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Wholesale Power Market Liquidity: Annual Report 2016

Report

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Overview:

This is our second annual report on liquidity in the wholesale electricity market since our licence obligations to promote liquidity came into effect in March 2014. These licence obligations are intended to help improve independent suppliers' access to the wholesale market and ensure that the market provides the products and price signals that companies need to compete effectively.

We have been monitoring the effects of the reforms both to assess their impact and for compliance. This report shows our results from monitoring since March 2014. The results show a notable improvement in liquidity in the wholesale market over the two years, albeit with a decline in the middle two quarters of 2015. There are many factors that could have contributed to the results we are seeing so far, and although it is difficult to draw definitive conclusions at this stage, we are cautiously optimistic about the impacts of the policy. We continue to monitor the effect of our reforms.

Context

Our principal objective when exercising our functions is to protect the interests of present and future consumers. Understanding the impacts of the Secure and Promote licence condition is an important part of our role in protecting the interests of consumers.

Liquidity in the wholesale electricity market in GB was in a period of decline since 2001 and is lower than other energy and commodity markets, including some European electricity markets. Ofgem's Energy Supply Probe in 2008 found that low liquidity in the electricity market was a concern, as it created a barrier to new entry into supply markets and a source of competitive disadvantage for independent suppliers.

Secure and Promote was introduced to improve liquidity in the GB wholesale power market to help underpin well-functioning, competitive generation and supply markets. This benefits customers through downward pressure on bills, and greater choice of suppliers.

We have been publishing annual reports on the impact of Secure and Promote. This is the 2016 annual report. It presents the results of the two years of our quantitative monitoring from 1 April 2014 to 31 March 2016.

Associated Documents

- Wholesale Energy Markets, 2015: https://www.ofgem.gov.uk/publications-and-updates/wholesale-energy-markets-2015
- Retail Energy Markets in 2015: https://www.ofgem.gov.uk/publications-and-updates/retail-energy-markets-2015
- Secure and Promote: wholesale power market liquidity decision letter Jan 2014 https://www.ofgem.gov.uk//publications-and-updates/wholesale-power-market-liquidity-decision-letter
- Liquidity in the Wholesale Electricity Market (Special Condition AA of the electricity generation licence): Guidance https://www.ofgem.gov.uk/ofgem-publications/86717/liquidityinthewholesaleelectricitymarketspecialconditionaaoftheelectricitygenerationlicence-guidance.pdf
- Wholesale Power Market Liquidity: Interim Report https://www.ofgem.gov.uk/publications-and-updates/wholesale-power-market-liquidity-interim-report
- Wholesale Power Market Liquidity : Annual Report 2015 https://www.ofgem.gov.uk/sites/default/files/docs/2015/09/wholesale_power_market_liquidity_annual_report_2015_0.pdf

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Executive Summary

This document is our second annual report on liquidity in the wholesale electricity market since we introduced Secure and Promote. When introducing the reforms, we committed to monitoring progress every year. This report contains the results of our monitoring so far, which show a notable improvement in liquidity albeit with a fall in the middle two quarters of 2015.

This report concentrates primarily on the quantitative data from this past year given the large bulk of our stakeholder engagement took place in the first year of the reforms. However, we expect to engage increasingly with stakeholders in the next year as the policy reaches its review stage. The results of our monitoring show an overall improvement in liquidity within the wholesale electricity market over the past year.

Background

The new licence obligations to promote liquidity in the wholesale electricity market (Secure and Promote) came into effect on 31 March 2014. We introduced these reforms because of concerns that poor liquidity in the wholesale power market was preventing consumers from fully realising the benefits that competition can deliver. The reforms were intended to meet three objectives:

- to promote the availability of products that support hedging by introducing a set of minimum service standards for trading between eligible suppliers[1] and the largest eight generators[2], called Supplier Market Access (SMA) rules
- to promote robust reference prices for forward products through a market-making obligation on the six largest vertically integrated companies
- to secure near-term market liquidity through a reporting requirement of day-ahead trading of the six largest vertically integrated companies and the two largest independent generators

Key results

Liquidity indicators

Our analysis shows a notable improvement in liquidity in the wholesale market over the two-year period, but a decline in the middle two quarters of 2015. Since our last annual report, our analysis shows a continued overall improvement in liquidity. Many factors have contributed to the more volatile price environment seen at times

[1] Suppliers that are small enough by definition under Secure and Promote guidance are considered eligible. The Secure and Promote guidance is here: https://www.ofgem.gov.uk/ofgem publications/86717/liquidityinthewholesaleelectricitymarketspecialconditionaaoftheelectricitygenerationlicence-guidance.pdf

[2] The obligated licensees for the SMA rules are the six largest vertically integrated companies plus the two largest independent generators, Engie (formerly GDF Suez) and Drax Power.

during the past year. We did see a fall in trading and churn in the middle two quarters of 2015, which was likely to have been a reflection of market conditions when prices and volatility were low. Although it remains difficult to separate out the effects of our reforms from other factors that have impacted liquidity, the monitoring results allow us to be cautiously optimistic that Secure and Promote has contributed to increasing liquidity in the market.

Overall, we have seen more trading and improved access to products since our reforms. Churn (the number of times a unit of electricity is traded before delivery), has been broadly stable in the last year compared with the first year. This reflects a notable uptick in the last two quarters Q4 2015-Q1 2016, which has outweighed the fall in churn in the middle of 2015. This relatively higher churn as well as stable bid-offer spreads (the difference between the buy and sell price for a product[3]) indicated that liquidity has been improving.

Increasing trade with independent suppliers and by market-makers

Our monitoring and analysis show that trading volumes with eligible suppliers are following a clear upward trend, although overall volumes remain low[4].

The data from Secure and Promote licensees shows a clear upward trend in volumes traded at the times when the six largest vertically integrated companies are market-making, called the market-making windows. The trend has followed the overall over the counter (OTC) volumes, and indicates increasing product availability and price robustness at those times.

Continued gains in near-term liquidity

The near-term market has remained liquid since Secure and Promote. Total exchange trading has continued to follow an upward trend since Secure and Promote, including day-ahead exchange volumes and intraday trading volumes.

Next steps

We will publish our next annual report in summer 2017. We continue to closely monitor the metrics outlined in this report and welcome comments from stakeholders on these. We will conduct a formal review of the policy on completion of the three year period of Secure and Promote in Q2 2017. Until then, we welcome engagement with stakeholders concerning their experience of the policy to inform the review.

[3] A low bid-offer spread indicates that the price reflects market value.
[4] There are 18 eligible suppliers at present, which are small by definition, therefore high trading volumes are not expected.

1. Objectives

Chapter Summary
This chapter gives a brief introduction to Secure and Promote and the three objectives under it.

Secure and Promote background and objectives

1.1. On 31 March 2014, new regulatory requirements to promote liquidity in the wholesale electricity market came into effect. We introduced these reforms, known as "Secure and Promote", because Ofgem and industry participants were concerned that the wholesale electricity market was not delivering the products and price signals that are needed to facilitate competition.

1.2. After extensive consultation with industry, the Secure and Promote liquidity reforms were implemented as a special licence condition into the generation licences of the six largest vertically integrated companies and the two largest independent generators, Engie (GDF Suez), and Drax Power.

1.3. To address the liquidity concerns we identified three objectives for our reforms. There is a summary of the main aspects of the design of each of these parts of Secure and Promote in appendix 1. These are:

1. to promote the availability of products that support hedging by introducing minimum service standards for trading between eligible suppliers and the largest eight generators, called **Supplier Market Access (SMA) rules**
2. to promote robust reference prices for forward products through a **market-making obligation** on the six largest vertically integrated companies
3. to secure near-term market liquidity through a **reporting requirement of day-ahead trading** of the six largest vertically integrated companies and the largest independent generators.

1.4. We are monitoring the impact of these reforms in various ways, such as using data reported to Ofgem by the licensees, and by monitoring key liquidity metrics at the market level. We have also had some stakeholder feedback on an ad-hoc basis in the last year. Further background to the policy and the feedback from our stakeholder engagement can be seen in our first annual liquidity report, published last year[5].

[5] The report may be seen at : https://www.ofgem.gov.uk/sites/default/files/docs/2015/09/wholesale_power_market_liquidity_annual_report_2015_0.pdf

1.5. In the next chapter, we consider how the policy has met the above three objectives by analysing the data that we receive from the Secure and Promote licensees under their reporting obligations. The complete set of metrics we are using are in appendix 2.

2. Secure and Promote Analysis

Chapter Summary
This chapter presents the results from our analysis on the Supplier Market Access (SMA) and market-making parts of the reforms. It also outlines the data on liquidity in the near-term market, which shows the progress of the third objective of Secure and Promote.

The data indicates the market is moving in a positive direction towards achieving our objectives under market-making, as well as under the Supplier Market Access rules. There are still issues we need to consider, and on-going consultation with stakeholders will be informative in this. The data shows an improvement for independent suppliers in trading with the largest eight generators. Price formation and product availability are both features of the market-making activity that have improved.

The near-term market has showed continued gains in liquidity and volumes have increased in the monitoring period, year on year. Our data shows that near-term liquidity has remained secured.

Supplier Market Access (SMA)

2.1. The SMA part of Secure and Promote aims to ensure that independent suppliers can gain access to the wholesale market on reasonable terms. This was introduced because of repeated concerns that independent suppliers were having problems setting up trading agreements through which to access the wholesale market. This meant that these smaller market participants were finding it harder to enter the market and compete effectively. Poor liquidity in this sense was preventing consumers from fully realising the benefits that competition can deliver.

2.2. The SMA rules set out minimum service standards that eligible suppliers can expect when negotiating trading agreements with the largest eight generators. The SMA rules were intended to improve independent suppliers' ability to gain access to smaller-sized products appropriate to their needs, and ensure the credit and collateral terms offered are transparent. The rules ensure that negotiating with eligible suppliers is not treated as a low priority, which helps them to trade and compete.

2.3. Under the SMA rules, the generators are able to set their own credit arrangements as long as they do not discriminate against independent suppliers. Generators must also follow an established process for establishing creditworthiness and be transparent about the rationale for making credit decisions.

Key findings

2.4. We have monitored traded volumes under the SMA rules to assess the impact of this part of the policy. Our analysis shows that trading volumes with eligible

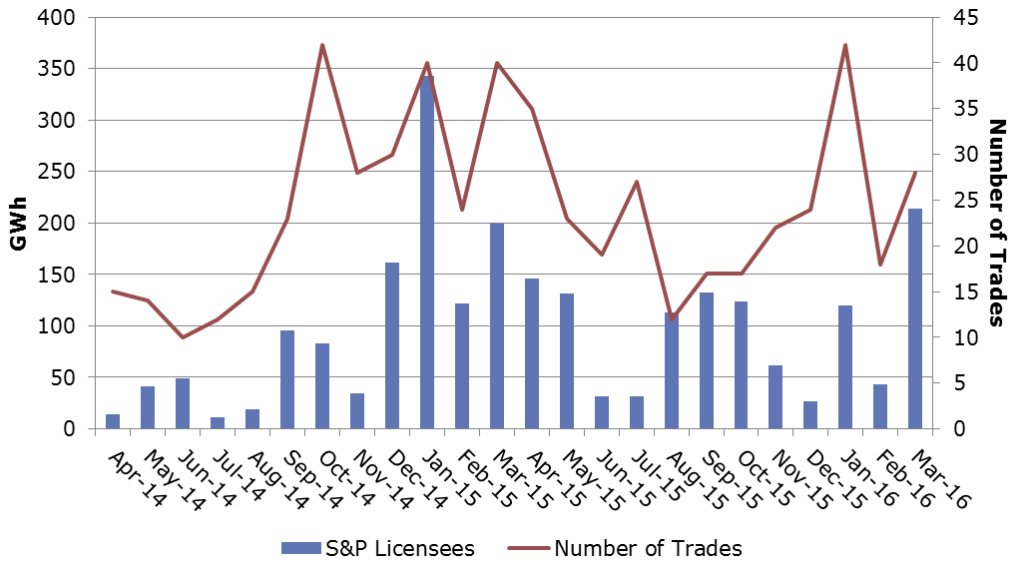
suppliers in SMA products have continued to be low and variable, but that they are on an upward trend. We have also seen a trend of increasing volumes of trade in SMA products with non-eligible suppliers since Secure and Promote started.

2.5. These results continue the trend we saw in the first year after Secure and Promote was introduced, of a gradual increase in the volume of trades involving small suppliers. Early feedback from small suppliers was that they had been finding it easier to access products and that the response from licensees to trading requests had improved, which shows that SMA was having a positive impact on the ability of small suppliers to trade. Our quantitative analysis suggests that this has continued to be the case and that Secure and Promote has made it easier for small suppliers to access products.

