Adjustment Action (BSAA) priced at £123.14/MWh, and by two bids from Pumped Storage Balancing Mechanism Units (BMUs) priced at £109/MWh and £115/MWh.

There were no negative System Prices in November, compared to 15 in October. The lowest System Price of the month was £13.36/MWh, on 14 November in Settlement Period 1. The price was set by a BSAA priced at £18/MWh, and bids from two Pumped Storage BMUs priced at £0/MWh.

In December, 53% of System Prices were between £20/MWh and £60/MWh, regardless of system length. When the system was long, 66% of prices were between £40/MWh and £50/MWh. When the system was short, 63% of prices were between £60/MWh and £80/MWh, with 9% of prices over £100/MWh.

In December, the highest System Price of £178/MWh occurred in Settlement Period 23 on 12 December, and was set by an Offer from a CCGT BMU. In two Settlement Periods the System Price was £0/MWh in December, and these were set by a combination of Bids priced at £0/MWh by Hydro, Pumped Storage and CCGT BMUs.

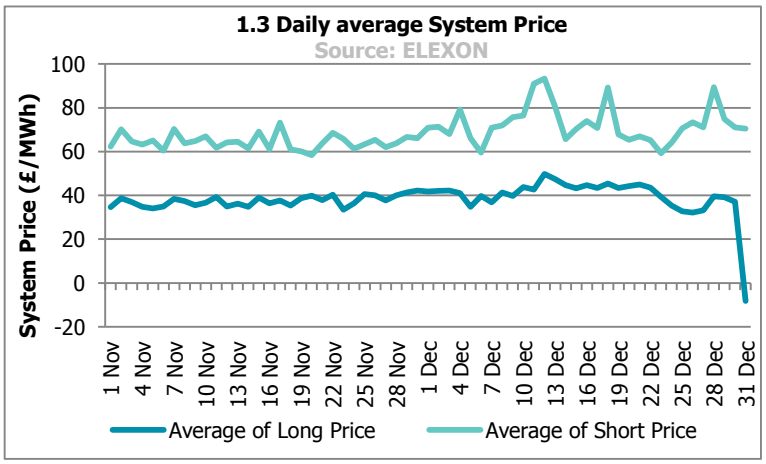
There were nine negative System Prices in December, ranging between -£64.22/MWh and -£68.91/MWh (the lowest System Price of the month). Occurring in consecutive Settlement Periods 9 to 17 on 31 December 2017, these prices were set by a combination of Balancing Services Adjustment Actions and Bids by Wind BMUs.

Graph 1.3 shows daily average System Prices in November and December 2017. In November, the average System Price was £37.47/MWh when the system was long and £64.45/MWh when the system was short.

In December, daily average System Prices were higher when both long (£39.38/MWh) and short (£72.74/MWh) compared to November.

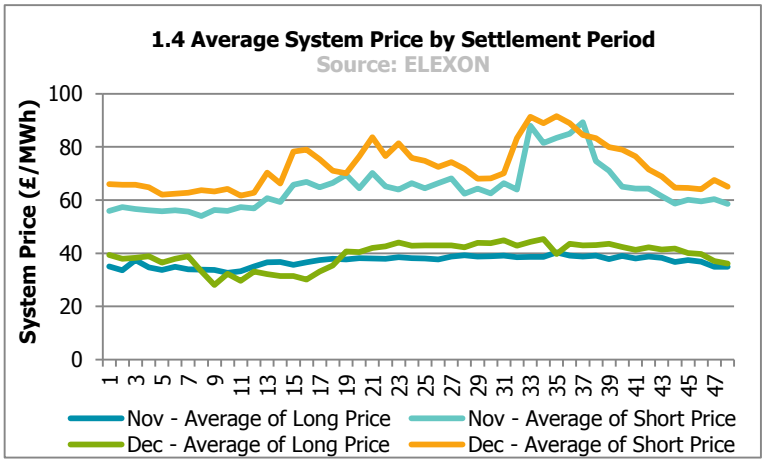
The highest daily average price when the system was short across the two months was £93.33/MWh, and occurred on 12 December. The system was short for 29 Settlement Periods on this day.

The lowest daily average price when the system was long across the two months was -£8.20/MWh on 31 December 2017. The system was long in 25 Settlement Periods on this day, with the average reduced by the nine consecutive negative prices seen on this day.



Graph 1.4 shows the variation of System Prices across the day. Short prices were highest in Settlement Period 37 in November and Settlement Period 35 in December. Long prices were lowest in Settlement Period 9 in December and Settlement Period 10 in November.

In November, average System Prices by Settlement Period varied by £7.78/MWh when long and £35.29/MWh when short. In contrast, December showed a larger variance in average long Settlement Period prices, £17.30/MWh, but a smaller variance in average short Settlement Period prices, £29.83/MWh.

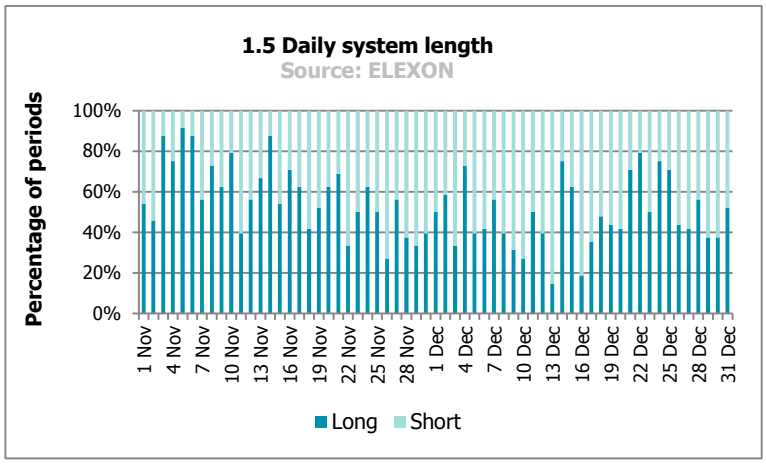


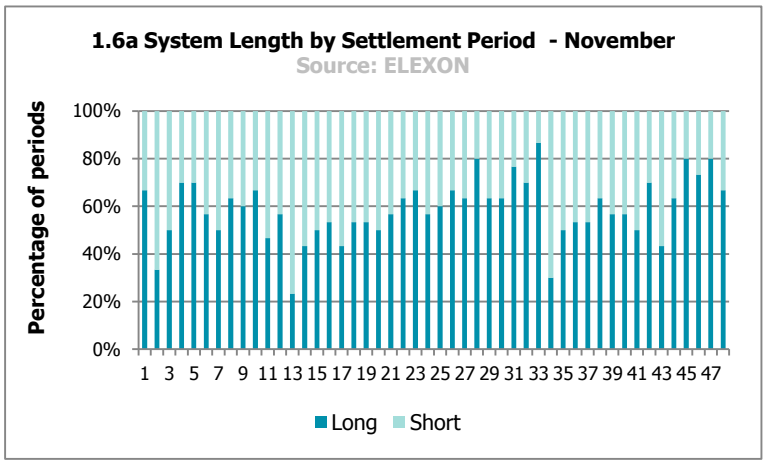
Graph 1.5 shows system length by day for November and December. The system was long for 59% of Settlement Periods in November, compared to 48% in December.

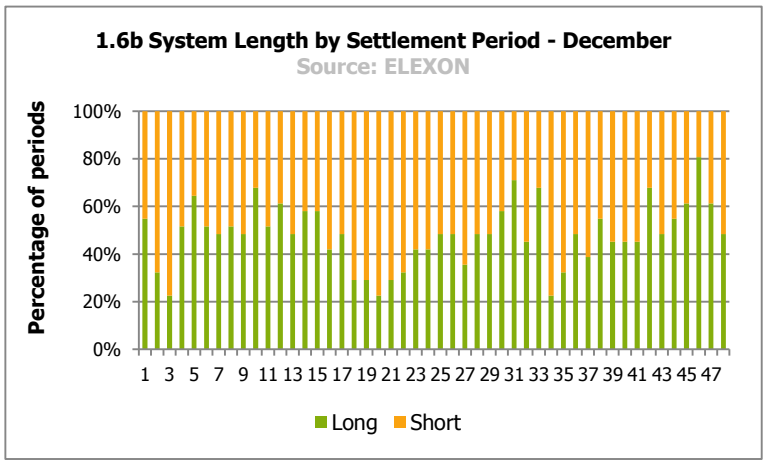
Graphs 1.6a and 1.6b show system length by Settlement Period for November and December. The system was short for 85% of Settlement Periods on 13 December, with an average NIV of 367MW on this day when the system was short. The average System Price on this day, regardless of length, was £75.69/MWh.

