



Wholesale Power Market Liquidity: Annual Report 2015

Report

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Overview:

This is our first annual report on liquidity in the wholesale electricity market since our new licence obligations to promote liquidity came into effect in March 2014. This follows an interim report published in December 2014. We introduced these licence obligations because we were concerned that poor liquidity in the wholesale power market was preventing consumers from fully realising the benefits that competition can deliver. The new regulations aim to help improve independent suppliers' access to the wholesale market and ensure that the market provides the products and price signals that all companies need to compete effectively.

We have been monitoring the effects of the reforms both to assess their impact and to make sure the obligated parties comply with them. This report shows the most recent results from the analysis and the feedback we have had. The results show a notable improvement in liquidity in the wholesale market over the first year, but a decline in the most recent quarter. There are many factors that could have contributed to the results we are seeing so far, and it is difficult to draw definitive conclusions at this stage. We continue to monitor the effect of our reforms. We note that independent suppliers have told us that they are finding it easier to access the products they need.



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 GB was in a period of decline since 2001 and is lower than other energy and commodity markets, including a number of European electricity markets. Ofgem's Energy Supply Probe in 2008 found that low liquidity in the electricity market was a concern, particularly as 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.

We will be publishing annual reports on the impact of Secure and Promote. This is the first annual report. It presents the results of the first year and a quarter of our monitoring and analysis from 1 April 2014 to 30 June 2015.

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>

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Executive Summary

This document is our first 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 shows a notable improvement in liquidity in the first year, but a decline in the most recent quarter.

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 Ofgem and industry participants were concerned 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 suppliers¹ and the largest eight generators², 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

As a part of the reforms, licensees must also report to Ofgem data on their trades every quarter under the SMA rules and the market-making obligation.

Key results

Liquidity indicators

Our analysis shows that liquidity has improved in the first year since Secure and Promote was introduced, but has declined in the most recent quarter. We now have five quarters worth of data, but it remains difficult to isolate the effect of our reforms given the many factors that affect liquidity as well as the limited data set we hold.

We saw more trading and improved access to products in the first year of our reforms. Trends such as relatively higher churn (the number of times a unit of

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/liquidityinthewholesaleelectricitymarketspecialconditionaoftheelectricitygenerationlicence-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.

electricity is traded before delivery) and falling bid-offer spreads (the difference between the buy and sell price for a product³) indicated that liquidity was improving.

Qualitative feedback has supported this data. Stakeholders have generally told us that it is easier for suppliers and generators to access the products they need and that prices for those products are perceived by industry as more robust during the times when market-making takes place.

This notwithstanding, we have seen a fall in trading and churn in the most recent second quarter 2015. Many factors have contributed to the more volatile price environment seen in 2014 and into the start of 2015. Similarly, the reverse in trend in Q2 2015 reflects a low price, low volatility market. While this may have contributed to the more recent trends we have observed, it is not possible to determine the impact of the individual factors on liquidity and we continue to monitor the effect of our reforms.

Easier access to products for independent suppliers

Our monitoring and analysis show that trading volumes with eligible suppliers are following a clear upward trend, although overall volumes remain low⁴. As reported in our Interim Report, we received feedback from many independent suppliers who told us they are finding it easier to access products and that the obligated licensees⁵ responsiveness to trading requests has improved. Stakeholders said that the general improvement in trading conditions will benefit new entrants who need to trade power to hedge⁶ and meet their business needs. Stakeholders also told us that getting desired credit lines and the costs of posting collateral remained the main difficulties for independent suppliers.

Increasing product availability and price robustness

The data from Secure and Promote licensees shows mixed volumes traded at the times when the six largest vertically integrated companies are market-making, called the market-making windows. The trend has been positive in the first year, but volumes have fallen in line with lower over the counter (OTC) volumes in Q2 2015. Market participants have told us that it is now easier for them to access the products they need and that prices in the windows are more robust than they were before Secure and Promote. Although most stakeholders agreed that there has been a positive change, some are still concerned that liquidity is being concentrated into the windows. Our data shows there are increased volumes traded in the afternoon window in particular, but this reflects a higher volume of trade in the market rather

³ A low bid-offer spread indicates that the price reflects market value.

⁴ There are 13 eligible suppliers at present, which are small by definition, therefore high trading volumes are not expected.

⁵ The obligated licensees are the largest six vertically integrated companies (Centrica, EDF Energy, E.ON UK, RWE Npower, ScottishPower and SSE Generation) and the two largest independent generators, Engie (GDF Suez) and Drax Power.

⁶ Hedging is trading power at an agreed future price, thereby protecting against the risk that the price on the day of delivery will be different to the one in the initial contract. Hedging reduces the risk from short term price movements.

than a transfer of liquidity from the rest of the day. Our data does show a fall-off in trading at the very end of the day. We continue to monitor this closely.

Secured near-term liquidity

The near-term market has remained liquid since Secure and Promote. Exchange trading volumes are comparable year-on-year. Day-ahead exchange trading has remained comparable year-on-year and intraday trading is on a slight upward trend since Secure and Promote.

Next steps

We will publish our next annual report in summer 2016. We continue to closely monitor the metrics outlined in this report and to engage with stakeholders.

1. Background and Metrics

Chapter Summary

This chapter describes the background to Secure and Promote and the three objectives under it. It also discusses the importance of monitoring, describes the metrics we are using to track liquidity in the market, and describes the data from our monitoring to date.

Liquidity has shown signs of improvement in the first year since Secure and Promote came into effect, but a more recent decline. There is no single metric that can provide a complete view of liquidity in the market. We therefore consider a set of metrics and stakeholder feedback. The mixed levels of 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 falling bid-offer spreads to Q1 2015, but falling churn and trading in Q2 2015.

We recognise that many factors can impact liquidity. With just five quarters worth of data it remains difficult to isolate the effect of our reforms among the multiple influences since Secure and Promote started.

Secure and Promote background and objectives

1.1. On March 31 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. We were concerned that poor liquidity in the wholesale power market was preventing consumers from fully realising the benefits that competition can deliver, namely downward pressure on bills and greater choice.

1.2. A liquid market should ensure that buyers or sellers that have found the products they need can then reliably make transactions promptly and at a cost-reflective price.

1.3. Low liquidity can dampen competition in several ways, for example by making it hard for small companies and new entrants to buy electricity in the wholesale market to supply their customers at a known price ahead of delivery. Low liquidity can also weaken price signals because a limited amount of trading makes it less likely that prices will reflect the underlying demand and supply conditions.

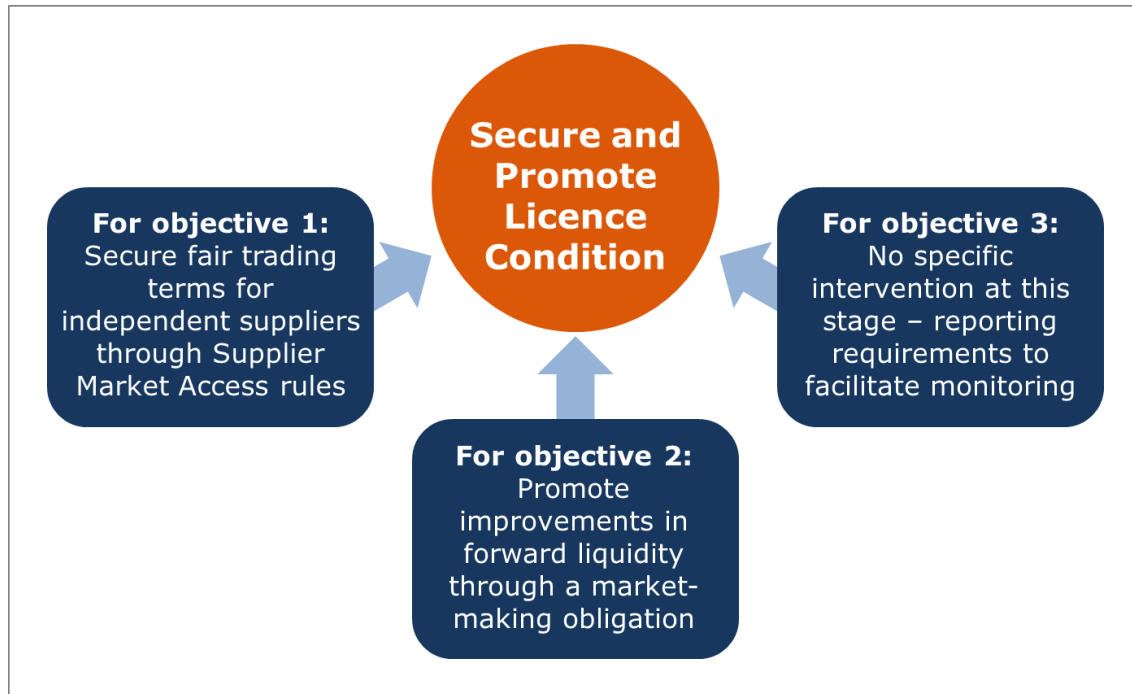
1.4. After extensive consultation with industry, the Secure and Promote liquidity reforms were implemented as a special licence condition into the generation licences of the six largest vertically integrated companies and the two largest independent generators, Engie (GDF Suez) and Drax Power.