Supplier market access data

2.6. Our analysis of the data as reported by obligated licensees shows variable trading volumes with eligible suppliers over the last year, but with a clear upward trend overall, as shown in Figure 1. This trend is likely influenced by the increasing market share of independent suppliers as a whole during this period. SMA volumes traded are necessarily small and although there is an upward trend in the number of individual trades, these are still low. The increasing trend in both volume and number of trades reflects the fact that there are now 18 eligible suppliers; the low absolute volume of trade reflects that these suppliers require small volumes.

Figure 1 – Supplier market access volume traded, Q2 2014 – Q1 2016

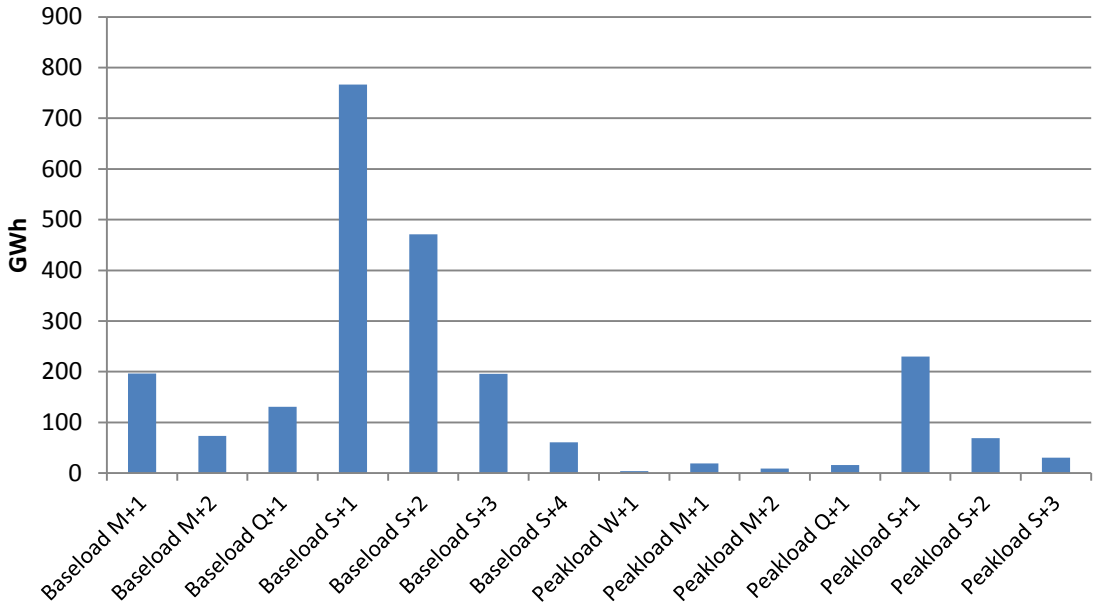


Source: Secure and Promote (S&P) Licensees

2.7. Trading volumes remain concentrated in a few contracts, in particular for delivery one season and two seasons ahead, and trading under SMA remains focused on baseload products. It is positive to see a clear improvement in the volumes traded

for delivery one quarter and four seasons out for baseload products, and importantly, we have seen an increase in volumes of peak products traded over the last year. The range of contracts traded under SMA contracts is shown in Figure 2.

Figure 2 – Supplier market access contracts traded in Q2 2014 – Q1 2016[6]



Source: Secure and Promote (S&P) Licensees

2.8. This data indicates that SMA has made a difference and has been successful in improving access to the market for independent suppliers. We note that this data only includes trading between obligated licensees and eligible suppliers under SMA. For this reason, we consider this data alongside the extra reporting data in the following section.

Trading with small suppliers

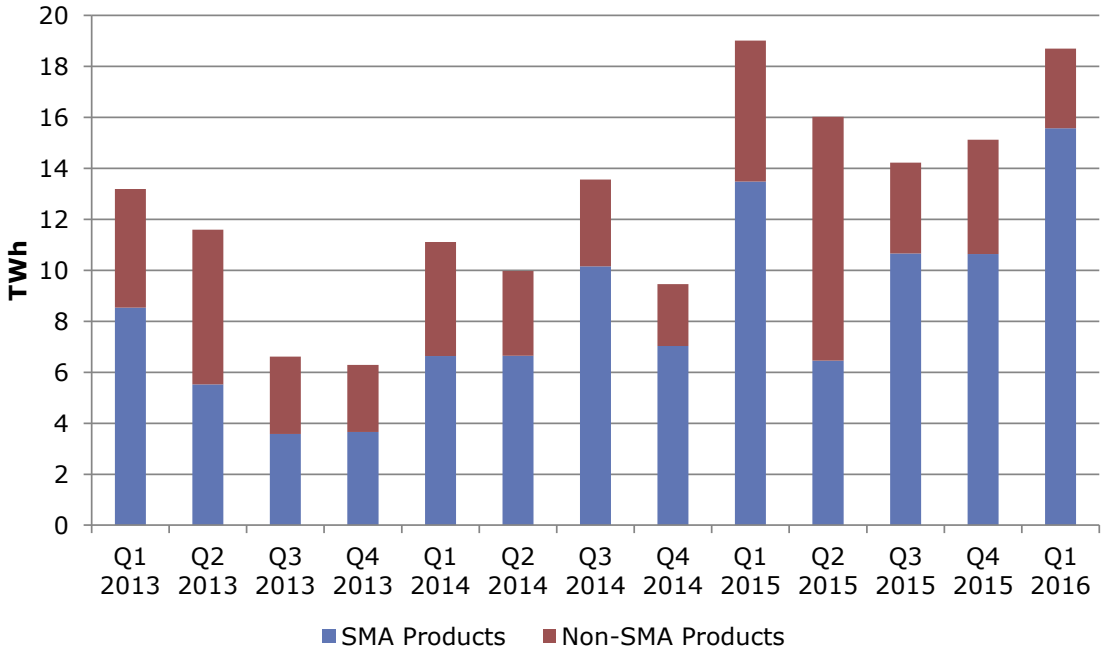
2.9. As our monitoring only initially included volumes traded with eligible suppliers, stakeholders felt that it might not be capturing the full impact of the reforms in this area. In 2015 we started collecting, on a voluntary basis, the electricity volumes

[6] W+1, M+1, M+2, S+1, Q+1 etc. refer to contracts traded for delivery one week out, one month out, two months out, one season out and one quarter out respectively.

traded with non-eligible small suppliers[7], as well as volumes of trade in products not included under the SMA rules.

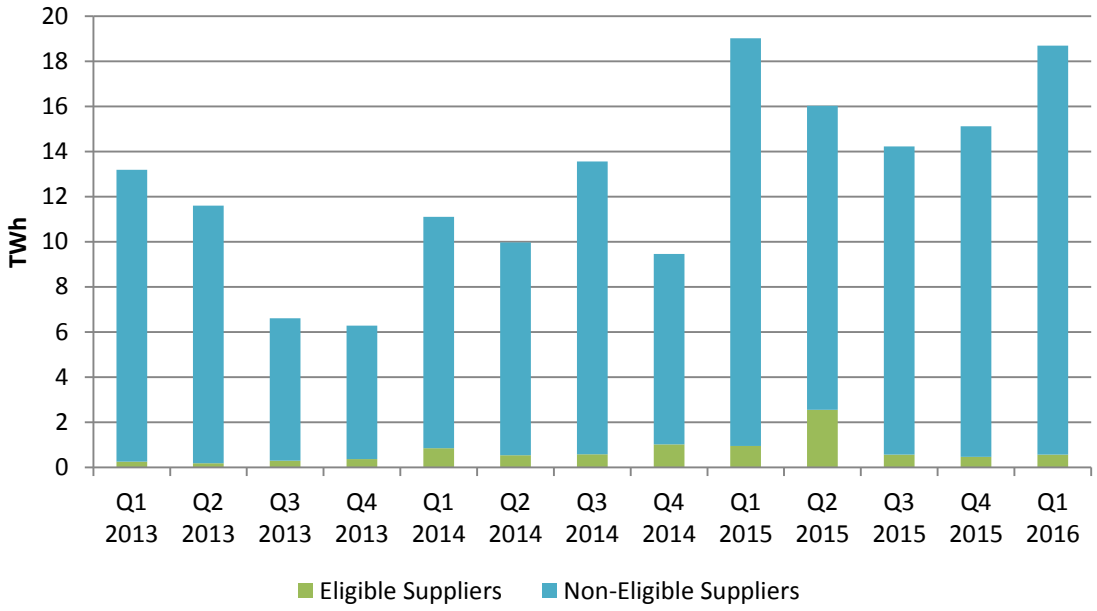
2.10. Although this data set is not complete, we have noted a trend of increasing volumes of trade in SMA products, with mixed volumes traded in non-SMA products as shown in Figure 3. Non-SMA products (defined as all products not included in the SMA rules) are often bespoke and traded in irregular quantities, so it is not surprising that volumes traded in these products are volatile. We have also seen an increasing trend in volumes traded with small suppliers, including eligible and other small suppliers (Figure 4).

Figure 3 - Volumes traded with small suppliers – SMA and other products[8]



[7] Small suppliers do not have a strict definition in the context of this data, but mean power suppliers with less than 250 000 customers in GB, and which are not vertically integrated.
[8] This includes volumes traded between the Secure and Promote licensees and small suppliers, whether deemed eligible or not. The data set goes back to 2013 prior to Secure and Promote, but we have presented the data according to the split between the SMA and other products for consistency.

Figure 4 - Volumes traded with small suppliers[9]



2.11. The increasing trend in both the volume of trade with small suppliers, and in SMA products traded with both eligible and non-eligible suppliers since Secure and Promote suggests that small suppliers have had greater access to the wholesale market. This may be due to greater price transparency for these products in the market, or due to improved trading relationships with the large generators.

Market-making

2.12. The market-making rules aim to encourage competition in both the generation and supply markets by making products available that participants need to hedge at a price that reflects market value. To achieve this, the rules require the obligated licensees to post the prices at which they are willing to buy and sell a range of mandated products for up to two years ahead of delivery. The bid-offer prices must be posted for the full duration of two one-hour windows (called the market-making windows) in every business day. This bid-offer spread has a maximum ceiling according to the product type. This ensures that prices are robust and reflect the demand and supply conditions faced by the licensees. There is a full description of the market-making rules in appendix 1.

[9] The data set goes back to 2013 prior to Secure and Promote, but we have presented the data according to the companies that are eligible vs non-eligible for the whole data set for consistency.

Key findings

2.13. Our monitoring tells us that the market has moved towards achieving our objectives under market-making. Over the last year, we saw a fall in activity in Q2-Q3 2015, but a notable pick up in the last six months of monitoring.

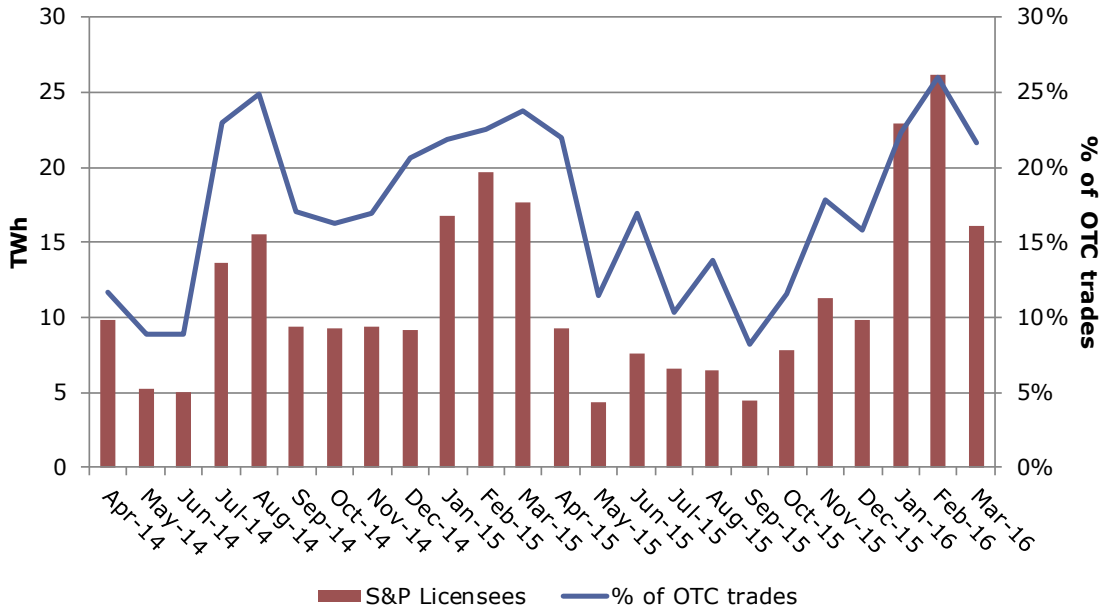
2.14. These results continue the trend we saw in the first year after Secure and Promote was introduced, with the volumes traded in the market-making windows following the rises and falls in volumes traded in the OTC market. Early feedback that we have received was largely positive and pointed to improved availability of products along with more robust prices in the windows. Our data suggests that overall product availability and price robustness are being maintained, despite some feedback that liquidity is being concentrated into the market-making windows.