Settlement Period 13 was short for 77% of the month in November, with an average System Price in these Settlement Periods of £55.08/MWh.

In December, Settlement Periods 3, 20 and 34 were most commonly short, with 77% of these Settlement Periods being short in the month.







2 PARAMETERS

In this section, we consider a number of different parameters on the price. We consider:

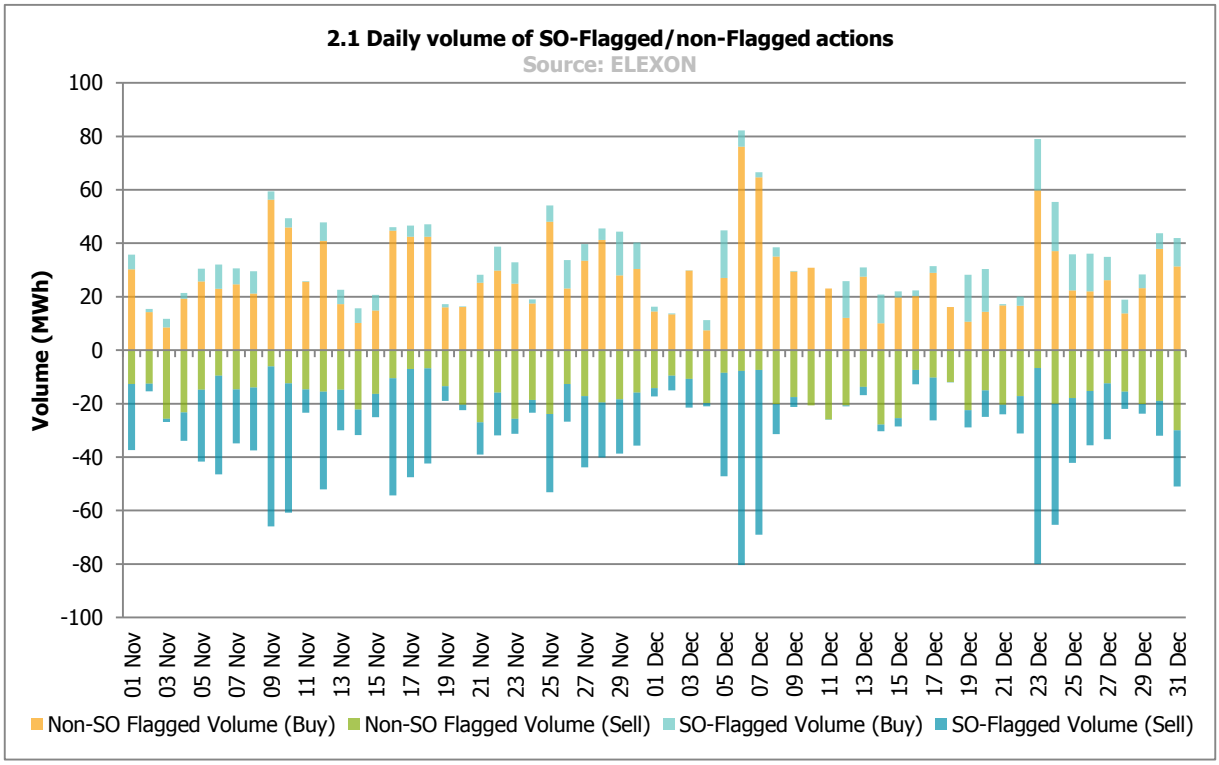
- The impact of Flagging balancing actions;
- The impact of NIV Tagging;
- The impact of PAR Tagging;
- The impact of the Replacement Price; and
- How these mechanisms affect which balancing actions feed into the price.

Flagging

The Imbalance Price calculation aims to distinguish between 'energy' and 'system' balancing actions. Energy balancing actions are those related to the overall energy imbalance on the system (the 'Net Imbalance Volume'). It is these 'energy' balancing actions which the Imbalance Price should reflect. System balancing actions relate to non-energy, system management actions (e.g. locational constraints).

Some actions are 'Flagged'. This means that they have been identified as potentially being 'system related', but rather than removing them completely from the price calculation (i.e. Tagging them) they may be re-priced, depending on their position in relation to the rest of the stack (a process called Classification). The System Operator flags actions when they are taken to resolve a locational constraint on the transmission network (SO-Flagging), or to correct short-term increases or decreases in generation/demand (CADL Flagging).

Graph 2.1 shows the volumes of buy and sell actions Flagged by the SO as being constraint related in November and December 2017. On 9 November, 91% of sell volume was SO-Flagged, with 92% of sell volume SO-Flagged on 23 December. On three days in December, no volume was SO-Flagged.



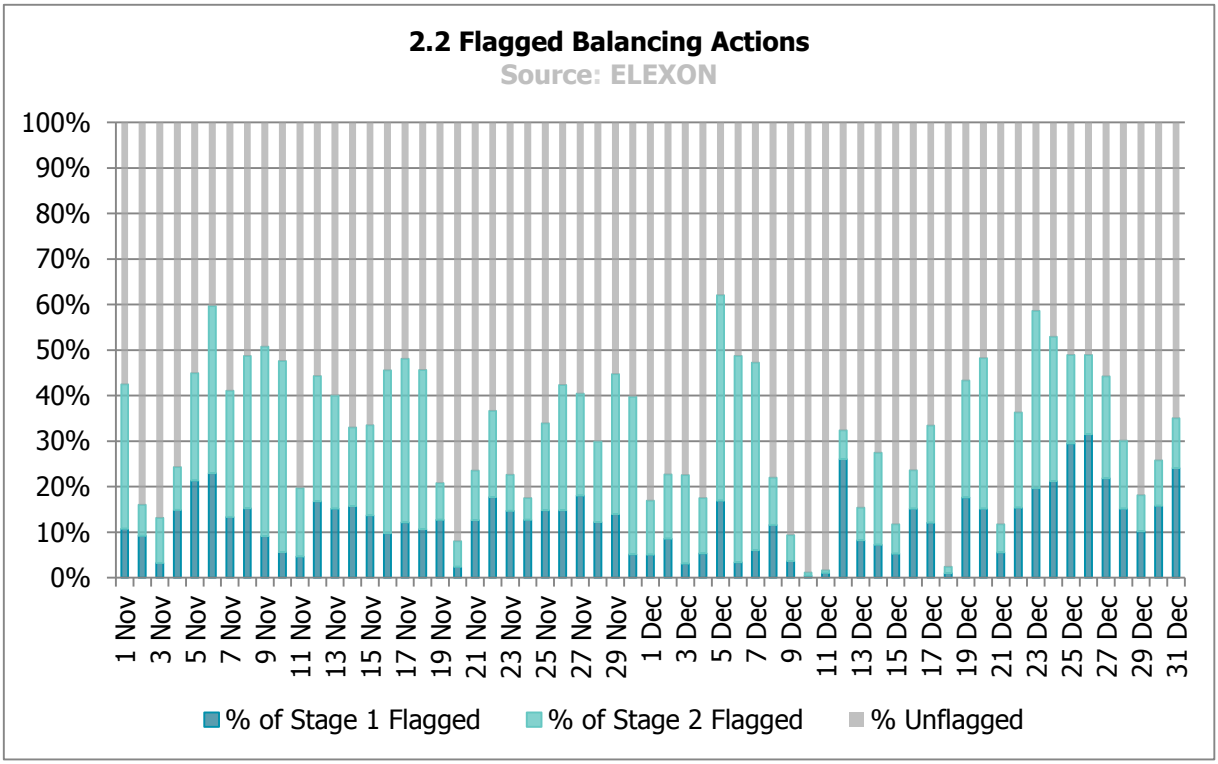
57% of sell balancing actions taken in November had an SO-Flag, compared with 49% in December. In November, 37% of SO-Flagged sell actions came from CCGT BMUs, 32% from BSAAs, and 20% from Wind BMUs. The average initial price (i.e. before any re-pricing) of a SO-flagged sell action was -£22.52/MWh. In December, 41% of SO-Flagged sell actions came from CCGT BMUs, 24% from BSAAs, and 23% from Wind BMUs. The average initial price of a SO-flagged sell action was -£17.82/MWh.