1.5. To address the liquidity concerns we identified three objectives for our reforms. 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

1.6. The reforms introduced to meet these objectives are illustrated in Figure 1. There is a summary of the main aspects of the design of each of these parts of Secure and Promote in appendix 1.

Figure 1 – Secure and Promote licence condition objectives



1.7. We are monitoring the impact of these reforms in various ways. As a part of the reforms, licensees must report to Ofgem data on their trades every quarter under the SMA rules and the market-making obligation. We are also monitoring key liquidity metrics at the market level, and have consulted with stakeholders.

1.8. We have shared the data in this report with the CMA as it has emerged, to support its energy market investigation.

Metrics to track liquidity in the market

1.9. We are actively monitoring the effectiveness of Secure and Promote. As no one indicator is a sufficient measure of liquidity we consider a number of quantitative metrics like churn and bid-offer spreads (as they can indicate that availability and reliable prices are features of the market), as well as qualitative feedback from industry participants.

1.10. To help us monitor liquidity we track 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

1.11. After five quarters of monitoring, the metrics show improving liquidity in the first year since Secure and Promote came into effect, but a more recent decline in Q2 2015. The metrics have shown that:

- churn, or the amount of electricity traded compared to the amount used by consumers, has increased year-on-year in the first year of monitoring but fell in Q2 2015 (Figure 2), giving a mixed overall picture
- bid-offer spreads followed a downward trend until Q4 2014 and are stable in Q2 2015 (Figure 6) which suggests that the price being paid for electricity better reflects market value since Secure and Promote was implemented
- 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 3)
- the amount of baseload products traded for delivery more than one season ahead remains steady (Figure 4). 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 are slightly higher volumes of trade over the counter (OTC) on average over the 15 months of our monitoring, however this reflects higher year-on-year volumes in the first year, and a fall in Q2 2015. Total exchange trading since Secure and Promote is comparable to the preceding 15 months, and trading has shown similar volatility over this period (Figure 5 and Figure 7)

1.12. There are many factors in addition to Secure and Promote that may have contributed to the increase in trading volumes in 2014 and 2015. If participants think there is greater risk to wholesale prices, they are likely to trade more. Many factors could have influenced participants' view of risk in 2014 including the geopolitical

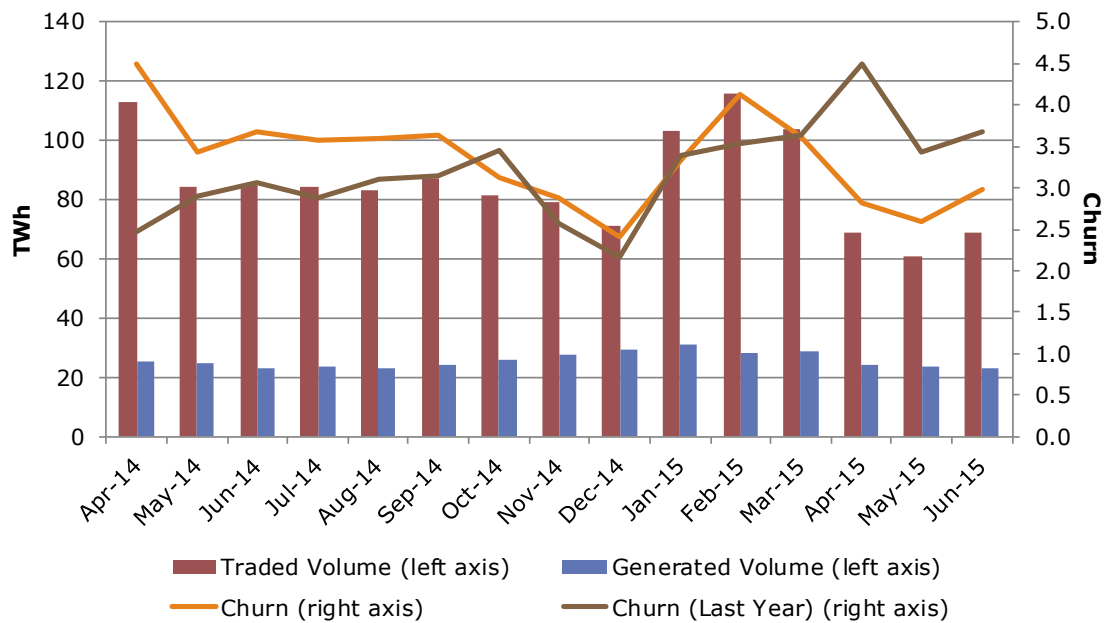
events in Ukraine, day-ahead market coupling in North West Europe, higher price volatility, the shift in relative attractiveness of spark spreads in Q2-Q3 2014 and Q1 2015 and several supply-side events in the GB market. In the first quarter of 2015, there was also political uncertainty preceding the General Election, the lead-up to the increase in the carbon price support level, and a falling oil price. Conversely, the low price, low volatile environment in Q2 2015 has created a notable fall in market activity. The lower level of price risk perceived by participants tends to cause them to trade and hedge less. This may be one factor behind lower trading in Q2 2015. Power trading also typically varies throughout the year. It is not possible to determine the impact of these factors individually on the levels of liquidity.

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

Churn

1.14. 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 2 – Monthly Churn

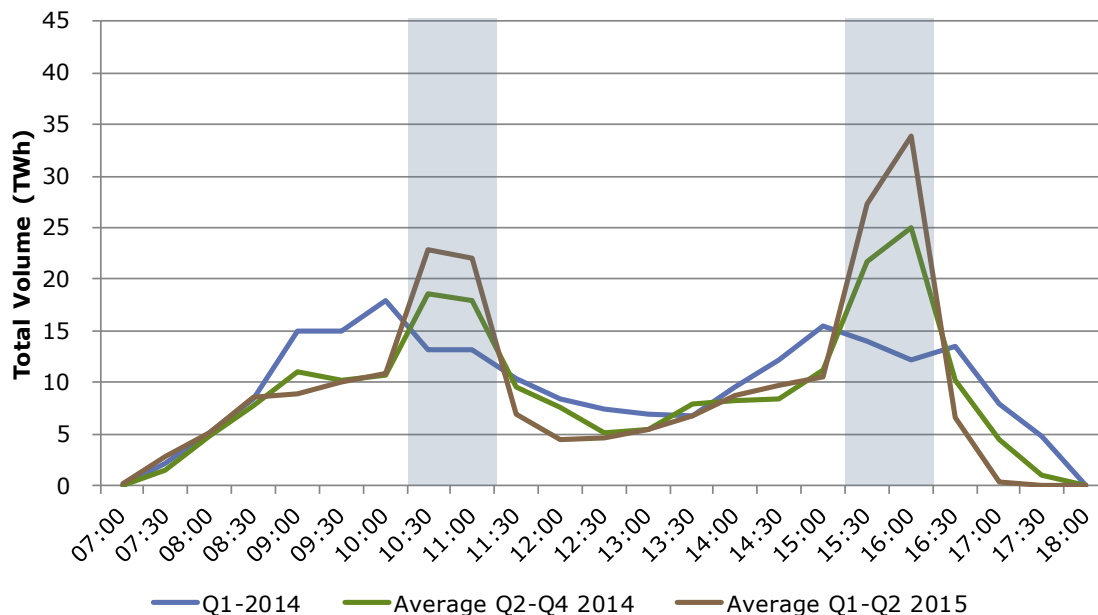


Source: DUKES, ICIS Energy, APX, NPS, ICE, Traded Volume consists of total OTC and exchange trading. Generated volume for March 2015 is forecast.

1.15. Our data shows a positive year-on-year trend in churn in the first year of monitoring, which was positive for liquidity as it shows there may have been more participants willing to trade and hedge their positions in the market. However the relative fall in churn in Q2 2015 reflects a reduced desire to trade and hedge in a low-price, low volatile market since April 2015, giving a mixed overall picture.

Trading across the day

Figure 3 – 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.