Market-making data

2.15. Our data, as reported by licensees, shows that market-making volumes have followed a clear increasing trend overall. Over the last year, we have seen an increasing volume of trades with market-makers since the relatively low volumes seen in Q2-Q3 2015, in line with volumes in the OTC market.

2.16. Market-making volumes increased from 54.3 TWh in Q1 2015 to 65.1 TWh in Q1 2016 as shown in Figure 5. These increased volumes reflect the increased OTC volumes seen in Q1 2016. There are many reasons why overall volumes may have increased, for example the higher price volatility and commodity price changes, as well as the shift in relative attractiveness of spark spreads. Conversely, low volatility and low prices are likely to have contributed to the lower volumes of 38.5 TWh in Q2-Q3 2015.

Figure 5 – Market-making volumes traded[10]



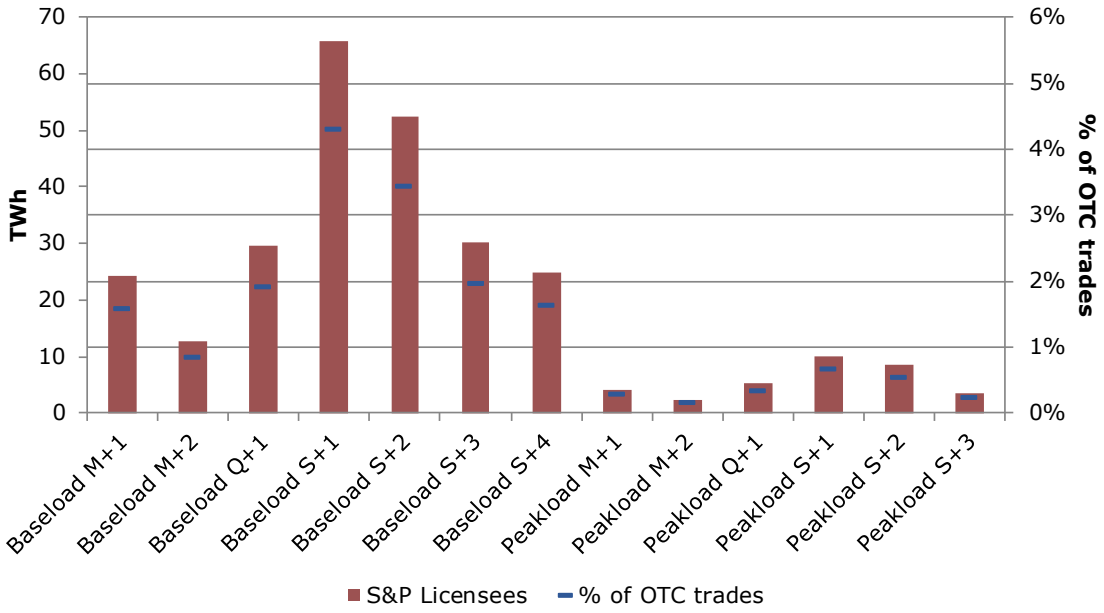
Source: ICIS Energy, Secure and Promote (S&P) Licensees, Total Trading only shows market-making mandated contracts traded OTC

2.17. Trades remain focused on baseload products, in particular one and two seasons ahead, and we still see an upward trend in peakload products traded two and three seasons ahead since Q2 2015. The data also shows that peakload products are traded more in the market-making windows compared to the market overall. Peakload products made up just over 14% of market-making products compared to just under 8% of total OTC trading since Q2 2015. Figure 6 shows the trading by contract for market-making volumes.

2.18. Our data indicates a positive trend, especially given the increasing amount of peak products and of products for delivery more than one season out in the windows. Going forward, the relative change in volumes and product types will allow us to continue to understand progress in forward product availability in the windows.

[10] The right-hand axis shows the volume traded in the market-making windows as a proportion of total OTC trading volumes in Secure and Promote market-making products.

Figure 6 – Market-making volumes traded by contract[11]



Source: ICIS Energy, Secure and Promote (S&P) Licensees, Total Trading only shows market-making mandated contracts traded OTC

Near-term market progress

2.19. A key objective of Secure and Promote was to ensure near-term markets continue to function effectively. Near-term markets are important for enabling firms to match their contracted positions with their physical position as they approach the time of delivery. This helps them to avoid imbalance charges by the system operator and therefore reduce their costs. We did not intervene in near-term markets, but instead introduced an obligation on the licensees to report their day-ahead trading to us. We are monitoring the state of near-term liquidity through reporting of trading on the exchanges, where most near-term trading takes place.

Key findings

2.20. The near-term market remains liquid since Secure and Promote. Overall exchange trading volumes are higher year-on-year. Day-ahead exchange trading

[11] M+1, M+2, S+1, Q+1 etc. refer to contracts traded for delivery one month out, two months out, one season out and one quarter out respectively. The right-hand axis shows the volume of the relevant contract traded in the market-making windows as a proportion of total OTC trading volumes in Secure and Promote market-making products.

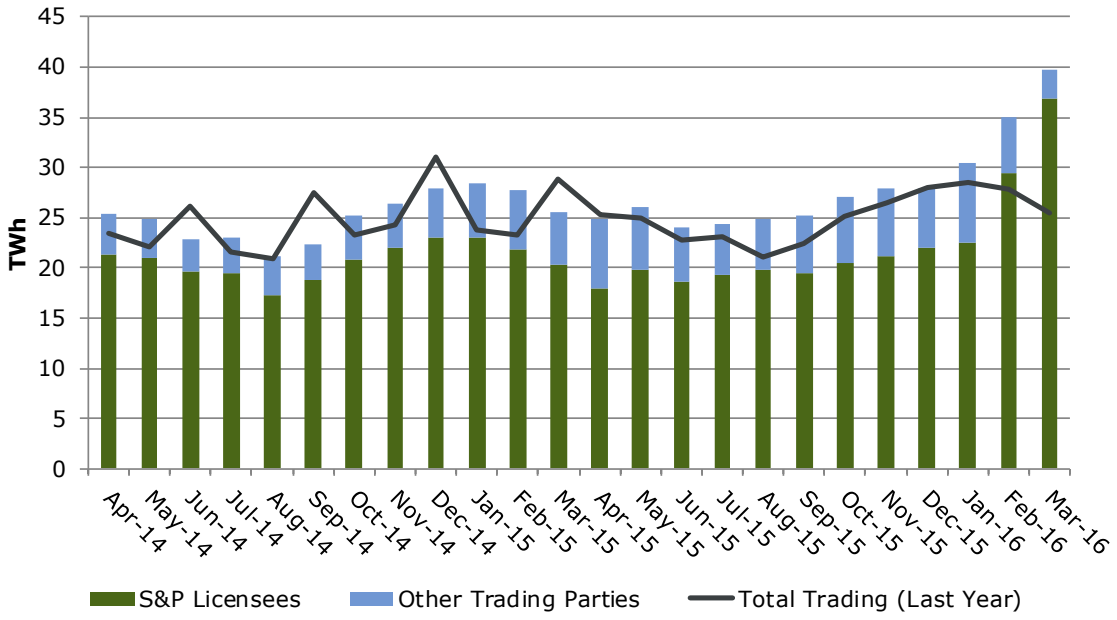
volumes have also increased year-on-year, as have intraday volumes since Secure and Promote.

2.21. We remain vigilant, and we continue to monitor liquidity development in near-term markets as we consider day-ahead and intra-day liquidity to be important.

Near-term liquidity data

2.22. Exchange trading, which is dominated by day-ahead trading, has shown an upward trend since 2010. Since Secure and Promote, day-ahead exchange trading has continued to follow an upward trend (Figure 7), with a particular increase in the last quarter. In addition to market coupling, which has pooled liquidity on the two day-ahead auction platforms through the 'GB virtual hub', the increased volume of renewables in GB's generation mix has also contributed to the trend of higher volumes at day-ahead stage. Frequent changes in forecasts of wind and solar capacity can drive readjustments in positions during day-ahead and intraday timeframes.

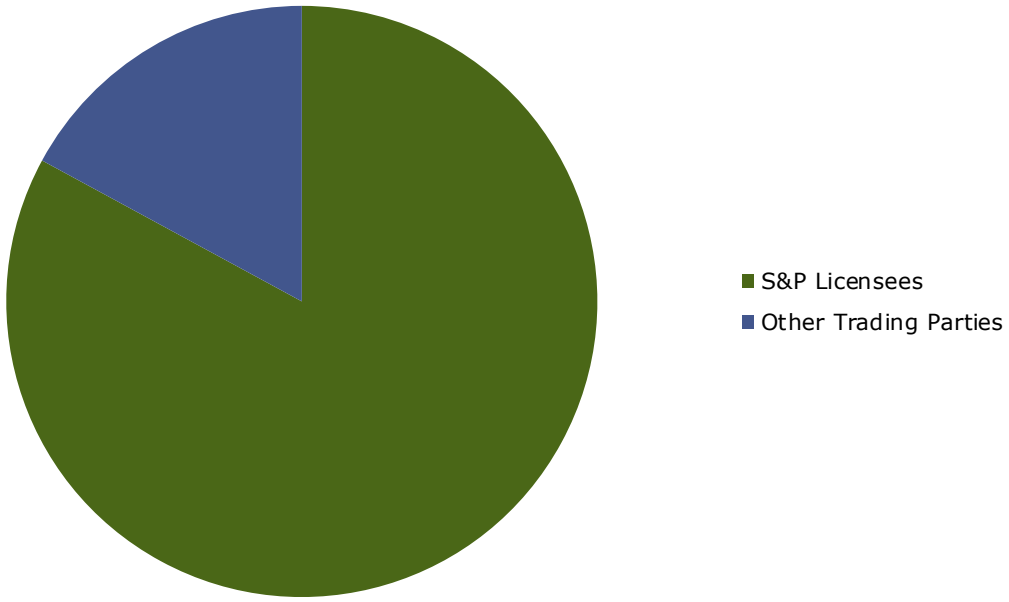
Figure 7 – Day-ahead trading



Source: Secure and Promote (S&P) Licensees, Total Trading consists of Day-Ahead OTC Trading, NPS, and APX Trading Day-Ahead

2.23. Day-ahead trading continues to be dominated by the six largest vertically integrated companies and two large independent generators. Their share of day-ahead gross volumes traded has stayed broadly constant and averaged around 80% since Secure and Promote (Figure 8).

Figure 8 – Share of day-ahead trading, Q2 2014 – Q1 2016



Source: Secure and Promote (S&P) Licensees, Total Trading consists of Day-Ahead OTC Trading, NPS, and APX Day-Ahead Trading. The grey portion is trading by non-S&P licensees.

2.24. In the next chapter, we report data that we monitor at market level to track liquidity in the market. The complete set of metrics we are using may be found in appendix 2.

3. Market level analysis

Chapter Summary
This chapter describes the metrics we are using to track liquidity in the market, and shows the data from our monitoring to date.

Liquidity has shown signs of improvement since Secure and Promote came into effect, albeit with a decline in the middle of 2015. There is no single metric that can provide a complete view of liquidity in the market. We therefore consider a set of metrics. The overall improvement in liquidity and the level of overall trading in the market is evidenced by our analysis of the key metrics, which show relatively higher churn and steady bid-offer spreads over the last year.

We recognise that many factors can impact liquidity. We now have two years of data, but it remains difficult to isolate the effect of our reforms among the multiple influences since Secure and Promote started. However, we believe that Secure and Promote has contributed to increasing liquidity in the market.

Metrics to track liquidity in the market

3.1. In our monitoring of the effectiveness of Secure and Promote, we consider a number of quantitative metrics like churn and bid-offer spreads (as they can give insight as to product availability and reliable prices), as well as any qualitative feedback from industry participants.