16% of buy balancing actions taken in November had an SO-Flag, compared to 20% in December. In November, 63% of SO-Flagged buy actions came from BSAAs, and 36% from CCGT BMUs, with the average initial price of a SO-Flagged buy action being £72.96/MWh. In December, 55% of SO-Flagged buy actions came from BSAAs, and 43% from CCGT BMUs, with the average initial price of a SO-Flagged buy action being £77.39/MWh in December.

Any actions which are less than 15 minutes total duration are CADL Flagged. 1.7% of buy actions in November and 1.4% in December were CADL Flagged. 1% of sell actions in both months were CADL Flagged. The majority of CADL Flagged buy actions (95% in both months) and CADL Flagged sell actions (56% in November and 53% in December) came from Pumped Storage BMUs.

SO-Flagged and CADL Flagged actions are known as 'First-Stage Flagged'. First-Stage Flagged actions may become 'Second-Stage Flagged' depending on their price in relation to other Unflagged actions. If a First-Stage Flagged balancing action has a more expensive price than the most expensive First-Stage Unflagged balancing action, it becomes Second-Stage Flagged. This means it is considered a system balancing action and becomes unpriced.

Graph 2.2 shows First and Second-Stage Flagged action volumes as a proportion of all actions taken on the system. Note these are all balancing actions that were accepted – only a proportion of these will feed through to the final price calculation. The percentage of Unflagged actions was above 97% for 3 days in December, compared to an average of Unflagged actions across December of 70%.



The Replacement Price

If any Second-Stage Flagged action volumes are left in the NIV, these will be repriced by the Replacement Price. In total 58% of sell actions in November were Flagged. Of these, 10% were assigned a Replacement Price (currently based on the most expensive 1MWh of Unflagged actions).

Sell actions will typically have their prices revised upwards by the Replacement Price for the purposes of calculating the System Price. In November, the average original price of a Second-Stage Flagged repriced sell action was £16.16/MWh, and the average Replacement Price for sell actions (when the System was long) was £36.23/MWh.

In December, 50% of sell actions were Flagged, with 6% of these being assigned a Replacement Price. The average original price of a Second-Stage Flagged repriced sell action was £13.13/MWh, and the average Replacement Price for sell actions (when the System was long) was £37.31/MWh.

17% and 21% of buy actions were Flagged in November and December respectively. Of these, 1% in November and 5% had the Replacement Price applied. In November, the average original price of a buy action with the Replacement Price applied was £88.45/MWh, against an average Replacement Price of £73.50/MWh. In December, the average original price of a buy action with the Replacement Price applied was £100.38/MWh, against an average Replacement Price of £72.84/MWh.

If no Unflagged actions remaining in the NIV, the Replacement Price will default to the Market Index Price (MIP). This occurred in 18 long and one short Settlement Period in November (compared to 31 long Settlement Periods in October). In December, 16 long and 16 short Settlement Periods had the Replacement Price defaulted to the MIP.

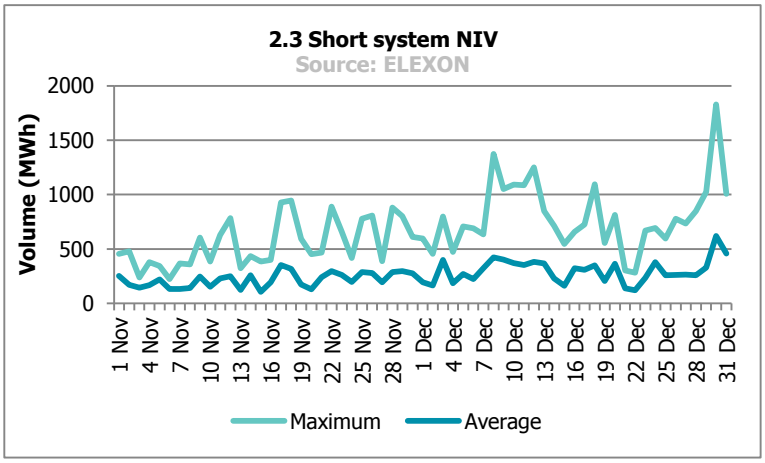
NIV and NIV Tagging

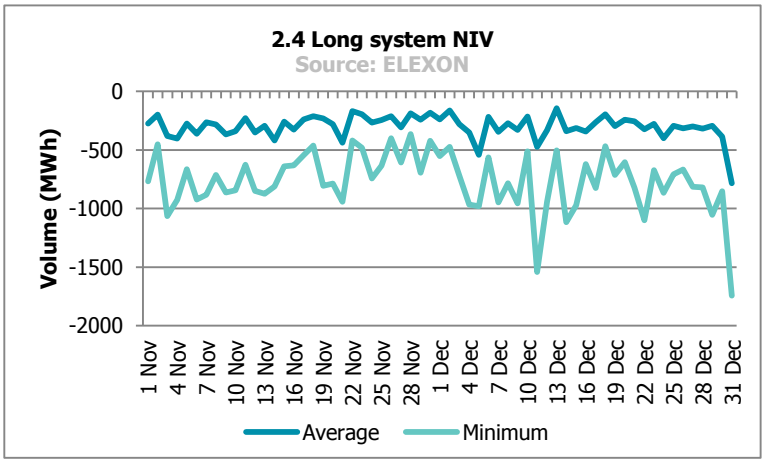
The Net Imbalance Volume (NIV) represents the direction of imbalance of the System – i.e. whether the system is long or short overall.

Graph 2.3 shows the greatest and average NIV when the system was short, and **Graph 2.4** shows greatest and average NIVs when the system was long. Note short NIVs are depicted as positive volumes and long NIVs are depicted as negative volumes.

In almost all Settlement Periods the System Operator will need to take balancing actions in both directions (buys and sells) to balance the system. However, for the purposes of calculating an Imbalance Price there can only be imbalance in one direction (the Net Imbalance). 'NIV Tagging' is the process which subtracts the smaller stack of balancing actions from the larger one to determine the Net Imbalance. It is from these remaining actions that the price is derived.

NIV Tagging has a significant impact in determining which actions feed through to prices. 81% and 85% of volume was removed due to NIV tagging in November and December respectively. The most expensive actions are NIV Tagged first, meaning NIV Tagging has a dampening effect on prices when there are balancing actions in both directions.





The maximum long system NIV across November and December was -1,745MWh, on 31 December 2017 during Settlement Period 40. There were -1,898MWh of sell actions and 153MWh of buy actions in this Settlement Period. The maximum short system NIV of November and December (1,829MWh) was seen on 30 December in Settlement Period 21.