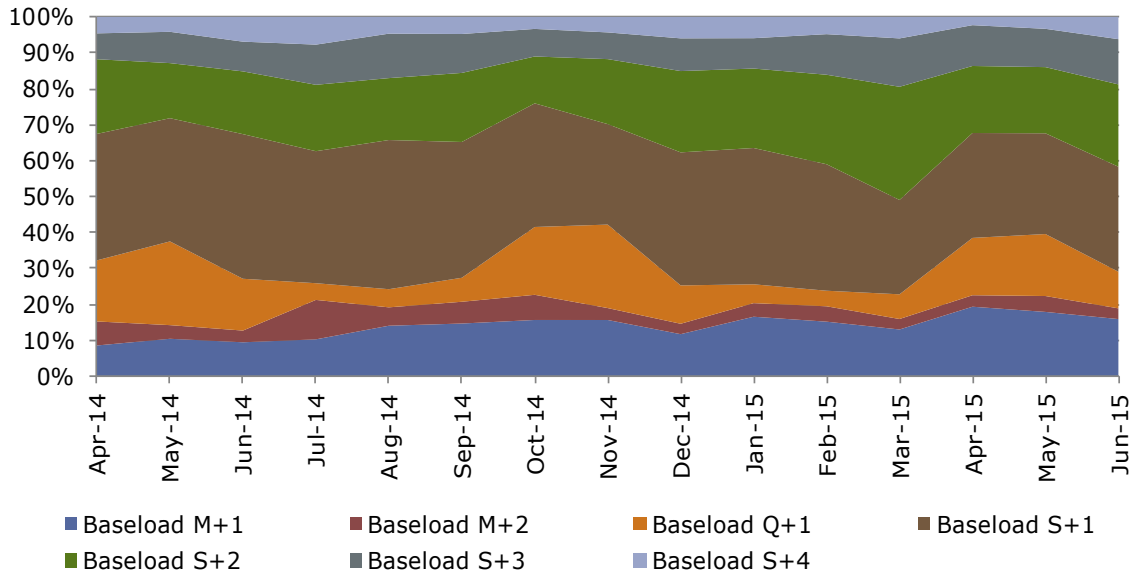
1.16. We are monitoring when trading takes place during the day because an extreme concentration of trade at one period of time might mean that trading opportunities are limited at other times in the day. More trading at all times across the day or more trading at certain times with no reduction at other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

1.17. Some stakeholders were concerned about liquidity moving into the two windows and drying up at other times. In Figure 3 we see that trading volumes have risen in the windows, particularly in the afternoon, and have stayed broadly static between the windows. There is evidence of less trade taking place at the end of the day and mid-morning compared with Q1 2014, but the evidence does not suggest product availability or price robustness are being adversely affected overall. We note that a longer time series of data is necessary to confirm this, but we are monitoring this carefully.

Range of contracts traded

1.18. 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 4 – OTC trading in baseload market-making contracts⁷



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

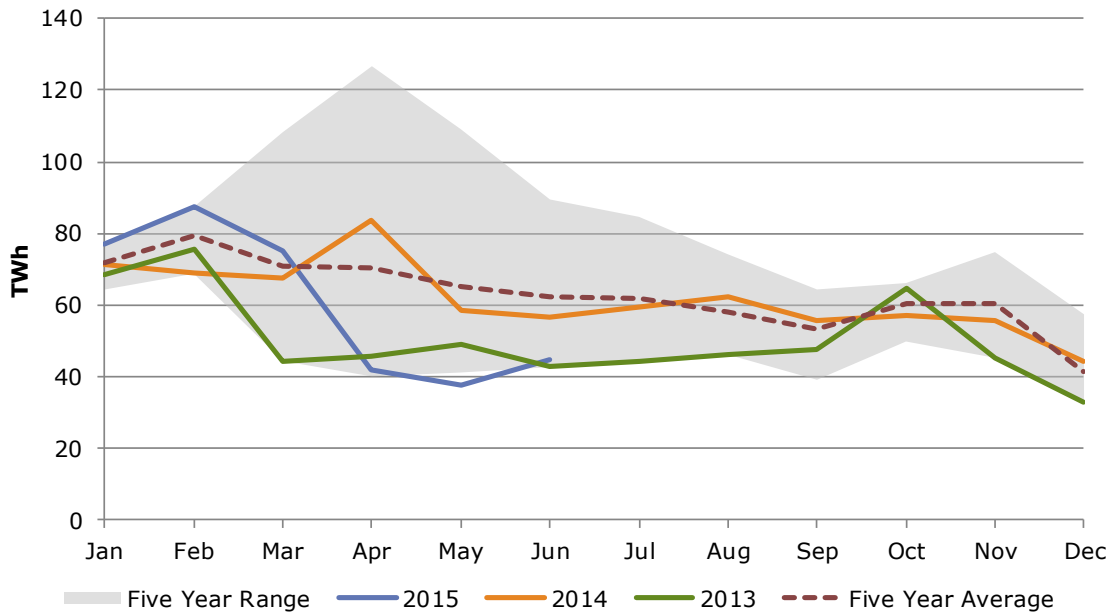
1.19. The season ahead baseload product continues to be the most used as shown in Figure 4. Baseload products for delivery more than one season ahead made up 33% of total baseload products traded over the 15 months since April 2014 compared to 46% in the previous 15 months. We see a stable trend of trading for delivery at least two seasons ahead. Our data also shows a positive trend in increasing peakload volumes traded in the OTC market that has continued since Secure and Promote. 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

1.20. 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.

⁷ 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 5 – Total OTC trading by quarter



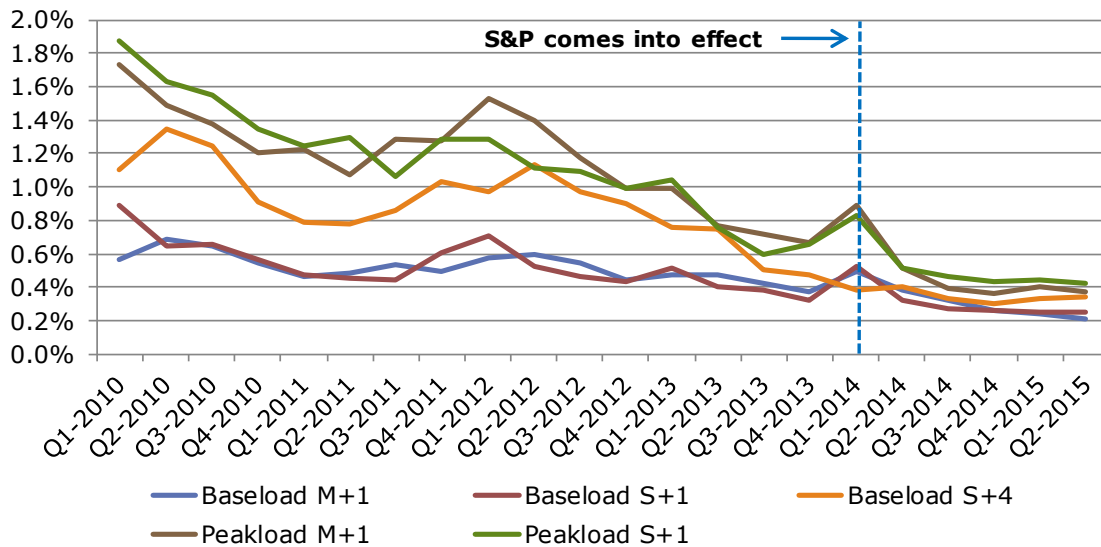
Source: ICIS Energy, Data only shows market-making mandated contracts

1.21. Total OTC trading in market-making products has been volatile and is slightly higher on average over the 15 months of our monitoring (Figure 5) compared with the 15 months prior, even given the fall in volumes in Q2 2015. This relatively sustained OTC activity in the first year of Secure and Promote reflects the high volatility seen in 2014, despite some factors that might have caused trading to fall in this time. As mentioned, the fall since April 2015 is reflective of the low volatility and prices we have seen.

Bid-offer spreads

1.22. 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 6 – Bid-offer spreads



Source: ICIS Energy

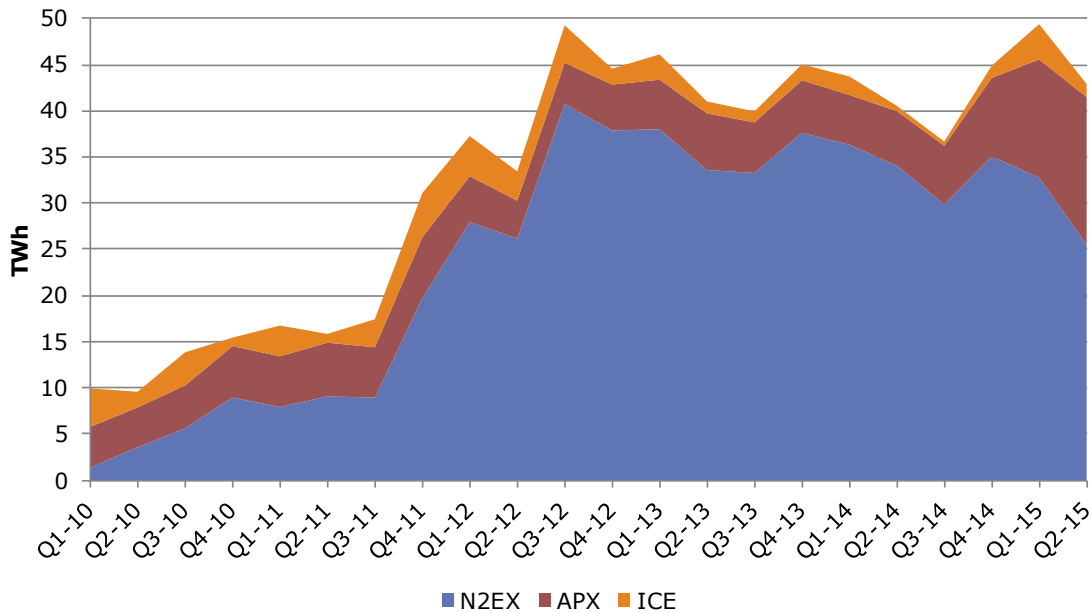
1.23. Bid-offer spreads followed a downward trend since 2010 as Figure 6 shows. Spreads have stayed stable since Q4 2014, reflecting the mandated spreads under Secure and Promote.⁸ The fall since Q2 2014 is positive insofar as it increases confidence that prices reflect the underlying demand and supply 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

1.24. 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.