3.2. To help us monitor liquidity weave tracked a number of metrics, including:

- the volume of power traded on different platforms, the number of times a unit of electricity is traded before it is delivered (churn)
- at what times power was traded in the day
- what type of contracts were traded (baseload or peak products and how far out into the future they are traded)
- the difference between the bid-offer spreads (the prices at which parties were offering to sell and buy a unit of energy)

Market-level metrics results

3.3. After two years of monitoring, the metrics show improving liquidity overall. Over the last year, we have seen a decline in Q2-Q3 2015 and a notable increase in liquidity since then. The metrics have shown that:

- churn, or the amount of electricity traded compared to the amount used by consumers, has increased year-on-year since Secure and Promote (Figure 9), with churn higher month-on-month in all but 4 months since Q2 2015

- bid-offer spreads followed a downward trend until Q4 2014 and have continued largely stable since that time (Figure 13), which suggests that the price being paid for electricity is reflecting market value
- trading volumes have risen in the market-making windows and have stayed broadly static in the rest of the day with a slight drop-off in the late afternoon and mid-morning (Figure 10)
- the amount of baseload products traded for delivery more than one season ahead has increased on average (Figure 11). This is one indicator of the ability to hedge and shows the extent to which participants are accessing products for delivery months and years in advance
- there have been slightly higher volumes of trade over the counter (OTC) on average over the last year of our monitoring, with a particular rise in volumes since Q2 2015
- Total exchange trading since Secure and Promote is higher over the last year, with a more notable increase since Q1 2016 in line with the uptick in day-ahead trading (Figure 14)

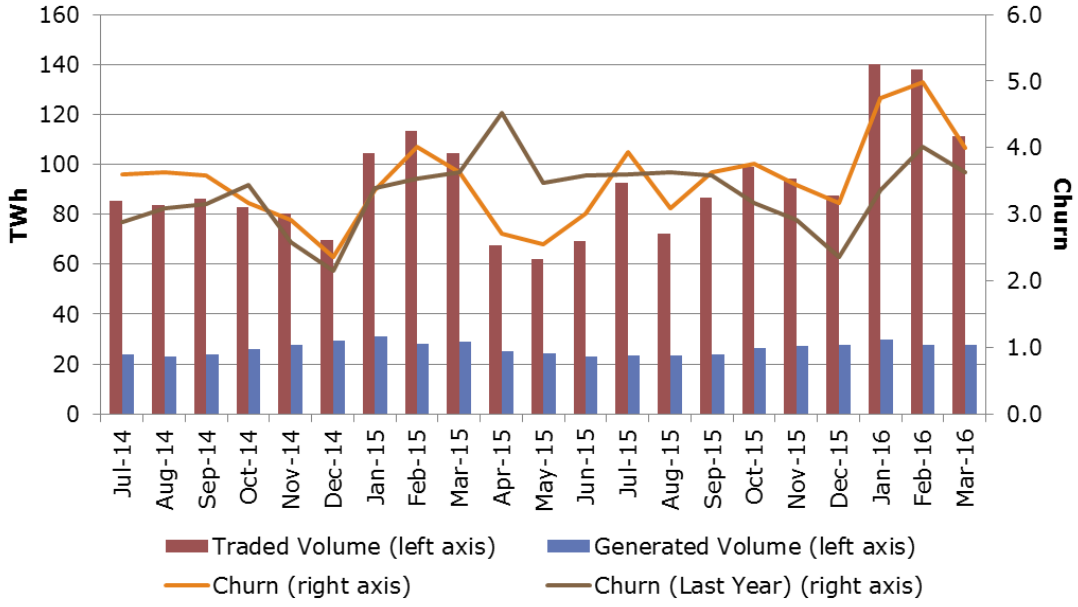
3.4. There are many factors in addition to Secure and Promote that may have contributed to the overall increase in trading volumes. If participants think there is greater risk to wholesale prices, they are likely to trade more. Many factors could have influenced participants' views of risk over the last year as mentioned above, with most recently, the volatility in the price of oil and the increased amount of renewable generation in the generation mix. Power trading also typically varies throughout the year. It is not possible to determine the impact of these factors individually on the levels of liquidiy, however we believe that Secure and Promote has contributed to increasing liquidity in the market.

3.5. Graphs of the main indicators follow, along with a brief explanation of what they show.

Churn

3.6. The churn rate shows how many times a unit of electricity is traded before it is delivered to customers. A higher churn indicates that it is easier for participants to trade and that they are often re-trading in order to optimise their positions before final delivery.

Figure 9 - Monthly Churn



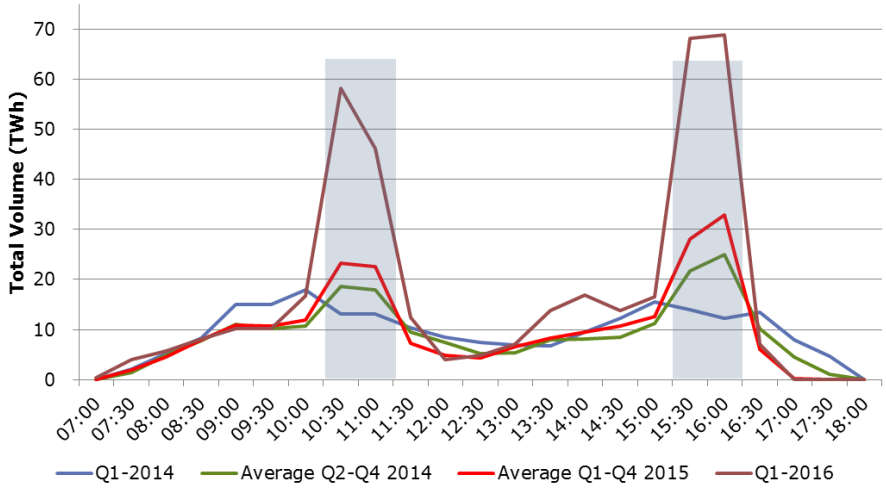
Source: DUKES, ICIS Energy, APX, NPS, ICE, Traded Volume consists of total OTC and exchange trading.

3.7. Our data shows an overall higher year-on-year trend in churn. This was positive for liquidity as it shows there may have been more participants willing to trade and hedge their positions in the market. Churn has been broadly stable in the last year compared with the first year. This reflects a notable uptick in the last two quarters, which has outweighed the fall in churn in the middle of 2015. The relative fall in churn in Q2-Q3 2015 reflects a reduced desire to trade and hedge in a low-price, low volatile market.

Trading across the day

3.8. We are monitoring when trading takes place during the day because an extreme concentration of trade at one period of time might mean that trading opportunities are limited at other times in the day. More trading at all times across the day or more trading at certain times with no reduction at other times would both be positive for liquidity.

Figure 10 - OTC trading in market-making contracts throughout the day



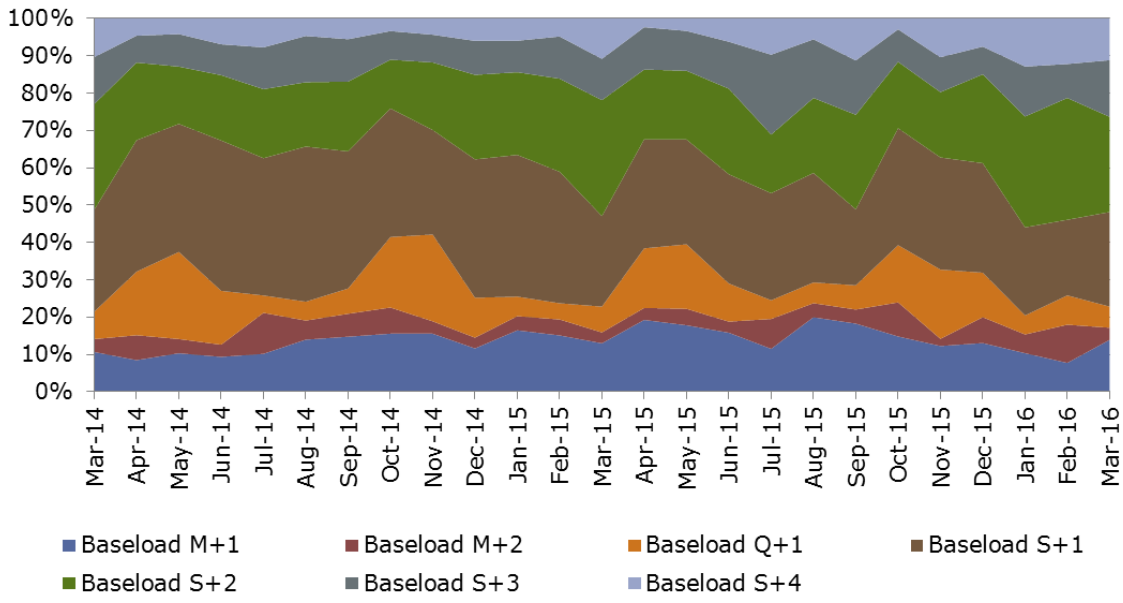
Source: Ofgem, Data only shows over-the-counter (OTC) market-making mandated contracts. Periods in grey represent the market-making windows.

3.9. Early feedback from stakeholders included concerns about liquidity moving into the two windows and drying up at other times. In Figure 10 we see that trading volumes have risen in the windows, particularly in the afternoon, and have stayed broadly static between the windows. There is still evidence of less trade taking place at the end of the day and mid-morning compared with Q1 2014 (before Secure and Promote), and that the recent increased OTC volumes are tending to concentrate in the windows, but the evidence does not suggest product availability or price robustness are being adversely affected overall. We are monitoring this carefully.

Range of contracts traded

3.10. To compete effectively, market participants need to access forward products which allow them to hedge against movements in the wholesale price. One indicator of the ability to hedge is the proportion of the OTC market that is traded months and years ahead of delivery. We measure this by looking at the volume of relevant products traded in the market and compare the proportion traded for delivery further out in time (year and two years ahead) with that for closer delivery (one month ahead). In this respect a positive movement in this indicator would be a growing proportion of products traded for delivery further out into the future.

Figure 11 - OTC trading in baseload market-making contracts[12]



Source: ICIS Energy, Data only shows market-making mandated contracts

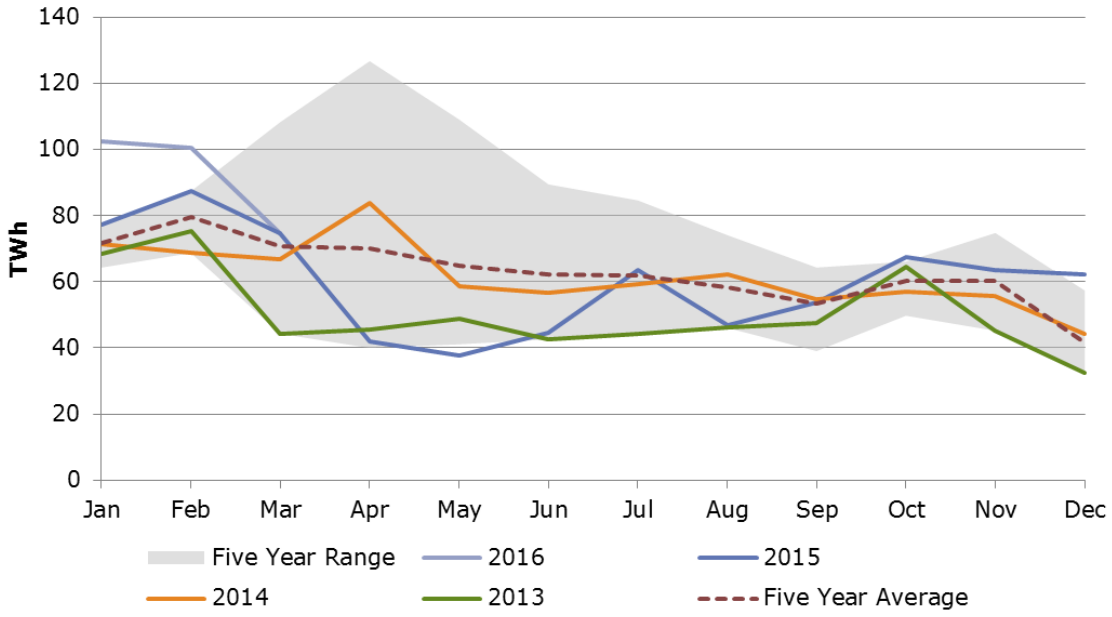
3.11. The season ahead baseload product continues to be the most used as shown in Figure 11. Baseload products for delivery more than one season ahead made up 45% of total baseload products traded over the last year compared to 36% in the first year. In addition, we see a higher level of year on year volumes of trade for delivery at least two seasons ahead. Our data also continues to show a growing trend in peakload volumes traded in the OTC market that has strengthened in the last year. The steady availability of peakload products is helpful to participants to hedge their positions at times of high demand, especially given the historical trend of relatively low peakload products compared with baseload.

Trading volumes in the OTC market

3.12. The volume of trading in the OTC market, where the majority of forward trading takes place, is useful to monitor alongside the other metrics as it shows the overall level of activity in the market. A positive movement in this indicator would be greater volumes of OTC trade year on year.

[12] M+1, M+2, S+1, Q+1 etc. refer to contracts traded for delivery one month out, two months out, one season out and one quarter out respectively.