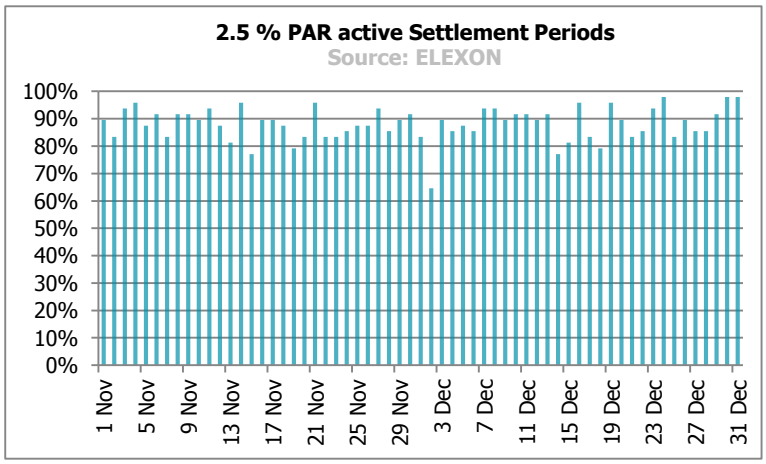
PAR Tagging

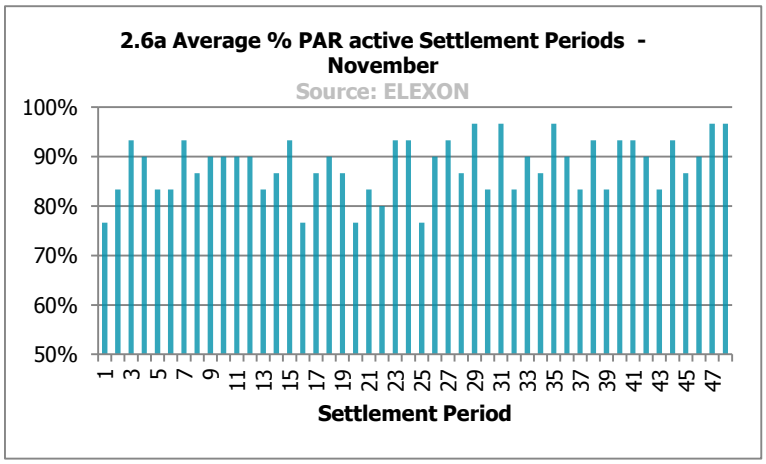
PAR is the final step of the Imbalance Price calculation. It takes a volume weighted average of the most expensive 50MWh of actions left in the stack. PAR is currently set to 50MWh, but is due to decrease to 1MWh on 1 November 2018.

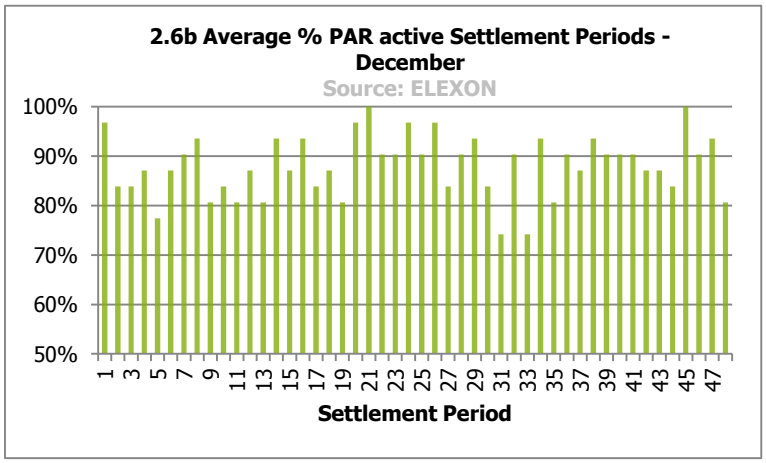
The impact of PAR Tagging across November and December can be seen in **Graph 2.5**. PAR Tagging is active when there are more than 50MWh of actions left in the NIV following the previous steps of Imbalance Price calculation. Only the most expensive 50MWh are used in the calculation, so any volumes greater than 50MWh are 'PAR Tagged' and removed from the Imbalance Price calculation stack. PAR was active for 88% of Settlement Periods in November and December.

Graphs 2.6a and 2.6b show the proportion of Settlement Periods over November and December when PAR Tagging was active. Settlement Periods 1, 16, 20 and 25 had the lowest active PAR Tagging in November 2017 with 77%, representing the NIV being smaller in this period or the system being more balanced as a whole prior to System Operator balancing activity. In December, Settlement Periods 31 and 33 had the lowest PAR Tagging active, with 74% of the time

In December, there was PAR Tagging in Settlement Periods 21 and 45 on every day of the month.



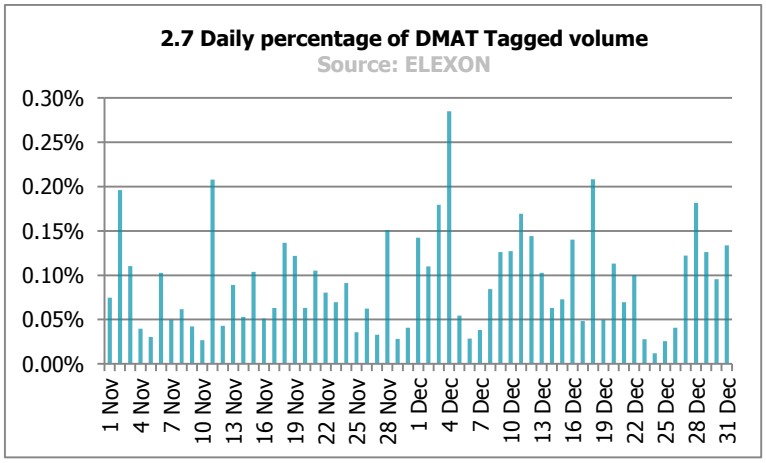




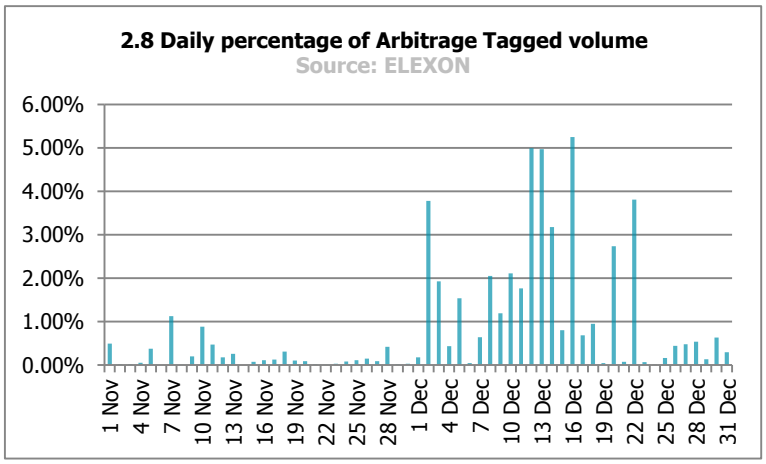
DMAT and Arbitrage Tagged Volumes

Some actions are always removed from the price calculation (before NIV Tagging). These are actions which are less than 1MWh (De Minimis Acceptance Threshold (DMAT) Tagging) or buy actions which are either the same price or lower than the price of sell actions (Arbitrage Tagging).

Graph 2.7 shows the volumes of actions which were removed due to DMAT Tagging. A total of 2.37% of buy and sell volume was removed by DMAT Tagging in November, whilst 3.22% was removed in December. 39% of DMAT Tagged volume came from CCGT BMUs in November. 42% of DMAT Tagged volume in December came from BSAAs.



Graph 2.8 shows the volumes of actions that were removed due to Arbitrage Tagging. In November, an average of 0.20% of volume was Arbitrage Tagged on a daily basis. In December an average of 1.48% of volume was Arbitrage Tagged.



In November, 45% of Arbitrage Tagged volume was from CCGT BMUs and 27% was from BSAAs. In December, 47% of Arbitrage Tagged volume was from BSAAs and 35% from CCGT BMUs.

In November, the average initial price of an Arbitrage Tagged buy action was £41.13/MWh, and for a sell action was £56.01/MWh. The maximum price of an Arbitrage Tagged sell action was £252.86/MWh, and the lowest priced Arbitrage Tagged buy action was £0/MWh.