⁸ These spreads may be seen in Appendix 1, Table 2.

Figure 7 – Volume of trading on exchanges



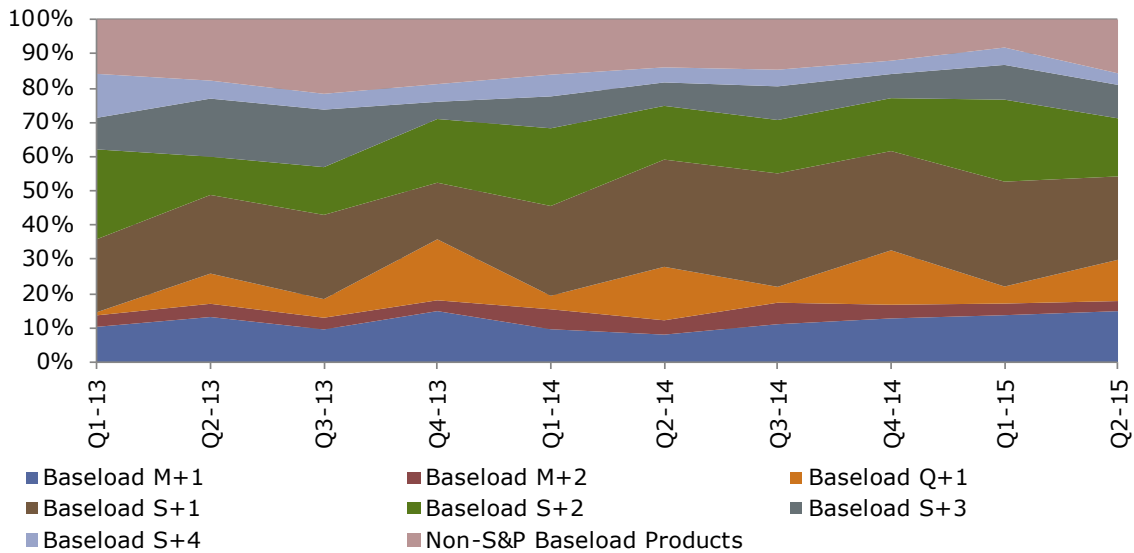
Source: NPS, APX, ICE

1.25. Exchange trading, which is dominated by day-ahead contracts, has shown some volatility since the upward trend in 2010-2012 (Figure 7). Total exchange trading over the last 15 months is comparable to the preceding 15 months, and trading has shown similar volatility since Secure and Promote. 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

1.26. We have noted 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 shows only a slight fall in the volume of non-mandatory Secure and Promote products traded as shown in Figure 8. For example, in Q1 2014 non S&P products made up 16.1% of total OTC baseload trade volumes. In Q2 2015, this had fallen to 15.7%.

Figure 8 - OTC baseload trading since Q1 2013



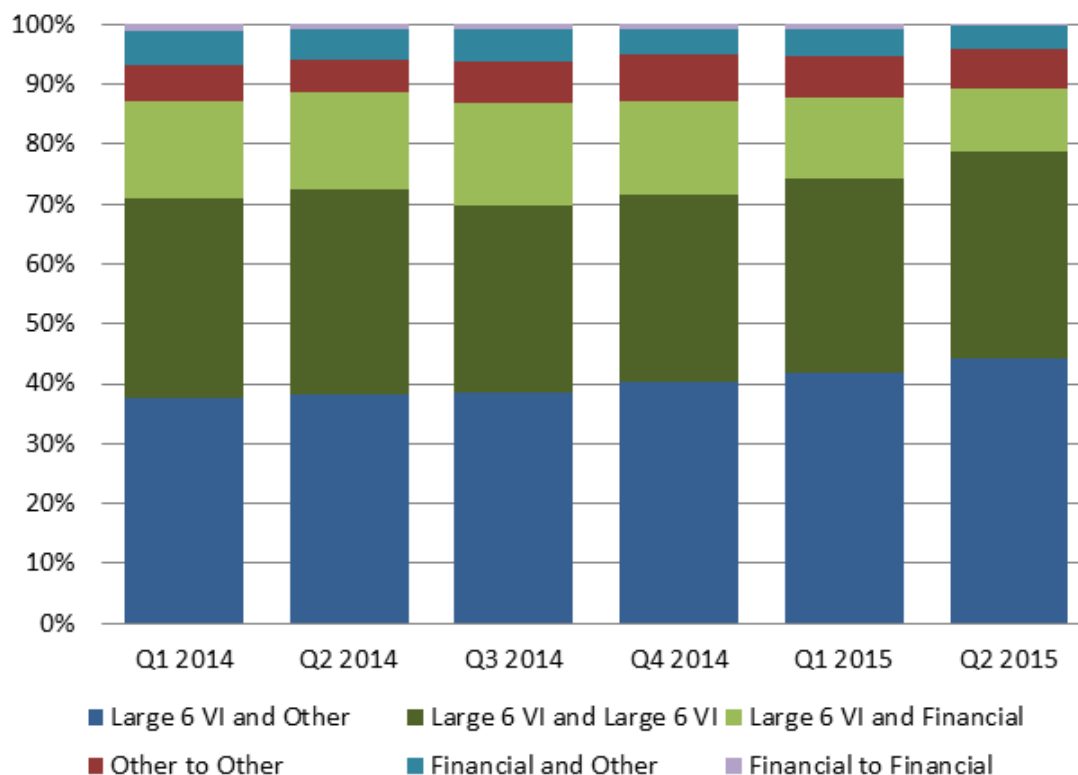
Source: ICIS Energy

1.27. The increase in trading of Secure and Promote products reflects the fact that 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-mandatory products do not have these opportunities, so it is not surprising to see a relative fall in their traded volumes. Given that these non-mandatory products were already traded in low volumes before Secure and Promote came into effect (roughly 10 TWh monthly vs 56 TWh for mandatory products), the reduced trade in these products is not likely to adversely affect participants' ability to hedge in the market.

Participation in the market since Secure and Promote

1.28. Stakeholders also expressed concerns that the Secure and Promote intervention was not sufficient to attract financial institutions back to the market and 'kick-start' liquidity. To better understand the impact from Secure and Promote on participation in the market, we have analysed OTC data since Q1 2014 to highlight what types of participants trade.

1.29. Our data from OTC trading starts in Q1 2014, which is not enough for us to completely understand who is participating in the market. Figure 9 shows the participation of different types of entities in the OTC market to Q2 2015, on either side of the trade.

Figure 9 - Participation in the OTC market since Q1 2014

Source: Ofgem. Data is based on the number of trades

1.30. 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 over the period, at just under 90%. 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 23% in Q1 2014 to 14% in Q2 2015. We see an increase in the percentage of trades involving other entities (trading houses, independent generators, suppliers and other smaller participants) from 49% in Q1 2014 to 55% in Q2 2015.

1.31. We have noted concerns from some stakeholders that financial participants have exited energy trading since 2014. Many factors may contribute to this. Of these, we note the uncertainty over the impact from impending European financial regulation⁹ in an environment of falling prices and scarcer risk capital. We do not have enough data to reflect this, but continue to monitor the activity of such participants.

⁹ Further information on the European financial regulation MiFID II is here: http://ec.europa.eu/finance/securities/isd/mifid2/index_en.htm

1.32. Stakeholders have also said that financial players may have been dissuaded from energy trading as a result of the market-making windows under Secure and Promote because they need good liquidity throughout the day. As seen in Figure 3, trading has increased in the windows. However, this reflects a higher volume of trade in the market rather than a transfer of liquidity from the rest of the day, with the exception of the end of the day and mid-morning. As noted by the CMA, there are wider factors influencing the participation of financial participants and that these affect commodities in general rather than specifically GB power. Our analysis suggests that Secure and Promote has not substantively contributed to this reduced participation.

1.33. In the next chapter, we report the data that we receive from the Secure and Promote licensees under their reporting obligations, as well as a summary of their feedback. The complete set of metrics we are using may be found in appendix 2.