Figure 12 – Total OTC trading by quarter



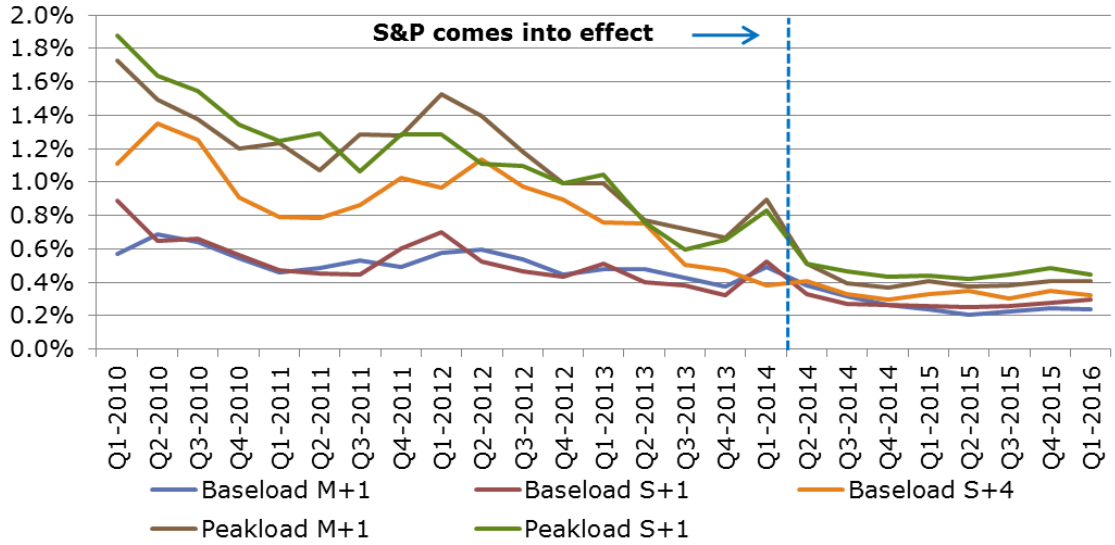
Source: ICIS Energy, Data only shows market-making mandated contracts

3.13. Total OTC trading in market-making products has been volatile and comparable on average over the last year (Figure 12) compared with the first year. This relatively sustained OTC activity since Secure and Promote reflects the high volatility seen in the majority of the period, despite some factors that might have caused trading to fall in this time. As mentioned, the fall in 2015 reflects the low volatility and prices we have seen.

Bid-offer spreads

3.14. Bid-offer spreads are a useful indicator of liquidity as they indicate the extent to which prices reflect market value. A tight (low) bid-offer spread is likely to indicate a large number of participants in the market. Tight spreads should encourage entry into the market because participants are confident of being able to buy and sell at a fair cost. A lower bid-offer spread is positive for liquidity.

Figure 13 – Bid-offer spreads



Source: ICIS Energy

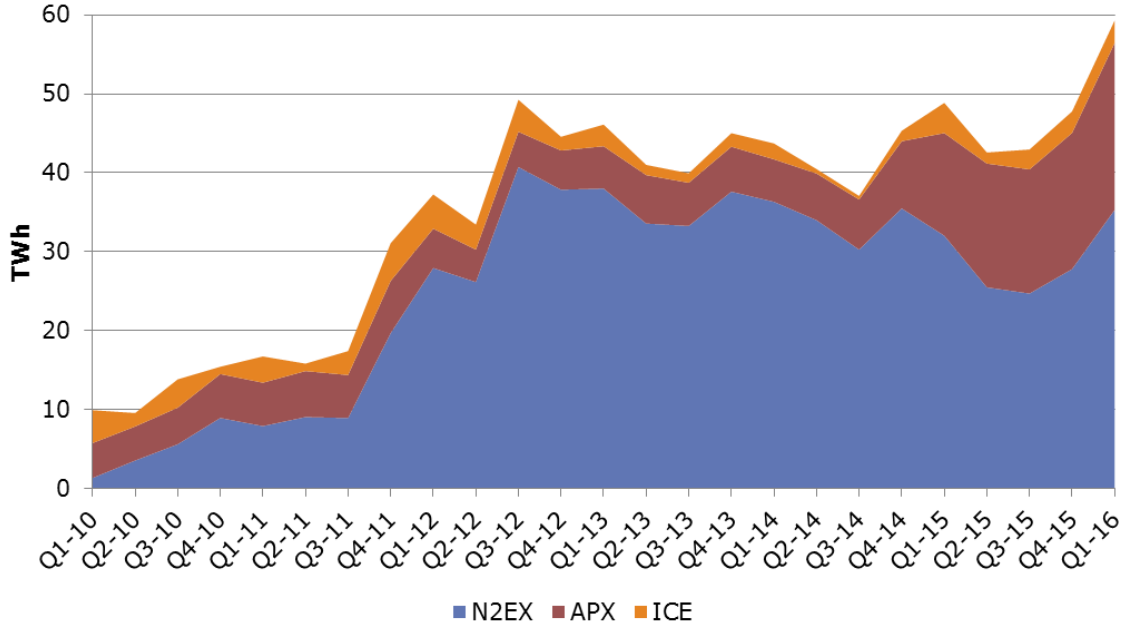
3.15. Bid-offer spreads followed a downward trend since 2010 as Figure 13 shows. Spreads have stayed largely stable over the last year, reflecting the mandated spreads under Secure and Promote.[13] These maintained spreads are positive in that the market can have confidence that prices reflect the underlying demand and supply conditions. We note that our data is based on spreads assessed at the close of trade, and as such reflects the mandated spreads in the afternoon market-making window. Bid-offer spreads throughout the day may be different to those shown by our data.

Trading volumes in the exchange market

3.16. The volume of trading in the exchange market is useful to monitor alongside the other metrics as the majority of near-term trading takes place on exchanges. A positive movement in this indicator equates to greater volumes of trade year on year.

[13] These spreads may be seen in Appendix 1, Table 2.

Figure 14 – Volume of trading on exchanges



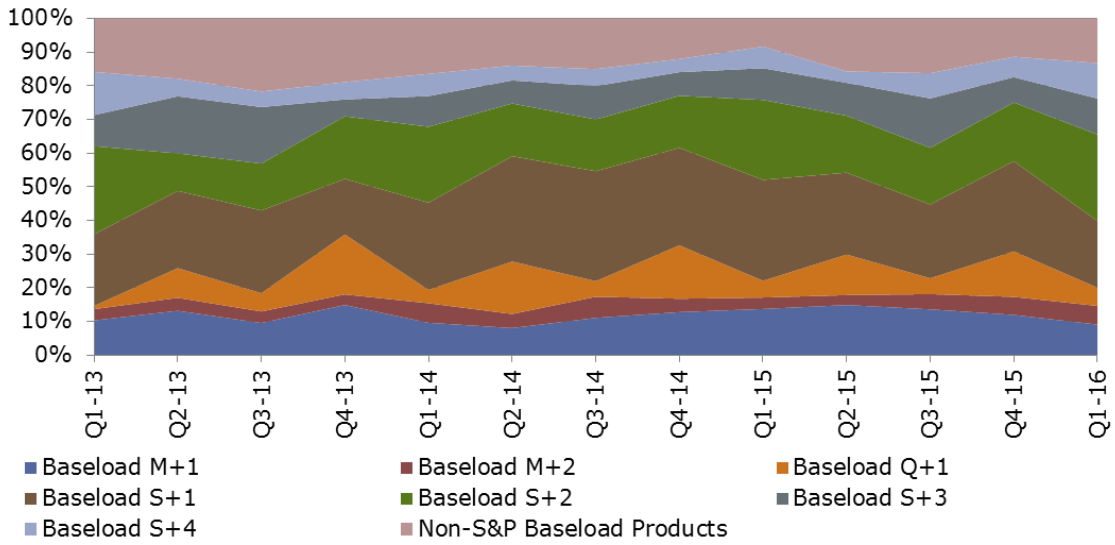
Source: NPS, APX, ICE

3.17. Exchange trading, which is dominated by day-ahead contracts, has shown some volatility since the increase in 2011-2012 (Figure 14). Total exchange trading has continued to follow an upward trend over the last year compared with the first year of Secure and Promote, with an increase of around 12% in volumes traded on the exchanges. Given stakeholders' initial concerns that Secure and Promote might negatively impact on exchange trading, the trend shown here is reassuring.

Effects on products not covered under Secure and Promote

3.18. Early on in the policy, we heard concerns expressed by stakeholders on the effect of Secure and Promote on non-mandatory Secure and Promote products. Our analysis of the OTC trading data over the last year shows a larger volume of non-mandatory Secure and Promote baseload products as a proportion of total OTC baseload products, compared with the first year of the policy; this increase in non-mandatory products is in line with the overall increase in OTC volumes. In Q1 2015 non S&P products made up 8.3% of total OTC baseload trade volumes. In Q1 2016, this had increased to 13.2%. Figure 15 shows the proportions for a longer time series from 2013 to see the equivalent period pre and post Secure and Promote.

Figure 15 - OTC baseload trading since Q1 2013



Source: ICIS Energy

3.19. Looking at the longer time series in the two years before and after Secure and Promote, there has been a slight increase in trading of Secure and Promote products compared with non-S&P products, reflecting the fact that those selected products (that were already widely used by market participants) have mandated spreads and are available at regular times. This naturally increases the opportunities to trade in these products. Conversely, non-S&P products do not have these opportunities, so it is not surprising to see a relative fall in their traded volumes as we noted in the first year of monitoring.

3.20. Given that these non-mandatory products were already traded in low volumes before Secure and Promote came into effect (under 10 TWh monthly on average vs 52 TWh for mandatory products), the reduced trade overall since the Policy began in these products is not likely to adversely affect participants' ability to hedge in the market.

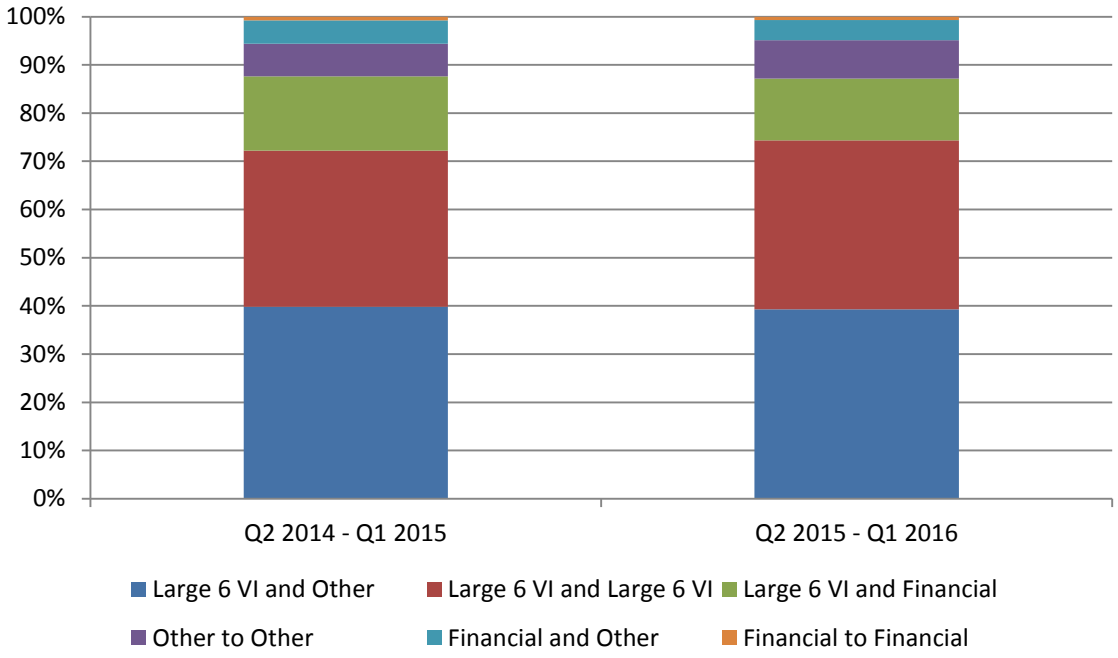
Participation in the market since Secure and Promote

3.21. Early stakeholder feedback included concerns that the Secure and Promote intervention was not sufficient to attract financial institutions back to the market and 'kick-start' liquidity. We have updated our analysis on what types of participants trade in the market in order to understand any impact from Secure and Promote.

3.22. Figure 16 shows the participation of different types of entities in the OTC market comparing the two years of data on either side of the trade since Secure and

Promote began. This is still a relatively limited data set, so it is an indicative view of who is participating in the market.

Figure 16 - Participation in the OTC market



Source: Ofgem. Data is based on the number of trades. The participation has been averaged over the relevant periods.

3.23. Our data shows that trading by and with the six largest vertically integrated (VI) utilities continues to dominate the market since Secure and Promote. The total percentage of trades involving at least one of the largest VI utilities has remained steady between the two years, at around 87%-88% on average. It also shows a falling number of financial institutions participating: the percentage of trades involving at least one financial institution decreased year-on-year, falling from 21% on average in the first year of monitoring to 18% in the last year. We see a slight increase in the percentage of trades involving other entities (trading houses, independent generators, suppliers and other smaller participants) from 51% on average to 52% over the same period.