In December, the average initial price of an Arbitrage Tagged buy action was £43.70/MWh, and for a sell action was £48.56/MWh. The maximum price of an Arbitrage Tagged sell action was £277.07/MWh, and the lowest priced Arbitrage Tagged buy action was £0/MWh.

3 BALANCING SERVICES

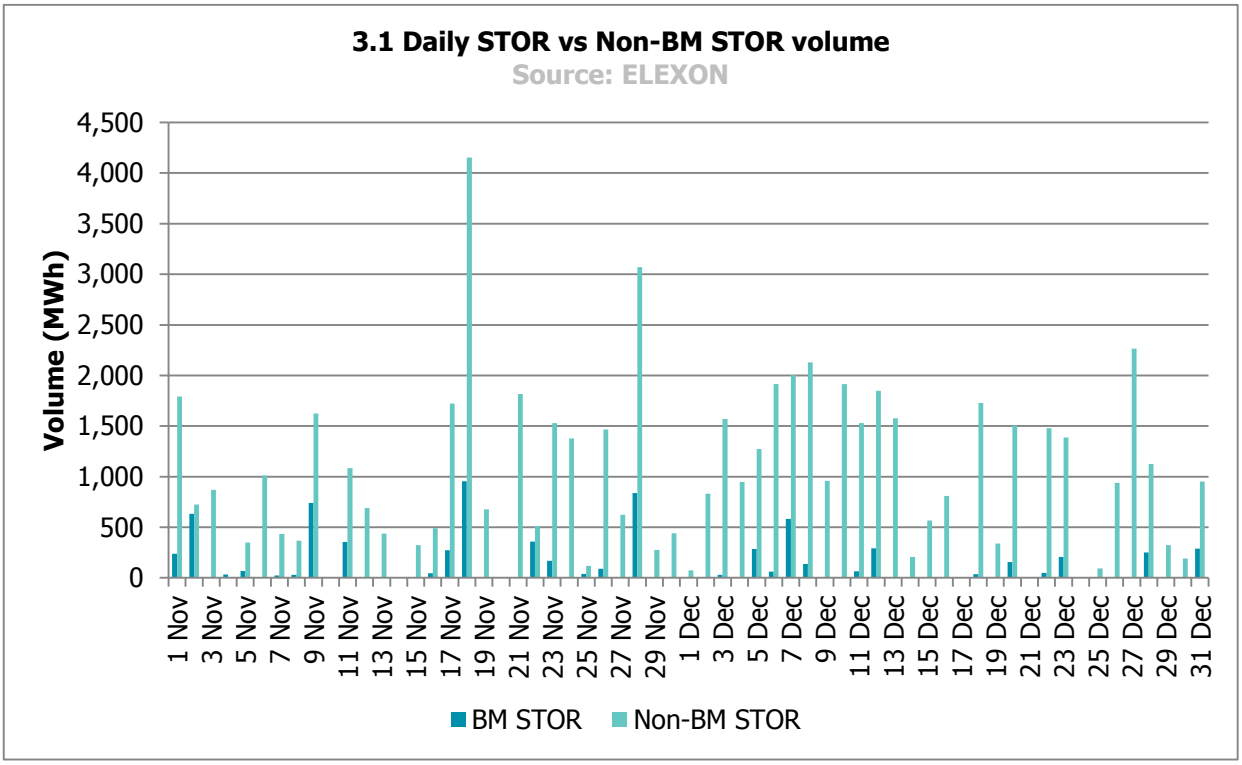
Short Term Operating Reserve (STOR) costs and volumes

This section covers the balancing services that the System Operator (SO) takes outside the Balancing Mechanism, but can still impact the price.

In addition to Bids and Offers available in the Balancing Mechanism, the SO can enter into contracts with providers of balancing capacity to deliver when called upon. These additional sources of power are referred to as reserve; most of the reserve that the SO procures is called Short Term Operating Reserve (STOR).

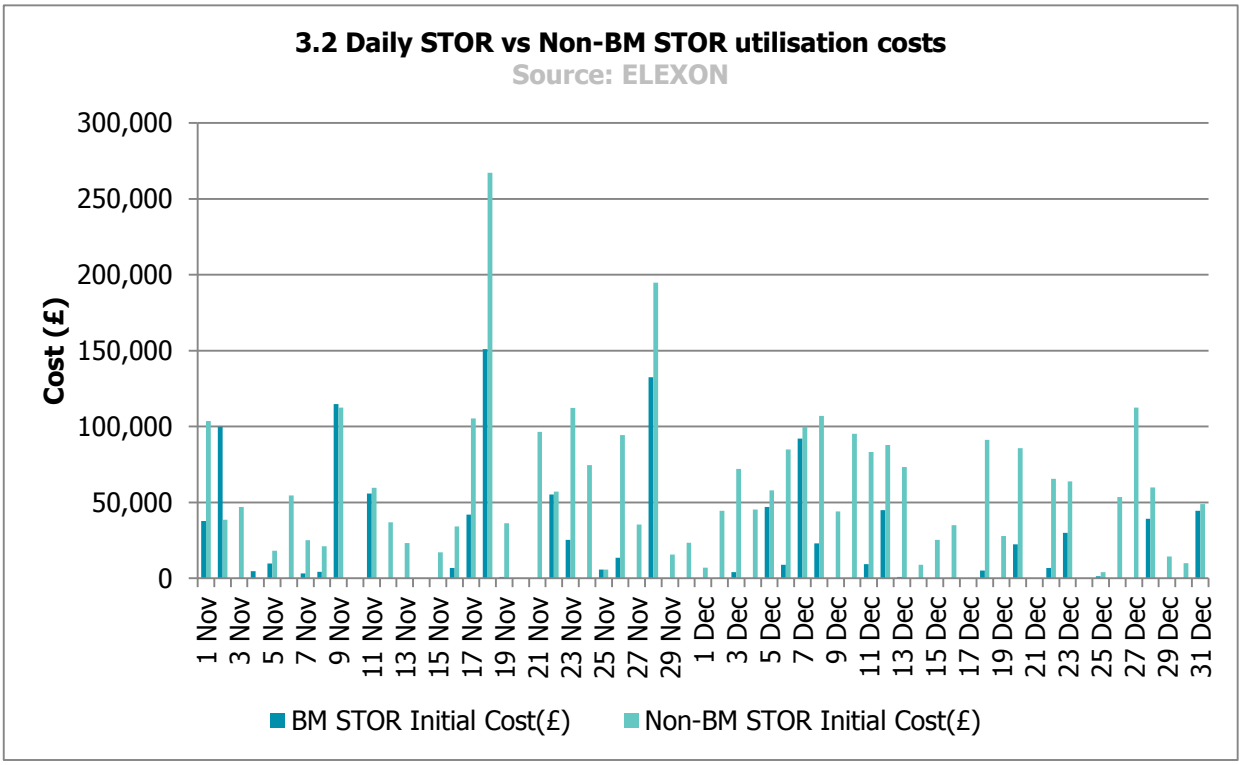
Under STOR contracts, availability payments are made to the balancing service provider in return for capacity being made available to the SO during specific times (STOR Availability Windows). When STOR is called upon, the SO pays for it at a pre-agreed price (its Utilisation Price). Some STOR is dispatched in the Balancing Mechanism (BM STOR) while some is dispatched separately (Non-BM STOR).

Graph 3.1 gives STOR volumes that were called during November and December – split into BM STOR and non-BM STOR. Average daily BM STOR volume across these two months was 120MWh, compared to the average daily Non-BM STOR volume of 991MWh.



Graph 3.2 shows the utilisation costs of this capacity. 85% of the total STOR utilised in November came from outside of the Balancing Mechanism, whilst in December this increased to 93%.

The average Utilisation Price for STOR capacity in November was £75.29/MWh (£156.12/MWh for BM STOR and £61.15/MWh for non-BM STOR), but fell to £56.91/MWh in December (£154.92/MWh for BM STOR and £49.53/MWh for non-BM STOR).