2. Secure and Promote Analysis

Chapter Summary

This chapter presents the results from our analysis and the comments that we have received from stakeholders 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 the SMA rules and, to a lesser extent, under market-making. There are still issues we need to monitor, and need to consult with stakeholders further. The data shows an improvement for independent suppliers in trading with the largest eight generators, but some barriers remain that make it difficult to access the products suppliers need. Price formation and product availability are both features of the market-making activity that stakeholders generally view positively. But we note that liquidity being concentrated into the market-making windows remains a concern for some stakeholders.

The near-term market is liquid and volumes have remained comparable in the 15 months since Secure and Promote, compared with the previous 15 months. 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. Feedback from independent suppliers (discussed in more detail below) showed that they have been finding it easier to access products and that obligated licensees' responsiveness to trading requests has improved. Stakeholders felt that the general improvement in trading conditions would benefit new entrants who needed to trade power to hedge and meet their business needs. Our analysis shows that trading volumes with eligible suppliers in SMA products to June 2015 are low but 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. However, we have also been told that credit and collateral costs remain the main difficulties for independent suppliers.

Stakeholder feedback

2.5. We have collected feedback on SMA over the last year through bilateral meetings, a stakeholder forum in November 2014, and two voluntary requests for information, the most recent of which was in April 2015. We asked stakeholders what they had noticed since the SMA rules had come into effect, their experiences of the rules and their views on factors that might be limiting success under SMA.

2.6. Overall, there has been cautious optimism. Feedback has suggested that conditions have improved for independent suppliers: products are more accessible, and the process for negotiating trading agreements is better. Independent suppliers have particularly appreciated the greater availability of smaller products. Some have suggested that a larger range of products should be covered by SMA. Some have suggested that there has been a lack of consistency in the credit arrangements required by the largest eight generators and in premiums charged by them, which has limited the range of products they have been able to access.

2.7. Many large generators and independent suppliers noted that they had already established trading relationships before the introduction of the Secure and Promote reforms, which remained unaffected since the SMA rules. Many also noted that they had not seen a significant change in the volume of trading under SMA or the amount of new agreements signed with eligible suppliers. In contrast, some independent suppliers informed us that they had seen an improvement in dealing with the eight obligated generators from the time that the SMA reforms started. This meant that they were able to enter into contracts and trade agreements with these parties without becoming eligible suppliers.

2.8. 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 response to their feedback, we asked the eight generators to start reporting the volumes traded with non-eligible small suppliers, as well as in products not included under the SMA rules.

2.9. We have not yet received this extra data from all eight generators. Although our data is incomplete, we have noted a trend of increasing volumes of trade in SMA products with non-eligible suppliers since Secure and Promote started. We will

continue to monitor this data and will be able to draw a more meaningful understanding of the impact of the SMA rules in our future reports.

2.10. Some responses noted that little had changed with the process of setting up new trading agreements. While response times seem to have improved, the process still requires participants to provide a lot of data. This hasn't resulted in a large increase in new trading agreements for eligible suppliers. However, this feedback did recognise that Secure and Promote is still in its early days and that take-up might increase over time.

2.11. The largest generators told us that more feedback from independent suppliers would be helpful, especially when trading agreements do not progress. They also said that the work to set up and comply under SMA rules has not been matched by the take-up by independent suppliers. This continues to be the case, although we note that there has been an increase in the number of eligible suppliers from six to 13 since our last report. This may see more participation under the SMA rules.

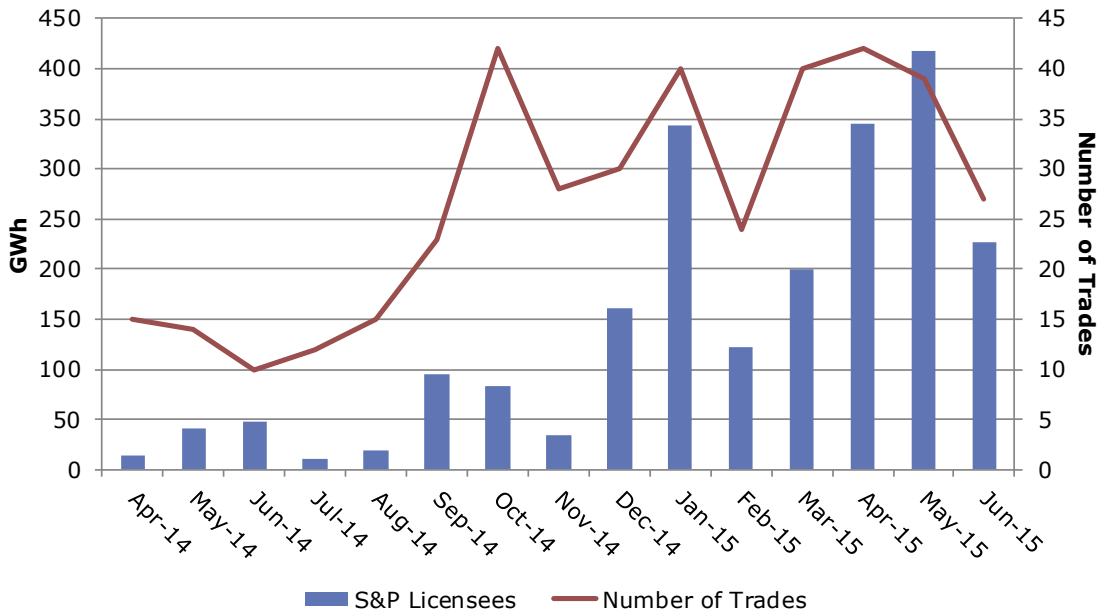
Supplier market access data

2.12. Our analysis of the data as reported by obligated licensees shows a clear increase in trading with eligible suppliers over the 15 months to June 2015 as shown in Figure 10. 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 the number of individual trades is still low, which reflects the fact that there are 13 eligible suppliers and that these suppliers require small volumes.

2.13. Trading volumes remain concentrated in a few contracts, in particular for delivery one season and two seasons ahead. There is a positive trend in SMA trading since April 2014 both in volumes and in the number of trades. Trading under SMA remains focused on baseload products. It is positive to see a clear improvement in the volumes traded for delivery two and three seasons out, not only in baseload products but more importantly in peak products compared with our interim report. The range of contracts traded under SMA contracts is shown in Figure 11.

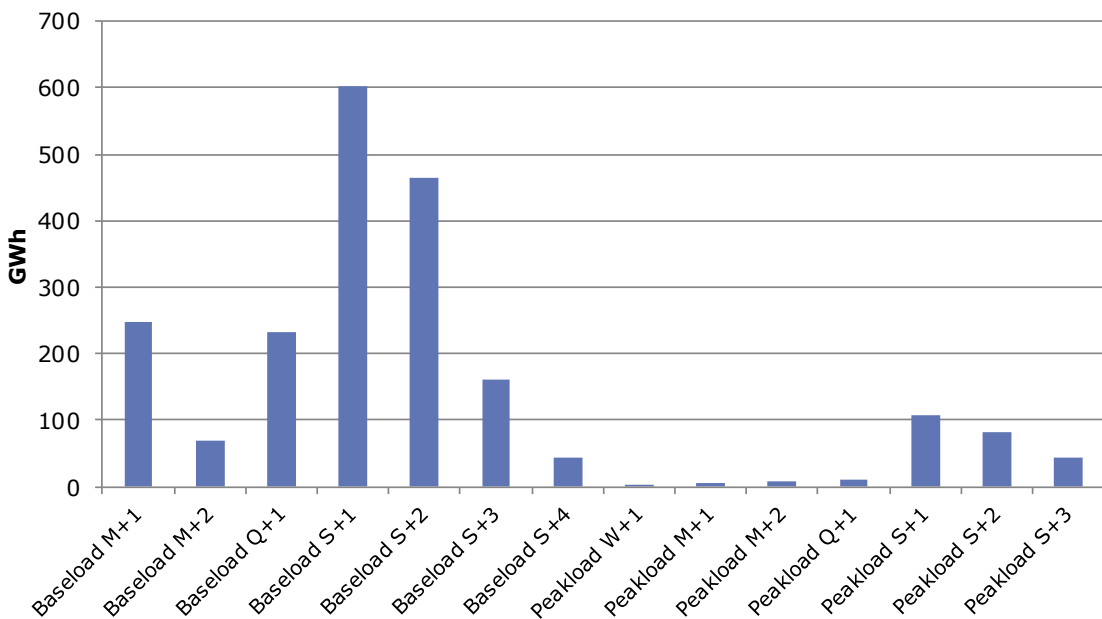
2.14. This quantitative data does not allow us to conclude whether SMA is a success or not, but the increase in volumes and product types that we have seen over the 15-month period reported here are positive signs and show some indication of success. We note that this data only includes trading between obligated licensees and eligible suppliers under SMA. This data should also be considered alongside the extra reporting data that we have begun to receive and will report on more fully in future.

Figure 10 – Supplier market access volume traded, Q2 2014 – Q2 2015



Source: Secure and Promote (S&P) Licensees

Figure 11 – Supplier market access contracts traded in Q2 2014 – Q2 2015¹⁰



¹⁰ 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.