3.24. We noted last year that there are wider factors influencing the participation of financial participants – for example, European financial regulation, relatively low prices, and the scarcity of risk capital[14] - and that these affect commodities in general rather than specifically GB power. We have not seen evidence to contradict

[14] Further information on the European financial regulation MiFID II is here: http://ec.europa.eu/finance/securities/isd/mifid2/index_en.htm

this; Secure and Promote has not substantively contributed to this reduced participation.

3.25. In the next chapter, we describe our next steps in our monitoring of Secure and Promote and liquidity in the market.

4. Next Steps

We are interested in your feedback on Secure and Promote

4.1. Feedback from stakeholders is an essential component of our monitoring and evaluation of the Secure and Promote reforms. We are always keen on continuing our engagement with interested parties to inform our monitoring and we expect to engage increasingly with stakeholders in the next year as the policy reaches its review stage.

Policy developments

4.2. Alongside developments in the market, there are a number of issues, reforms and work streams that may affect liquidity such as the CMA's remedies following the energy market investigation, Electricity Market Reform, European financial legislation, and the accessibility of credit. We will continue to monitor the impact of these.

Continued monitoring and enforcement

4.3. The Secure and Promote licence condition is subject to the normal enforcement processes applicable to generation and supply licences, set out in Ofgem's Enforcement Guidelines on complaints and investigations.[15] We are monitoring compliance based on our wholesale market monitoring, information collected from the licensees, broader consultation with other market participants, and any complaints that we may receive.

4.4. As with all licence conditions, any decision to investigate a potential breach of Secure and Promote would be made in accordance with the Enforcement Guidelines and would take the facts of the case into account. Factors considered before investigating a potential infringement include (but are not limited to) the extent of the potential harm to consumers and whether the licensee addresses the situation.

Post-implementation review

4.5. In our 2013 statutory consultation on the Secure and Promote licence condition we indicated that, aside from any review prompted by EU financial legislation, we intended to leave the licence condition in place for a significant period (at least three years) before making fundamental changes. We indicated that we

[15] Ofgem (2014), Enforcement guidelines: https://www.ofgem.gov.uk/ofgem-publications/89753/enforcementguidelines12september2014publishedversion.pdf

would expect to conduct a review of whether it remained appropriate after this period.

4.6. To allow us a full three years' worth of data with which to assess the effects of the condition, and in the interests of regulatory certainty, we intend to observe this review timescale. The Secure and Promote licence condition came into force on 31 March 2014, therefore we do not propose to consider changes to the condition before 31 March 2017. However, during the remainder of 2016 we intend to progress our thinking around the scope of the review and around what data we will need to conduct it. The liquidity indicators assessed in the Annual Liquidity Reports will form a core part of our review, but we would like to use this opportunity to invite stakeholders to contact us if they think there are indicators or issues relating to the effectiveness of the Secure and Promote Licence condition that are not covered in the Reports.

Our forward timetable

4.7. We will publish an annual report by the end of summer every year while Secure and Promote is in place.

5. Appendices

Index

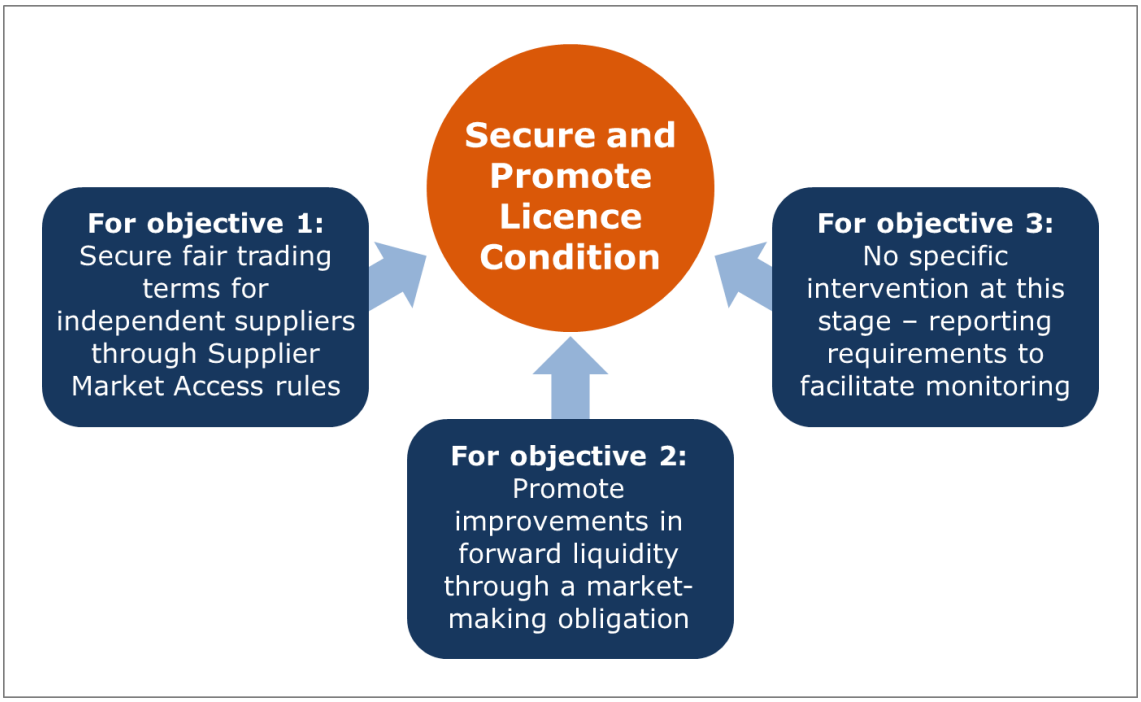
Appendix 1 – The Secure and Promote Special Licence Condition

This section summarises the Secure and Promote special licence condition. The detailed obligations of Secure and Promote have been implemented through schedules to the licence condition, which came into effect on 31 March 2014.

Structure of Secure and Promote

5.1. Figure 17 below summarises our final proposals for Secure and Promote:

Figure 17 – Structure and objectives of Secure and Promote



1. **A Supplier Market Access obligation to meet objective one**, with explicit rules about responding to requests from independent suppliers.

2. **A market-making obligation to meet objective two, with the option of nominating a third party to undertake the obligation.** Licensees can nominate a third party to undertake market-making on their behalf if they choose.

3. **No intervention in near-term markets, but reporting requirements**. Secure and Promote includes reporting requirements to ensure that we can monitor liquidity in near-term markets effectively.

5.2. The list of licensees is different for the two obligations. The licensees are set out in Figure 18 below:

Figure 18 – Obligated licensees under Secure and Promote

Supplier Market Access rules		Market-making obligation	
Centrica	Engie (GDF Suez)	Centrica	RWE Npower
Drax Power	RWE Npower	EDF Energy	ScottishPower
EDF Energy	ScottishPower	E.ON UK	SSE Generation
E.ON UK	SSE Generation		

The detailed design of both the schedules is listed in the following tables.

Table 1: Supplier Market Access – detailed rules	
Element	**Requirements**
A1 –Transparency	Licensee must provide a **named contact** on its website for requests for trading agreements. The licensee must provide on its website a **list of the information** that is required from a potential counterparty in order to process a request for a trading agreement. Licensees may only request information that is relevant.
A2 – Scope	Licensees must follow these rules in trading with all suppliers whose affiliated parties supplied less than 5TWh and generated less than 1 TWh in the previous year, up to a limit of 0.5 TWh per counterparty. Ofgem will publish a list of Eligible Suppliers. If a group has multiple generation and/or supply licences, eligibility will be considered on a group basis.
A3 – Response to trading requests	Licensee must respond in a timely manner, by fulfilling the steps below: 1. Licensee must **acknowledge a written request** for a trading agreement within 2 Business Days. The acknowledgement must state whether necessary information has been received, or specify the further information that is required. If the request is resubmitted with further information, the licensee must acknowledge the subsequent request within 2 Business Days. 2. The licensee must **send a written response** to the request within 20 Business Days after receipt of a complete trading request. This response must include: a formal offer of a trading agreement including all relevant terms and conditions; or if the licensee cannot trade with the counterparty for legitimate reasons, the reasons for this position. 3. Licensee must ensure that any subsequent **negotiations** proceed in a timely manner. The licensee will not be held responsible for delays due to its counterparty. 4. If no agreement has been reached within 40 Business Days from the receipt of a complete trading request, the licensee must write to the counterparty within 5 Business Days, noting the outstanding areas of disagreement, and offering a **meeting** within 20 Business Days from the date of writing. 5. Following the meeting, if no agreement is reached, the licensee must continue to negotiate until such a time as agreement is reached or both parties agree to cease discussions. 6. Ofgem reserves the right to remove independent suppliers from the list of eligible suppliers in the event that they act in bad faith e.g. through vexatious requests for a trading agreement. **Requests to trade** Once a trading agreement is in place, the licensee must respond to requests to trade within 3 hours of receipt. If the request is received on a non-Business Day, or less than three hours before the end of a Business Day, a response must be provided by 11.00 am on the next Business Day.

Table 1: Supplier Market Access – detailed rules (cont.)	
A4 – Credit and Collateral	**Licensee must offer proportionate credit and collateral arrangements.** Credit terms will be considered to be proportionate when the following conditions are met: • In reaching its decision, the licensee follows a process which takes into account the individual circumstances of a counterparty, through consideration of a range of relevant information • The credit terms are a reasonable reflection of the risks of trading with the counterparty **Licensee must also clearly explain the rationale for credit decisions.** When responding to a request for a trading agreement, the licensee must complete a Credit Transparency Form which justifies its credit decision. This must set out: • The credit terms and collateral arrangements offered • The quantitative and qualitative factors and information taken into account in making this assessment • Any steps the counterparty could take which could result in a material improvement in the credit terms offered. The licensee must share the Credit Transparency Form with the counterparty and be prepared to discuss it. These credit forms should be held on file for Ofgem audit for three years.
A5 – Clip Size	If requested, licensee must trade clip sizes as small as **0.5 MW,** and in minimum increments of 0.5MW above that.
A6 – Product Range	If requested, the licensee must be willing to trade at least the following standard products: **Baseload:** Week+1, Month+1, Month+2, Quarter+1, Season+1, Season+2, Season+3, Season+4 **Peak:** Week+1, Month+1, Month+2, Quarter+1, Season+1, Season+2, Season+3
A7 – Fair and Transparent Pricing	Licensee must provide quotes for products **reflective of the market price**. Any added fees (for example trading fees) charged by external platforms should be itemised and justifiable. The licensee should not include any administration costs in the price quoted.

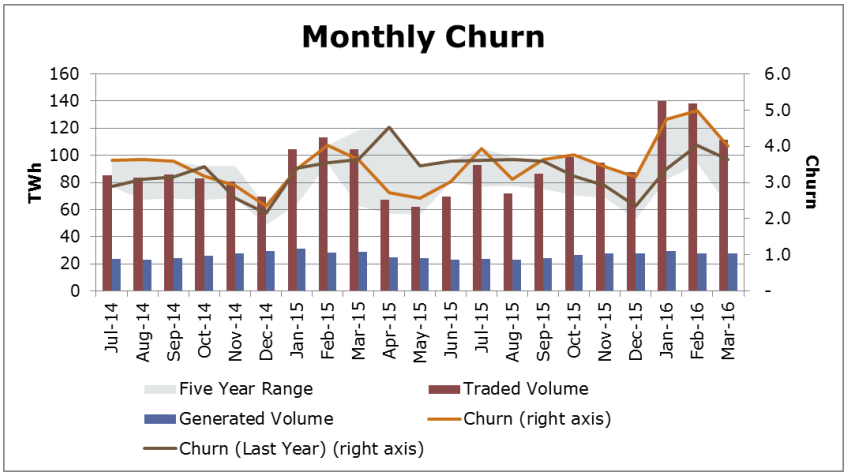
<table>
<tr><th colspan="2"><u>Table 2: Market-making Obligation – detailed rules</u></th></tr>
<tr><td>B1 – Nominating a third party</td><td>Licensee may nominate a third party to undertake their obligation on the same basis set out in this licence condition (unless otherwise specified). The licensee must not nominate any party delivering more than one other licensee's obligation.</td></tr>
<tr><td>B2 – Platform</td><td>The licensee is required to market make on any qualifying GB wholesale electricity market trading platform.</td></tr>
<tr><td>B3 – Products</td><td>The licensee must post bids and offer prices in the following products:

Baseload: Month+1, Month+2, Quarter+1, Season+1, Season+2, Season+3, Season+4
Peak: Month+1, Month+2, Quarter+1, Season+1, Season+2, Season+3.</td></tr>
<tr><td>B4 – Availability</td><td>For each of the listed products the licensee must post prices within the bid-offer spread limits specified for 100 per cent of the two hour-long trading windows. A volume cap and a fast market rule exist that allow opting out of the window for the applicable product(s).</td></tr>
<tr><td>B5 – Bid-offer spreads</td><td>When market-making, the licensee must maintain a spread between their bid and offer price narrower than:

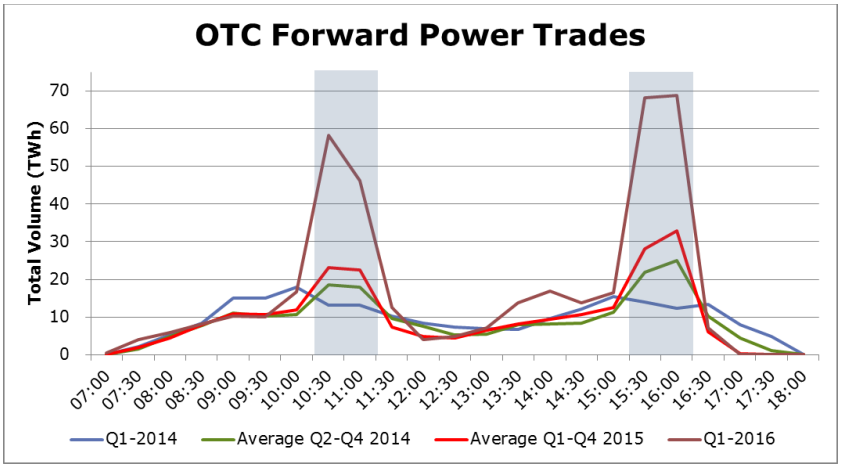
<table>
<tr><th colspan="2">Baseload</th><th colspan="2">Peak</th></tr>
<tr><td>Month+1
Month+2
Quarter+1
Season+1
Season+2</td><td>0.5%</td><td>Month+1
Month+2
Quarter+1
Season+1
Season+2</td><td>0.7%</td></tr>
<tr><td>Season+3
Season+4</td><td>0.6%</td><td>Season+3</td><td>1%</td></tr>
</table>

The allowed spreads were higher than the above by 2% for the first three months after the implementation of Secure and Promote.</td></tr>
<tr><td>B6 – Trade size</td><td>At any particular posted bid or offer price, licensee must be willing to trade in clip sizes of 5MW. The maximum trade size the licensee must execute is 10MW, although they may trade larger volumes if they wish.</td></tr>
</table>

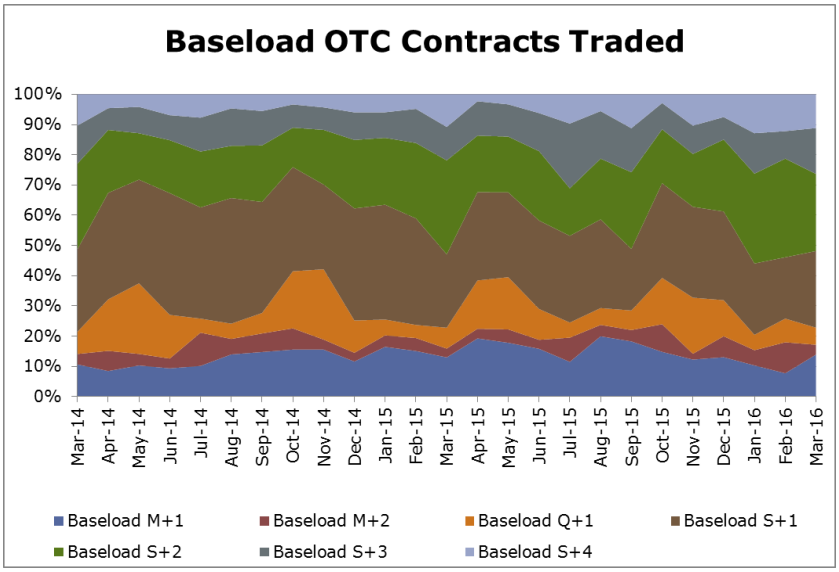
Appendix 2 – Liquidity Metrics



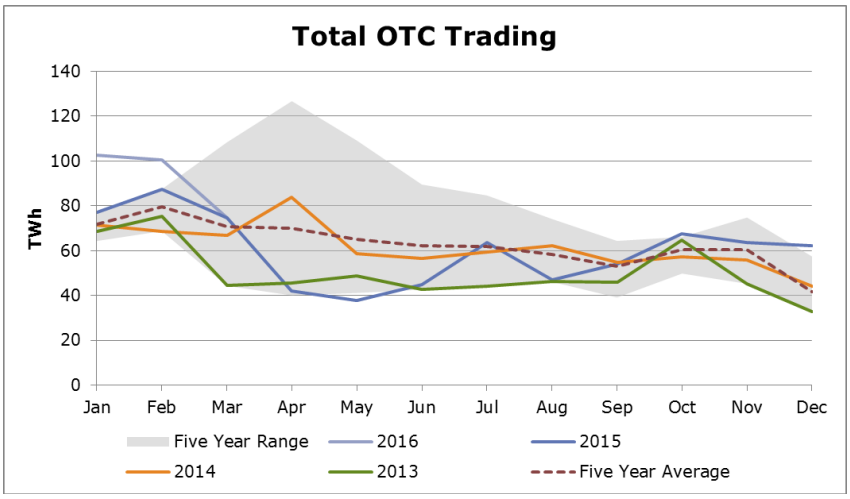
- The churn shows how often a unit of generation is traded before it is delivered.
- The graph shows churn by month over the previous 15 months.
- The left hand axis shows the volumes generated and traded in TWh
- The right hand axis shows the churn (orange line)



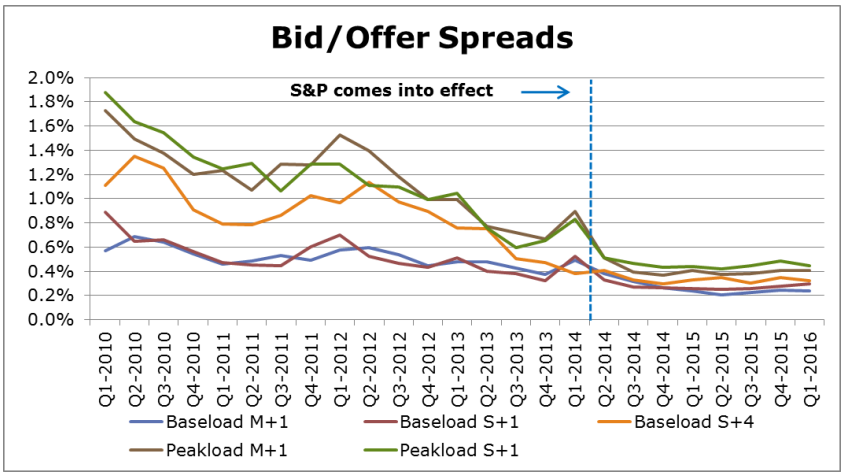
- Shows what time trades are made throughout the day in each of the first three quarters of 2014 in terms of volume.
- The grey sections show the market making windows.
- Applies to market making mandated contracts only.



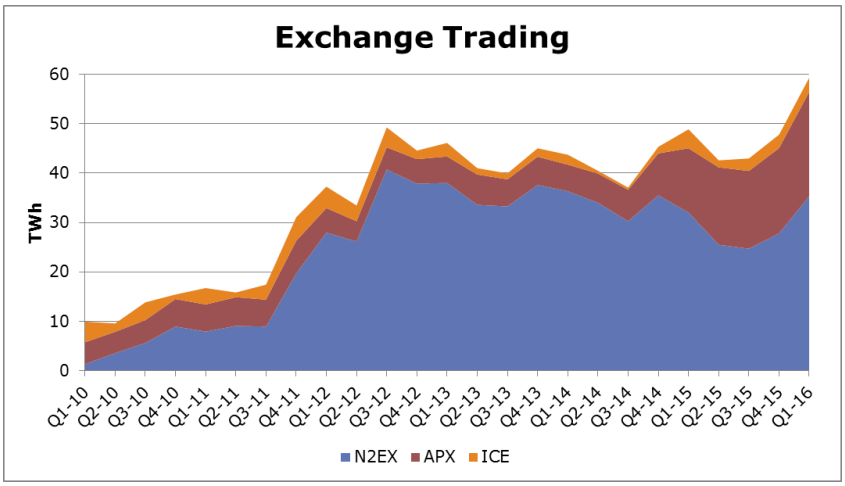
- Shows the percentage share of volumes of electricity traded for future delivery and how this has changed over the last year.
- It covers the baseload mandated market making contracts only.



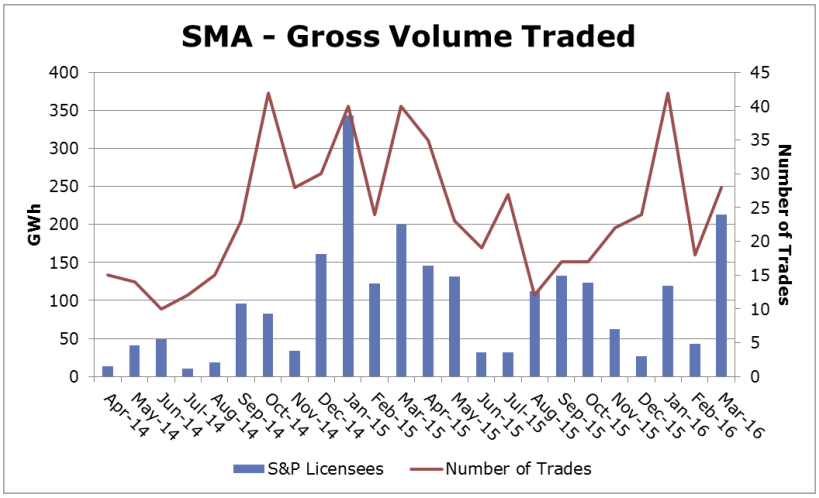
- Total OTC trading in market making contracts by quarter since 2013 in TWh.



- Bid-Offer spreads show the difference between the prices parties are willing to buy at and willing to sell at.
- The graph shows the average spreads by quarter since 2010 for selected market making contracts.

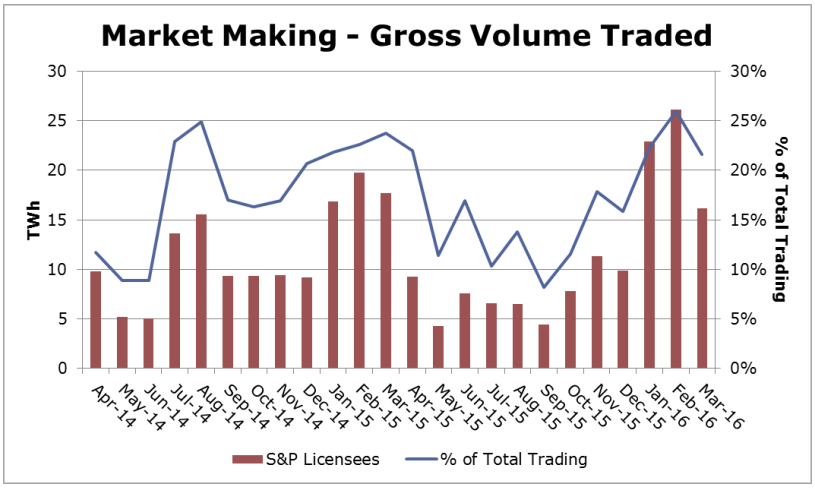


- Total exchange trading since 2011 in TWh.
- The data covers trading on the N2EX, APX, and ICE platforms.

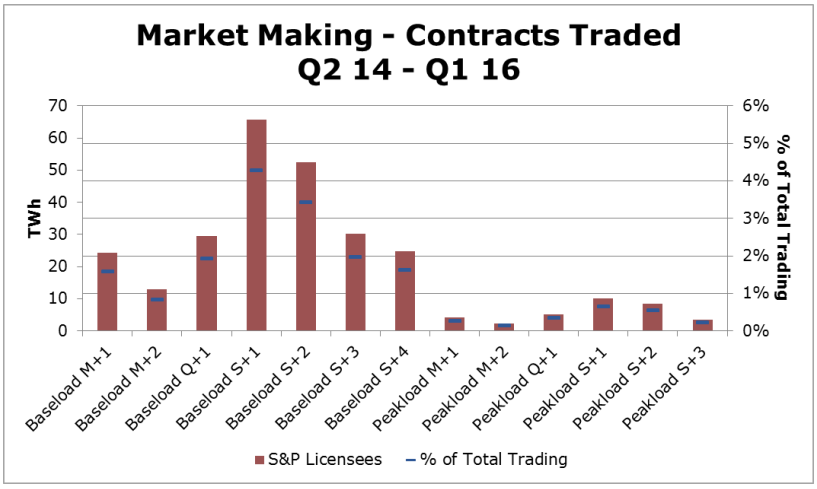


- Trades made with eligible suppliers as part of Supplier Market Access by month.
- Blue bars (left axis) show gross volume in GWh.
- Red line shows the number of trades (right axis).