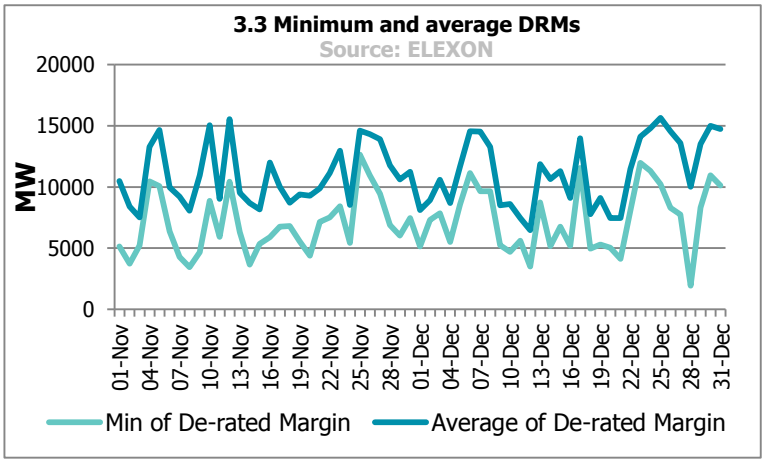
De-Rated Margin, Loss of Load Probability and the Reserve Scarcity Price

There are times when the Utilisation Prices of STOR plants are uplifted using the **Reserve Scarcity Price (RSP)** in order to calculate System Prices. The RSP is designed to respond to capacity margins, so rises as the system gets tighter (the gap between available and required generation narrows). It is a function of **De-Rated Margin (DRM)** at Gate Closure, the likelihood that this will be insufficient to meet demand (the **Loss of Load Probability**, LoLP) and the **Value of Lost Load** (VoLL, currently set at £3,000/MWh).

Graph 3.3 shows the daily minimum and average Gate Closure DRMs for November and December 2017.

The System Operator has determined a relationship between each DRM and the LoLP, which will determine the RSP[2]. The minimum DRM in November was 3,442MW on 8 November in Settlement Period 35, compared to 3,247MW in October. The minimum DRM in December was 1,942MW on 28 December in Settlement Period 37.

The RSP re-prices STOR actions in the Imbalance Price calculation if it is higher than the original Utilisation Price.



No STOR actions that were re-priced using the RSP in November or December (see **Table 3.4**).

3.4 Top 5 LoLPs and RSPs

3.4a November

Date	SP	DRM	LoLP	RSP	RSP Used	System Length	System Price
08/11/2017	35	3,442.52	0.0000	**0.00**	No	Short	57.88
14/11/2017	36	3,667.62	0.0000	**0.00**	No	Long	40.11
02/11/2017	35	3,734.29	0.0000	**0.00**	No	Short	117.98
08/11/2017	36	3,764.48	0.0000	**0.00**	No	Long	38.93
14/11/2017	35	3,798.45	0.0000	**0.00**	No	Long	40.12

3.4b December

Date	SP	DRM	LoLP	RSP	RSP Used	System Length	System Price
28/12/2017	37	1,941.79	0.0028	**8.30**	No	Short	136.05
28/12/2017	36	2,717.56	0.0001	**0.15**	No	Short	137.05
28/12/2017	35	3,174.12	0.0000	**0.01**	No	Short	137.05
12/12/2017	20	3,492.63	0.0000	**0.00**	No	Short	105.30
28/12/2017	38	3,562.19	0.0000	**0.00**	No	Short	116.05

[2] The System Operators methodology for LoLP is set out in the LoLP Methodology statement: https://www.elexon.co.uk/wp-content/uploads/2015/10/Loss_of_Load_Probability_Calculation_Statement_v1.0.pdf

4 P305 - SPECIFIC ANALYSIS

This section compares live prices with two different pricing scenarios. First we consider what prices would look like with the **pre-P305 price calculation** to highlight the impact of P305. Before the implementation of P305, the price calculation had:

- A PAR of 500MWh, and an RPAR of 100MWh;
- No non-BM STOR volumes or prices included in the price stack;
- No RSP, and instead a Buy Price Adjuster (BPA) that recovers STOR availability fees; and
- No Demand Control, Demand Side Balancing Reserve (DSBR), or Supplementary Balancing Reserve (SBR) actions priced at VoLL.

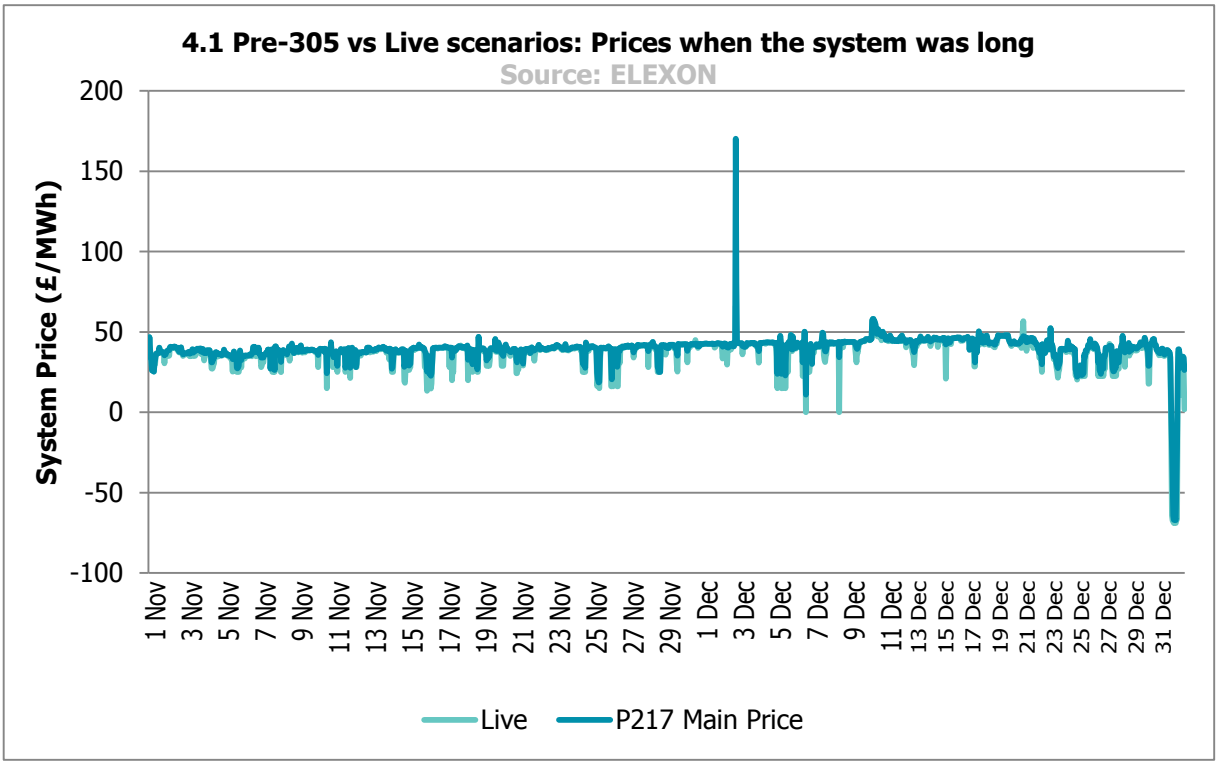
We also consider the **November 2018 Scenario**, which captures the effect of changes to the Imbalance Price parameters that are due to come in on 1 November 2018. These are:

- A reduction in the PAR value to 1MWh (RPAR will remain at 1MWh);
- The introduction of a 'dynamic' LoLP function; and
- An increase in the VoLL to £6,000MWh, which will apply to all instances of VoLL in arrangements, including the RSP function.

Pre-P305 Price Calculation

Graph 4.1 compares live System Prices when the system was long with prices re-calculated using the pre-P305 pricing scenario 'P217' (for comparison we use the Main Price calculation). On average, live prices were £1.45/MWh lower when the system was long compared to the pre-P305 calculation. This is expected as the reduction of PAR from 500MWh to 50MWh aims to make prices 'more marginal', by reducing the dampening effect of a large PAR.