Source: Secure and Promote (S&P) Licensees

Market-making

2.15. 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.

Key findings

2.16. Our monitoring tells us that the market has moved towards achieving our objectives under market-making, but we note a fall in activity in Q2 2015. Feedback that we have received is largely positive and points to improved availability of products along with more robust prices in the windows. A summary of the stakeholder feedback follows.

Stakeholder feedback

2.17. We have collected feedback on the market-making rules over the last year through bilateral meetings, a stakeholder forum in November 2014 and two voluntary requests for information, the most recent of which was in April 2015. We asked stakeholders what they had noticed since the market-making rules came into effect. We also asked them if they thought that there were more robust reference prices for the mandated products since Secure and Promote.

2.18. Stakeholders have been fairly positive about the market-making reforms. They generally agreed that price formation and product availability within the windows has improved. Stakeholders also agreed that the overall number of trades outside of the windows has remained largely constant over the year, indicating that trading volumes have not been adversely affected. Tighter bid-offer spreads and improved accessibility of previously less liquid products have also been noted as particularly positive developments, where tighter spreads have reduced transaction costs for smaller players and resulted in a wholesale cost of power that better reflects true value.

2.19. Some stakeholders caveated these positive developments with views that this may not represent a kick-start in liquidity, but simply a shift. They said price robustness had not been achieved throughout the day and that more depth in forward products is still needed, particularly in forward shaped products. Some also said that there needed to be more financial players trading in the market to see a real improvement in liquidity.

2.20. Many stakeholders said they thought that there was a concentration of liquidity in the windows, although others recognised that Ofgem data demonstrated that this had not been the case. Our data (Figure 3 above) does not support the anecdotal comments from some stakeholders, but it does suggest lower trading volumes following the end of the afternoon window and mid-morning since April 2014. There were conflicting views over the potential benefits or harm that could result from such a shift.

2.21. Some stakeholders said that there was no need for liquidity to be constant throughout the day and if there was limited liquidity then having two very liquid windows is better than low liquidity all day. Conversely, other stakeholders felt that compressing liquidity into windows would limit the types of participants in the wholesale market, in particular with a negative impact on the participation of financial organisations. Some stakeholders thought that financial players have exited the market with little reason for them to return, and that the windows were not the problem.

2.22. Stakeholders also noted that any concentration of liquidity increases risk for trading outside of the two daily windows and could increase small suppliers' exposure to adverse movements in wholesale prices, without the natural hedge that larger players have through self-supply.

2.23. There were mixed opinions on the obligation for market-makers to be 100% present during the two windows. Some stakeholders wanted windows of longer duration with a less than 100% obligation, while some welcomed the 100% obligation based on their impression of better reference prices for products traded less often.

2.24. There were also mixed opinions on the bid-offer spreads. Some stakeholders were happy with the mandated spreads in the windows, but others thought they were too wide throughout the day. No supporting data has been given. We are aware we need to measure this more accurately but we are not yet able to do so.

2.25. Some stakeholders have suggested a need to consider lengthening the windows, while some have suggested extending the range of mandated products, for example to a range of shaped block products for future delivery. We continue to monitor and evaluate the impact on the market of the issues raised from our stakeholder feedback, but we will give Secure and Promote time to mature for the next two years before considering any changes to the intervention.

Market-making data

2.26. Our data, as reported by the licensees, shows that market-making volumes have followed an increasing trend in the first year to Q1 2015, but have fallen in Q2 2015 in line with volumes in the OTC market.

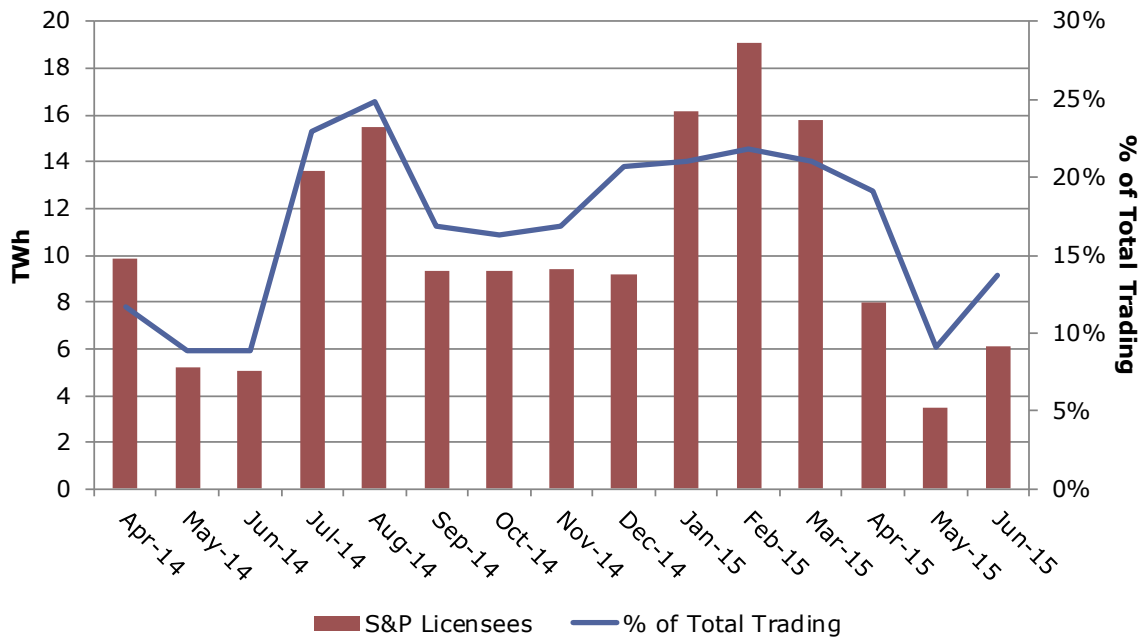
2.27. Market-making volumes increased from 20.1 TWh in Q2 2014 to 28.0 TWh in Q4 2014 as shown in Figure 12. Volumes continued to increase in Q1 2015 to 51.1

TWh, which is a reflection of the increased OTC volumes seen in the quarter. There are many reasons why overall volumes may have increased, for example the geopolitical events in Ukraine, higher price volatility, the shift in relative attractiveness of spark spreads in Q2-Q3, and several supply-side events in the GB market. Conversely, low volatility and low prices have contributed to the lower volumes of 17.6 TWh in Q2 2015.

2.28. Trades remain focused on baseload products, in particular one season ahead, but there has been an upward trend in peakload products traded two and three seasons ahead since Q2 2014. The data also shows that peakload products are traded more in the market-making windows compared to the market overall. Peakload products made up around 12% of market-making products compared to only 8% of total OTC trading over the 15 months. Figure 13 shows the trading by contract for market-making volumes.

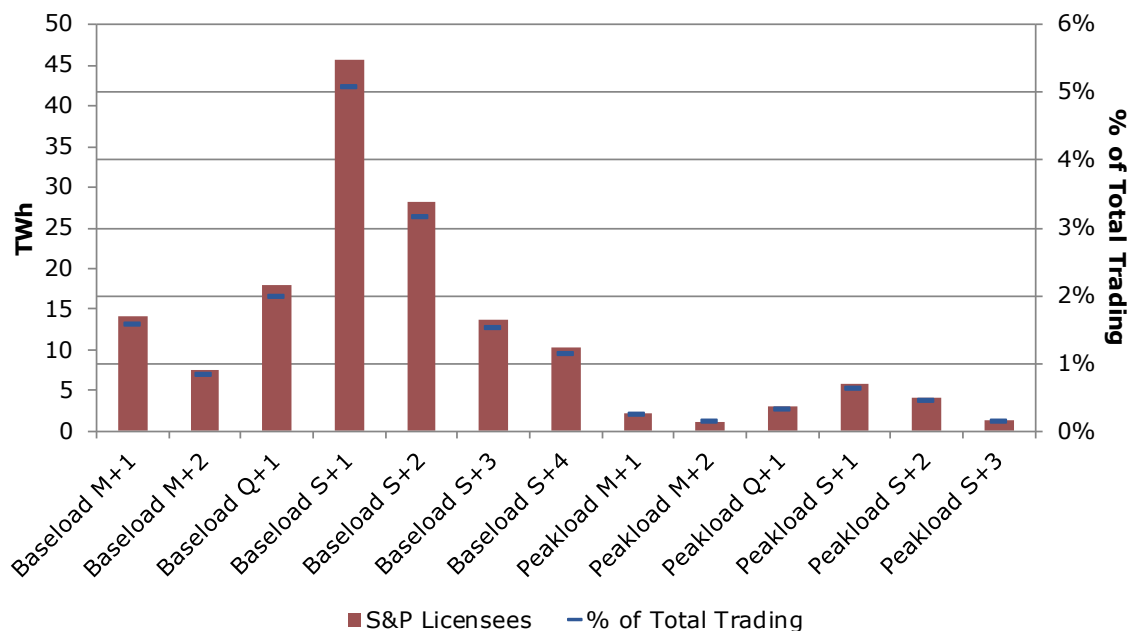
2.29. Likewise for SMA data, the market-making data does not allow us to conclude whether market-making is a success or not, but the relative change in volumes and product types will allow us to understand progress in forward product availability in the windows. Our data indicates a positive trend, especially given the increasing trend of peak products and in products for delivery more than one season out in the windows.