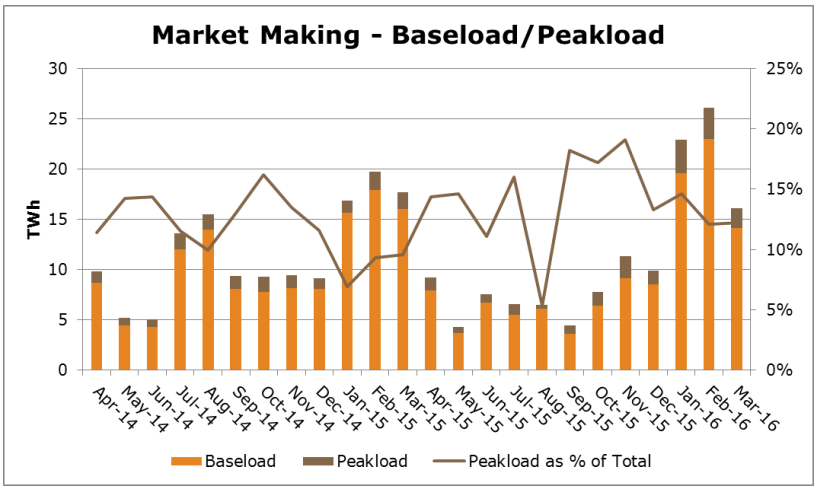
- The gross volume traded with eligible suppliers as part of Supplier Market Access (GWh) by baseload and peakload contract type.



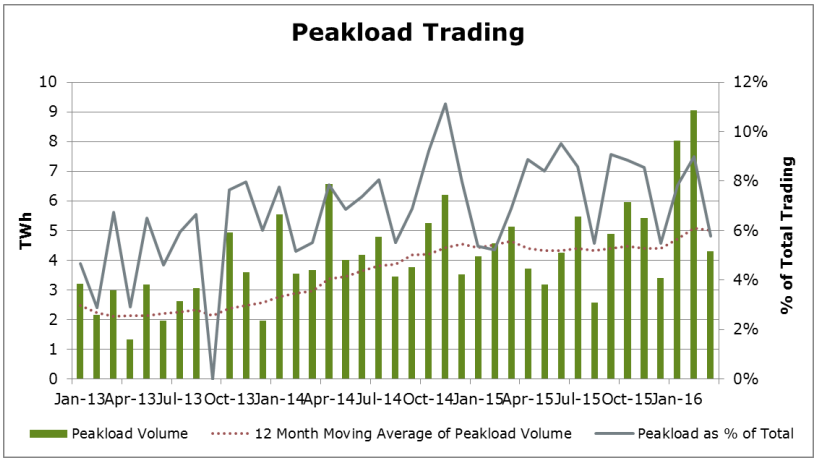
- Trades made in the market making windows by month.
- Red bars (left axis) show gross volume (TWh)
- The blue line (right axis) shows the percentage of volume traded by market making participants compared with total OTC trading in the relevant contracts.



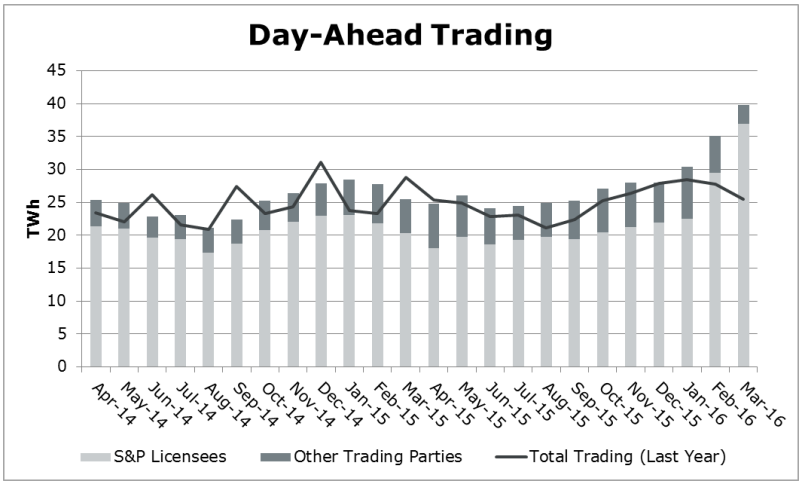
- The gross volume traded in the market making windows by baseload and peakload contract type.
- Red bars (left axis) show gross volume (TWh)
- The dashes (right axis) show the percentage in volume the contract contributes to total OTC trading.



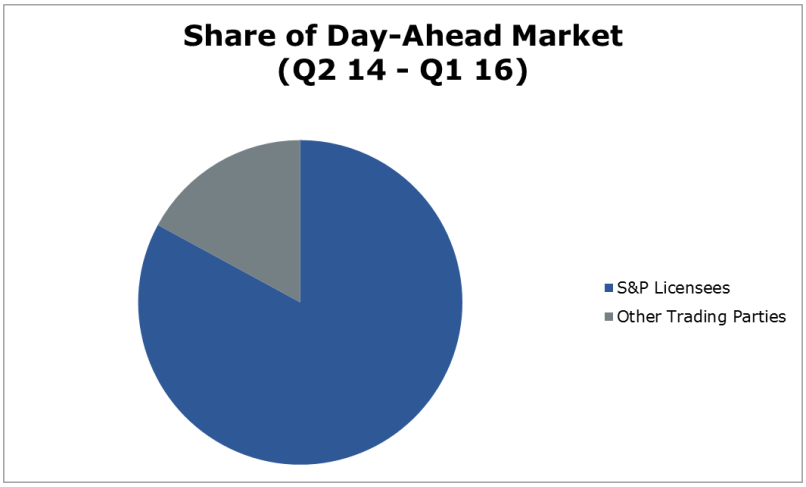
- Compares the gross volume of baseload and peakload type contracts in the market making windows by month.
- The brown line shows the percentage of peakload products traded during the windows.



- Total gross volume of mandated market making peakload contracts traded OTC since 2013.
- Green bars (left axis) show volume (TWh)
- Grey line (right axis) shows the percentage of peakload contracts traded out of total OTC trading.



- Volume of total day-ahead trading (TWh).
- The grey bars show trading since the beginning of S&P.
- The grey line shows trading in the equivalent month a year ago.



- The share of day-ahead trading between the main market participants
- The grey section denotes 'Other Parties'

Appendix 3 – Glossary

A

Agency for the Cooperation of Energy Regulators (ACER)

ACER is a European Union body which cooperates with EU institutions and stakeholders, notably National Regulatory Authorities (NRAs) and European Networks of Transmission System Operators (ENTSOs), to deliver a series of instruments for the completion of a single energy market.

APX

APX owns and operates energy exchange markets in the Netherlands, UK and Belgium. APX provides a power spot exchange service in the UK.

B

Barrier to entry

A factor that may restrict entry into a market.

Baseload product

A product which provides for the delivery of a flat rate of electricity in each hourly period over the period of the contract.

Bid-offer spread

The bid-offer spread shows the difference between the price quoted for an immediate sale (offer) and an immediate purchase (bid) of the same product. It is often used as a measure of liquidity.

Broker

A broker handles and intermediates between orders to buy and sell. For this service, a commission is charged which, depending upon the broker and the size of the transaction, may or may not be negotiated.

C

Churn rate

Churn is typically measured as the volume traded as a multiple of the underlying consumption or production level of a commodity.

Clearing

The process by which a central organisation acts as an intermediary and assumes the role of a buyer and seller for transactions in order to reconcile orders between transacting parties.

Clip size

The size (usually in MW) of the contract to be traded.

Collateral

A borrower will pledge collateral (securities, cash etc.) in order to demonstrate their ability to meet their obligations to repay loans. The collateral serves as protection for a lender against a borrower's risk of default.

Contract for Difference (CfD)

A contract where the payoff is defined as the difference between a pre-agreed 'strike' price and a reference price (determined in relation to an underlying commodity). The government has proposed the use of CfDs as part of Electricity Market Reform. CfDs under EMR are intended to encourage investment in low-carbon generation by providing greater long-term revenue certainty to investors.

Credit line

The limit that a company sets on the maximum amount of credit it is willing to extend to a trading counterparty. Credit risk typically comprises the value of the products delivered to the counterparty and not yet paid for, and the possible profit on products not yet delivered.

D

Day-ahead market

A form of near-term market where products are traded for delivery in the following day.

Department of Energy and Climate Change (DECC)

The UK government department responsible for energy and climate change policy.

E

Electricity Market Reform (EMR)

EMR is the government's approach to reforming the electricity system to ensure the UK's future electricity supply is secure, low-carbon and affordable.

Exchange

A type of platform on which power products are sold. Typically an exchange would allow qualifying members to trade anonymously with other parties and the risks between parties would be managed by a clearing service.

F

Financial Product

A contract that is settled financially at maturity rather than by the delivery of a physical commodity.

Forward Curve

A series of sequential time segments within which it is possible to trade a particular commodity and for which prices are available.

Forward trading

The trading of commodities to be delivered at a future date. Forward products may be physically settled – by delivery – or financially settled.

G

Grid Trade Master Agreement

A Grid Trade Master Agreement (GTMA) is a legal agreement between the two parties in a trade that sets out terms for financially settling the contract and physically delivering the power.

H

Hedging

Transactions which fix the future price of a good or service, and thereby remove exposure to the daily (or spot) price of a good or service. This enables those purchasing a good or service to reduce the risk of short term price movements.

I

ICE

Intercontinental Exchange, an American financial company that operates Internet-based marketplaces which trade futures and over-the-counter (OTC) energy and commodity contracts as well as derivative financial products.

IFA

The electricity interconnector between GB and France.

Imbalance

The difference between a party's contracted position and metered position measured on a half-hourly basis.

Intra-day trading

Refers to the market in which products traded are on the same day as delivery.

L

Liquidity

Liquidity is the ability to quickly buy and sell a commodity without a significant change in its price and without incurring significant transaction costs.

M

Market Coupling

Market coupling is a method for integrating electricity markets in different areas, applied across a number of European countries.

Market Maker

A firm which is regularly prepared to buy and sell in a commodities or financial market. Market makers post two-sided (bid and ask) prices on a regular basis, encouraging greater liquidity.

N

N2EX

The N2 Exchange, a GB electricity market platform, is operated by Nord Pool Spot AS (NPS).

Near-term market

The market in which the products are traded close to delivery (for example, on the day of delivery or day-ahead of delivery.

Nord Pool

Nord Pool, the Nordic Power Exchange, a single power market for Norway, Denmark, Sweden and Finland.

O

Off-peak product

A product which provides for the delivery of a flat rate of electricity for the period of the day when demand is typically lowest for the duration of the contract.

Over the Counter (OTC)

Trading of financial instruments, including commodities, that takes place directly between counterparties. This is in contrast to exchange-based trading where the exchange acts as a counterparty to all trades.

P

Peak product

A product which provides for the delivery of a flat rate of electricity for the period of the day when demand is typically highest for the duration of the contract.

Physical settlement

A contract that, at maturity, results in an exchange of the contracted good for its contracted value.

Product

The type of contract available. Examples include day-ahead, weekly, weekend, block seasonal, year, etc. Standard products are those that are widely traded on well-established terms, so exchanges generally deal in standard products. By contrast, structured products are those where the terms are precisely tailored to match the contract buyer's requirements, and they usually involve variable contract volumes and/or non-standard volumes and durations.

R

Reference price

A price for a product which has been revealed through enough trading for it to be considered reflective of the product's 'true' market value.

Retail Market Review (RMR)

Ofgem's Retail Market Review aims to make the energy market simpler, clearer and fairer for consumers, encouraging and equipping them to engage effectively so that they can get the best deal.

S

Shaped product

A shaped product is a contract which specifies different amounts of electricity to be delivered at different times. A bespoke shaped product with half-hour granularity could specify a different volume for every half-hour period of the contract's duration.

Spot market

Refers to the market in which products traded are delivered at (or close to) delivery.

T

Third Package

The Third Package is EU legislation on European electricity and gas markets that entered into force on 3 September 2009. The purpose of the Third Package is to further liberalise European energy markets. DECC is primarily responsible for its transposition in Great Britain and had to do this by 3 March 2011.

V

Vertical Integration

Where one corporate group owns two or more parts of the energy supply chain. For example, where the same group features both generation and supply businesses.

W

Window

Refers to one of the two one-hour windows starting at 10.30 am and 2.30 pm on business days when the market-making obligation applies.