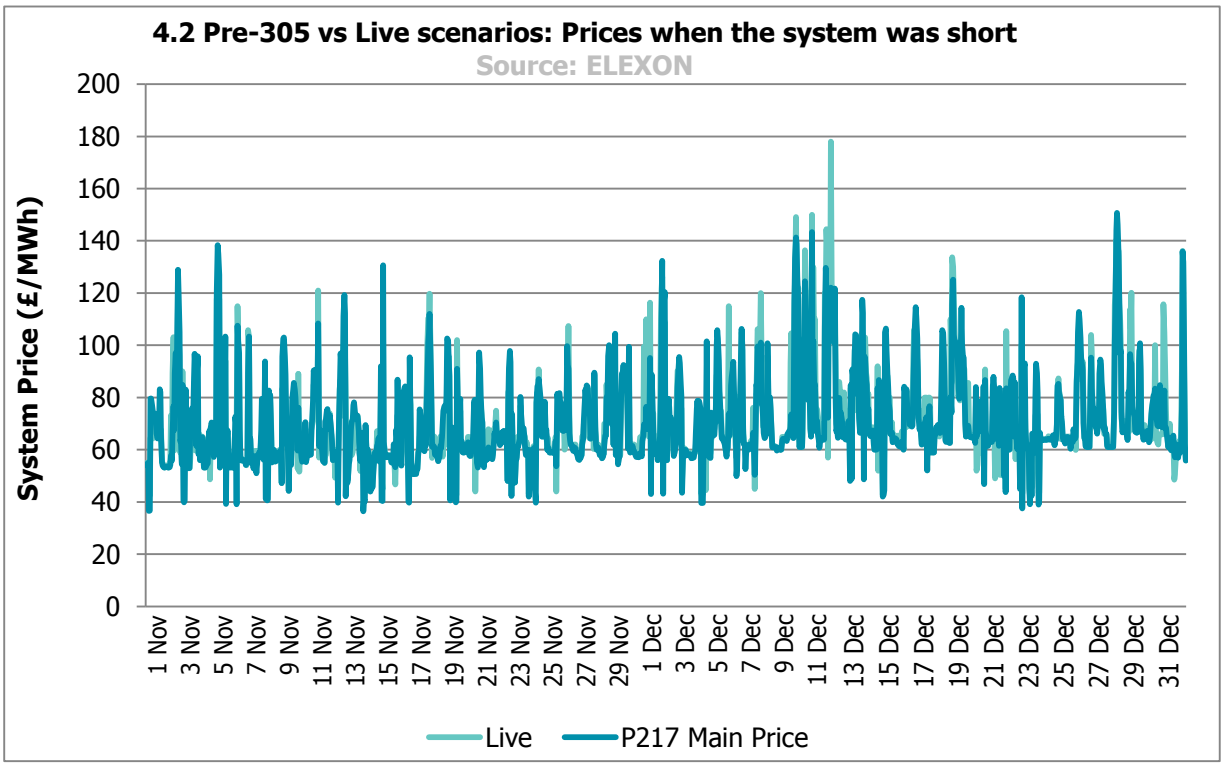
When the system was long, prices were different in 87% of Settlement Periods; in 80% of these periods the change was less than £1/MWh. The biggest price change occurred on the 2 December 2017 in Settlement Period 31, where the live price was £104.21/MWh lower than the System Price would have been under the P217 Scenario. Again this is due to the reduction in PAR.



Graph 4.2 compares live System Prices when the system was short with prices re-calculated using the pre-P305 pricing scenario 'P217' (using the Main Price calculation). On average, live prices were £0.74/MWh lower when the system was short, with 13% of short Settlement Periods having price changes greater than £10/MWh.

The biggest difference in prices when the system was short was £55.98/MWh (12 December 2017 during Settlement Period 23), again as a result of the reduction in PAR. In the P217 scenario, the Main Price would have been £122.02/MWh compared to the live scenario System Price of £178/MWh.

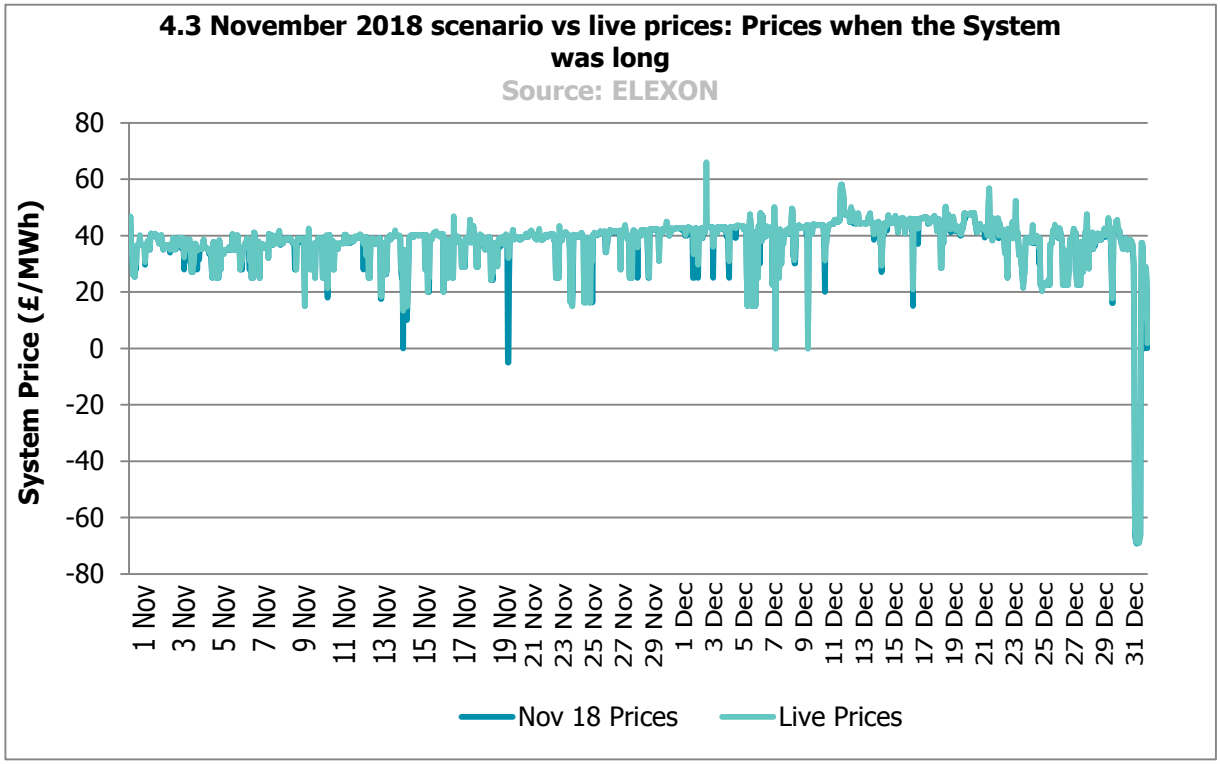
The inclusion of non-BM STOR volumes in the pricing stack changed the system length from long to short in 47 Settlement Periods (2%).