Figure 12 – Market-making volumes traded



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

Figure 13 – Market-making volumes traded by contract¹¹



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

Near-term market progress

2.30. The objective under 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

2.31. The near-term market remains liquid since Secure and Promote. Exchange trading volumes are comparable year-on-year. Day-ahead exchange trading has remained comparable year-on-year and intraday trading is on a slight upward trend since Secure and Promote.

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.



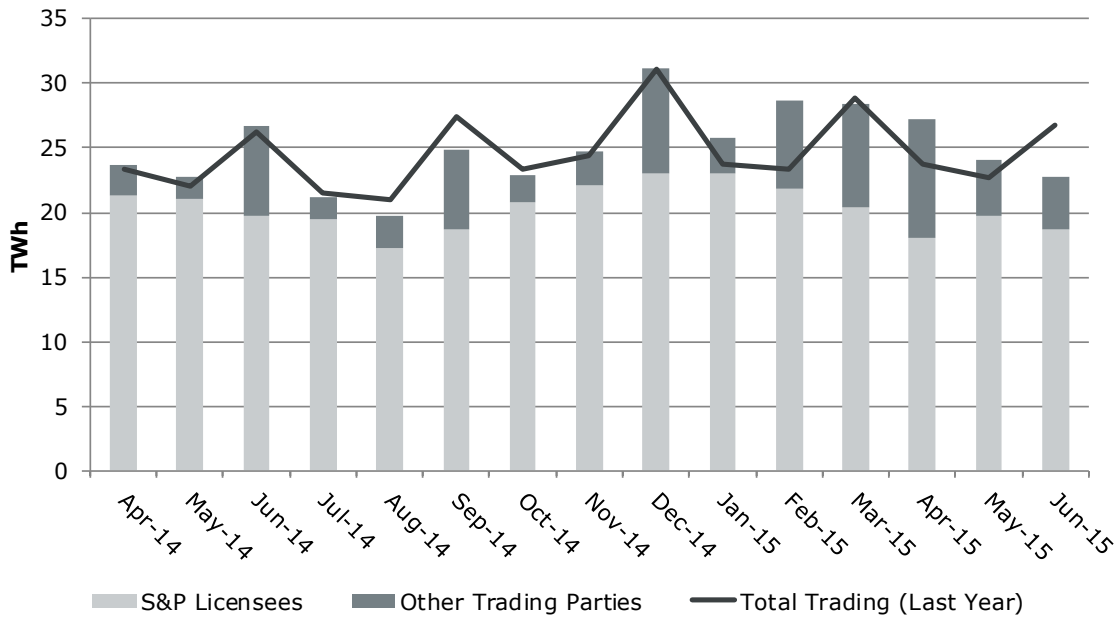
2.32. We remain vigilant on liquidity in near-term markets and consider day-ahead and intra-day liquidity to be important. We will continue to monitor these markets closely to track progress.

Near-term liquidity data

2.33. Exchange trading, which is dominated by day-ahead trading, has shown an upward trend since 2010. Since Secure and Promote, day-ahead exchange trading is following a very slight upward trend and is slightly higher compared to the previous 15 months (Figure 14). One factor that has contributed to this is market coupling, which has seen liquidity pooled on the two day-ahead auction platforms through the 'GB virtual hub'.

2.34. Day-ahead trading continues to be dominated by the six largest vertically integrated companies and large independent generators. Their share of day-ahead gross volumes traded has stayed broadly constant and averaged around 82% over the five quarters to Q2 2015 (Figure 15).

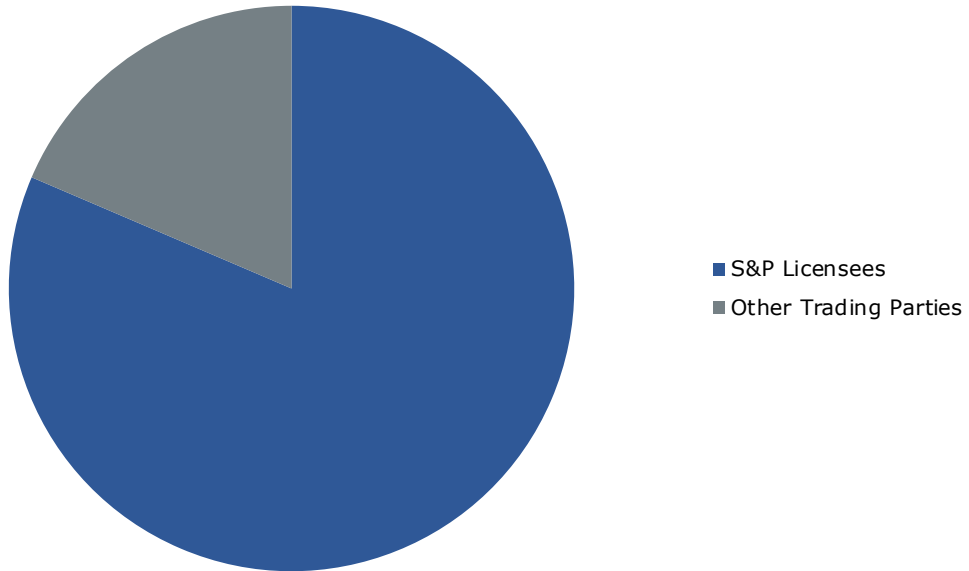
Figure 14 – Day-ahead trading



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



Figure 15 – Share of day-ahead trading, Q2 2014 – Q2 2015



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.

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

3. Next Steps

We are seeking your feedback on Secure and Promote

3.1. As shown in this report, feedback from stakeholders is an essential component of our monitoring and evaluation of the Secure and Promote reforms. We are continuing our engagement with interested parties in the year ahead.

Comments from stakeholders on the metrics

3.2. Stakeholders gave us feedback the metrics in 2014, which we have taken into consideration since our interim report. Feedback was largely positive about the range of indicators, but there were some suggestions, for example:

- improving the data on bid-offer spreads to reflect spreads throughout the day
- incorporating trading with independent but not eligible suppliers in SMA
- reporting including trading under SMA in products not listed in the SMA schedule
- considering information on risk premiums or on credit terms charged by licensees
- benchmarking the gas churn alongside the churn for electricity.

3.3. We have considered this feedback and, for example, have started monitoring trading with non-eligible independent suppliers. Some feedback we have received is commercially sensitive so is not included in this report. We do not consider it appropriate to use gas churn as a benchmark for power, given the differences in the two commodities and markets.

3.4. We will continue to take comments into consideration for our future reports and we may modify the charts or include new ones if this is an improvement and is feasible.

Policy developments

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

Continued monitoring and enforcement

3.6. 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.¹² 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.

3.7. 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

3.8. To minimise uncertainty for market participants, we intend to leave Secure and Promote in place for two more years before considering any fundamental changes. After this period, we would expect to conduct a review of whether Secure and Promote remains appropriate.

Our forward timetable

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

¹² Ofgem (2014), Enforcement guidelines: <https://www.ofgem.gov.uk/ofgem-publications/89753/enforcementguidelines12september2014publishedversion.pdf>

4. Appendices

Index

Appendix	Name of Appendix	Page Number
1	Secure and Promote Special Licence Condition	29
2	Liquidity Metrics	34
3	Glossary	39