November 2018 Price Calculation

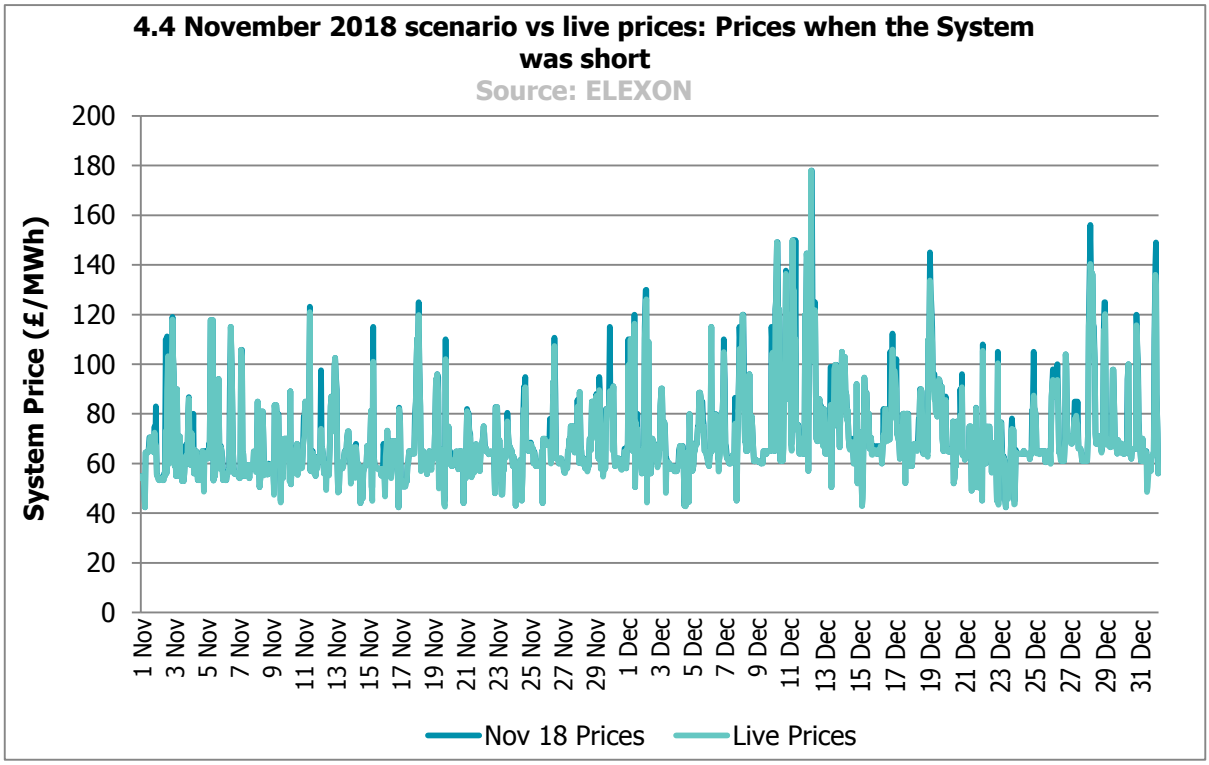
Under the November 2018 scenario, when the system is long prices would be the same or lower, and when the system is short prices would be the same or higher. **Graph 4.3** compares live System Prices with prices recalculated using the November 2018 scenario when the system was long.

The average price differences across November and December are relatively small under the November 2018 scenario, with prices unchanged in 58% of Settlement Periods. System Prices would be, on average, £0.44/MWh lower when the system was long and £1.28/MWh higher when the system was short. When the system was long, price changes were less than £1/MWh in 82% of Settlement Periods, and greater than £5/MWh in only 4% of Settlement Periods. The biggest shift in price was £42.05/MWh (Settlement Period 24 on 19 November 2017), when the price would have been -£5/MWh under the November 2018 scenario compared to the current live System Price of -£37.05/MWh.



Graph 4.4 compares live System Prices with prices re-calculated using the November 2018 scenario when the system was short. Prices would be higher in 36% of short Settlement Periods under the November 2018 scenario; 22% changed by more than £5/MWh and 10% by more than £10/MWh. The biggest difference in price was £68.91/MWh (Settlement Period 24 on 12 December), when the price would have been £178/MWh under the November 2018 scenario compared to the current live System Price of £112.19/MWh.

Under the November 2018 scenario, there would be 109 Settlement Periods in November and December 2017 with prices greater than £100/MWh, compared to 90 periods under the current live scenario.



There were no Demand Control actions taken during November and December 2017. Under the November 2018 scenario, these would be priced at a VoLL of £6,000/MWh rather than the current £3,000/MWh. Although this scenario does not capture the impact that a move to a dynamic LoLP methodology will have, the impact of the change in VoLL on the RSPs can be seen in **Table 4.5.** The RSP would have re-priced no STOR actions in November and December.

4.5 Reserve Scarcity Prices with VoLL of £6,000

4.5a November

Date	SP	DRM	LoLP	RSP	RSP Used	System Length	System Price
08/11/2017	35	3,442.52	0.0000	**0.00**	No	Short	57.88
14/11/2017	36	3,667.62	0.0000	**0.00**	No	Long	40.11
02/11/2017	35	3,734.29	0.0000	**0.00**	No	Short	117.98
08/11/2017	36	3,764.48	0.0000	**0.00**	No	Long	38.93
14/11/2017	35	3,798.45	0.0000	**0.00**	No	Long	40.12

4.5b December

Date	SP	DRM	LoLP	RSP	RSP Used	System Length	System Price
28/12/2017	37	1,941.79	0.0028	**16.60**	No	Short	136.05
28/12/2017	36	2,717.56	0.0001	**0.31**	No	Short	137.05
28/12/2017	35	3,174.12	0.0000	**0.02**	No	Short	137.05
12/12/2017	20	3,492.63	0.0000	**0.00**	No	Short	105.30
28/12/2017	38	3,562.19	0.0000	**0.00**	No	Short	116.05

5 GLOSSARY

Term	Abbrev.	Definition
Bid		A proposed volume band and price within which the registrant of a BM Unit is willing to reduce generation or increase consumption (i.e. a rate below their FPN).
Bid/Offer Acceptance	**BOA**	A Bid or Offer within a given Settlement Period that was Accepted by the SO. BOAs are used in the Imbalance Price calculation process e.g. to calculate NIV or the System Price.
Offer		A proposed volume band and price within which the registrant of a BM Unit is willing to increase generation or reduce consumption (i.e. a rate above their FPN).
System Price		A price (in £/MWh) calculated by BSC Central Systems that is applied to imbalance volumes of BSC Parties. It is a core component of the balancing and settlement of electricity in GB and is calculated for every Settlement Period. It is subject to change via Standard Settlement Runs.
Replacement Price		A price (in £/MWh) calculated by BSC Central Systems that is applied to volumes that are not priced during the imbalance pricing process (detailed in BSC Section T) It is calculated for every Settlement Period, and is subject to change via Standard Settlement Runs.
Utilisation Price		The price (in £/MWh) sent by the SO in respect of the utilisation of a STOR Action which: (i) in relation to a BM STOR Action shall be the Offer Price; and (ii) in relation to a Non-BM STOR Action shall be the Balancing Services Adjustment Cost.
Market Index Price	**MIP**	The Market Index Price reflects the price of wholesale electricity in the short-term market (in £/MWh). You can find an explanation of how it is calculated and used in the Market Index Definition Statement (MIDS).
Reserve Scarcity Price	**RSP**	Both accepted BM and non-BM STOR Actions are included in the calculation of System Prices as individual actions, with a price which is the greater of the Utilisation Price for that action or the RSP. The RSP function is based on the prevailing system scarcity, and is calculated as the product of two following values: · the Loss of Load Probability (LoLP), which will be calculated by the SO at Gate Closure for each Settlement Period; and · the Value of Lost Load (VoLL), a defined parameter currently set to £3,000/MWh.
Replacement Price Average Reference	**RPAR**	The RPAR volume is a set volume of the most expensive priced actions remaining at the end of the System Price calculation, and is currently 1MWh. The volume-weighted average of these actions, known as the Replacement Price, is used to provide a price for any remaining unpriced actions prior to PAR Tagging.
Long		In reference to market length, this means that the volume of Accepted Bids exceeds that of Accepted Offers.
Short		In reference to market length, this means that the volume of Accepted Offers exceeds that of Accepted Bid.
Net Imbalance Volume	**NIV**	The imbalance volume (in MWh) of the total system for a given Settlement Period. It is derived by netting buy and sell Actions in the Balancing Mechanism. Where NIV is positive, this means that the system is short and would normally result in the SO accepting Offers to increase generation/decrease consumption. Where NIV is negative, the system is long and the SO would normally accept Bids to reduce generation/ increase consumption. It is subject to change between Standard Settlement Runs.