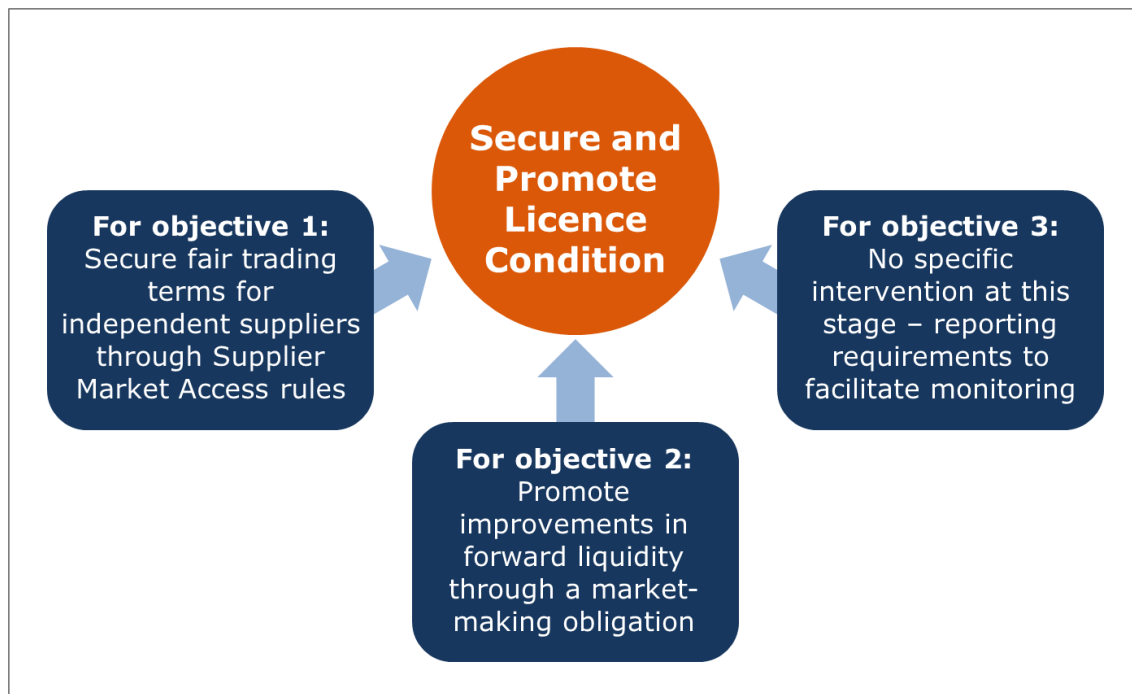
Appendix 1 – The Secure and Promote Special Licence Condition

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

4.1. Figure 16 below summarises our final proposals for Secure and Promote:

Figure 16 – 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.

4.2. The list of licensees is different for the two obligations. The licensees are set out in Figure 17 below:

Figure 17 – 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	<p>Licensee must respond in a timely manner, by fulfilling the steps below:</p> <ol style="list-style-type: none"> 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. <p>Requests to trade</p> <p>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.</p>

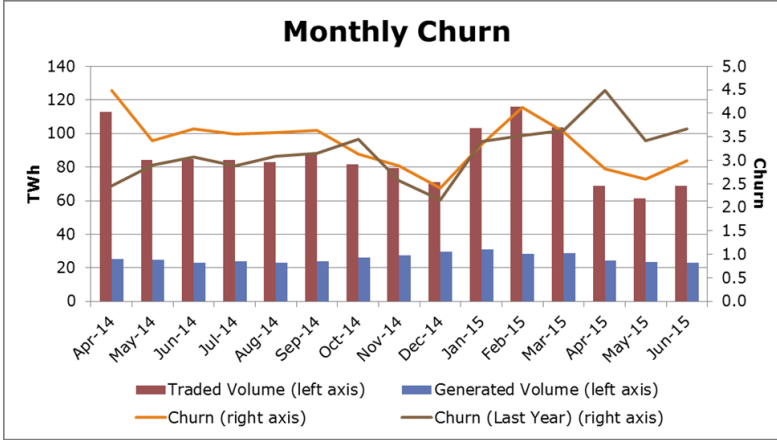
Table 1: Supplier Market Access – detailed rules (cont.)

<p>A4 – Credit and Collateral</p>	<p>Licensee must offer proportionate credit and collateral arrangements. Credit terms will be considered to be proportionate when the following conditions are met:</p> <ul style="list-style-type: none"> • 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 <p>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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>
<p>A5 – Clip Size</p>	<p>If requested, licensee must trade clip sizes as small as 0.5 MW, and in minimum increments of 0.5MW above that.</p>
<p>A6 – Product Range</p>	<p>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</p>
<p>A7 – Fair and Transparent Pricing</p>	<p>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.</p>

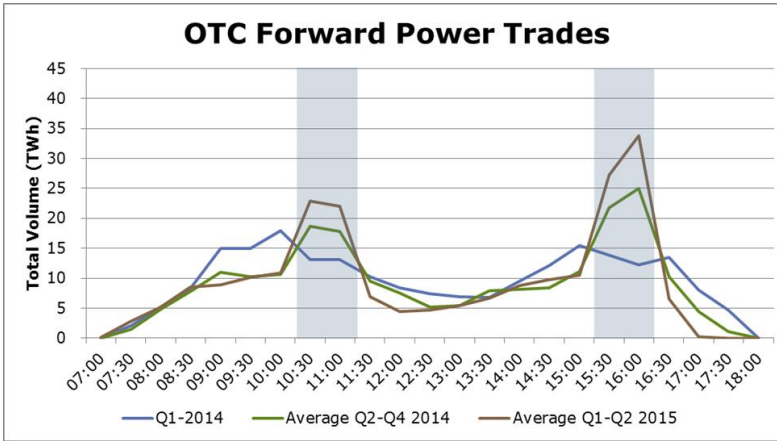
Table 2: Market-making Obligation – detailed rules

B1 – Nominating a third party	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.																						
B2 – Platform	The licensee is required to market make on any qualifying GB wholesale electricity market trading platform.																						
B3 – Products	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.																						
B4 – Availability	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).																						
B5 – Bid-offer spreads	<p>When market-making, the licensee must maintain a spread between their bid and offer price narrower than:</p> <table border="1" data-bbox="384 914 1423 1182"> <thead> <tr> <th colspan="2">Baseload</th> <th colspan="2">Peak</th> </tr> </thead> <tbody> <tr> <td>Month+1</td> <td rowspan="3">0.5%</td> <td>Month+1</td> <td rowspan="3">0.7%</td> </tr> <tr> <td>Month+2</td> <td>Month+2</td> </tr> <tr> <td>Quarter+1</td> <td>Quarter+1</td> </tr> <tr> <td>Season+1</td> <td rowspan="4">0.6%</td> <td>Season+1</td> <td rowspan="4">1%</td> </tr> <tr> <td>Season+2</td> <td>Season+2</td> </tr> <tr> <td>Season+3</td> <td>Season+3</td> </tr> <tr> <td>Season+4</td> <td></td> </tr> </tbody> </table> <p>The allowed spreads were higher than the above by 2% for the first three months after the implementation of Secure and Promote.</p>	Baseload		Peak		Month+1	0.5%	Month+1	0.7%	Month+2	Month+2	Quarter+1	Quarter+1	Season+1	0.6%	Season+1	1%	Season+2	Season+2	Season+3	Season+3	Season+4	
Baseload		Peak																					
Month+1	0.5%	Month+1	0.7%																				
Month+2		Month+2																					
Quarter+1		Quarter+1																					
Season+1	0.6%	Season+1	1%																				
Season+2		Season+2																					
Season+3		Season+3																					
Season+4																							
B6 – Trade size	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.																						

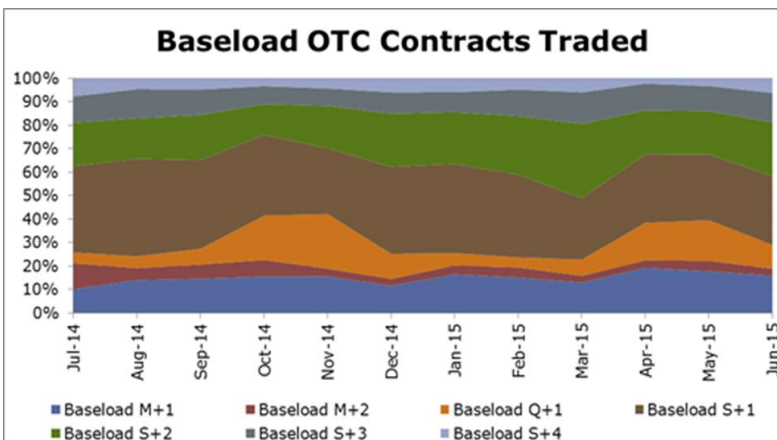
Appendix 2 – Liquidity Metrics



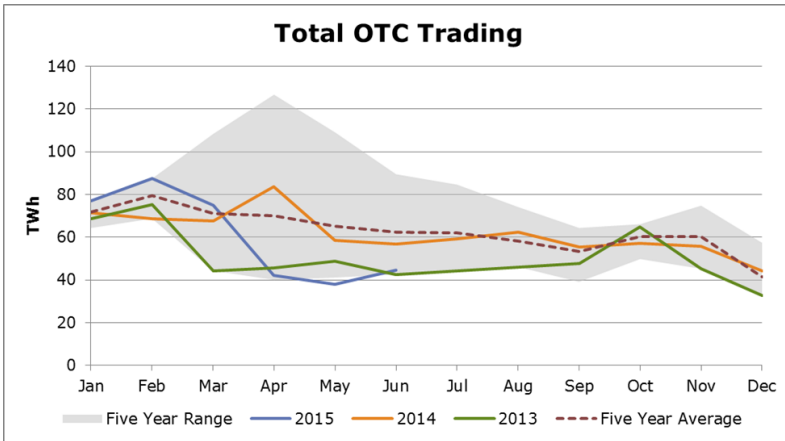
- The churn shows how often a unit of generation is traded before it is delivered.
- The graph shows churn by month over the previous 15 months.
- The left hand axis shows the volumes generated and traded in TWh
- The right hand axis shows the churn (orange line)



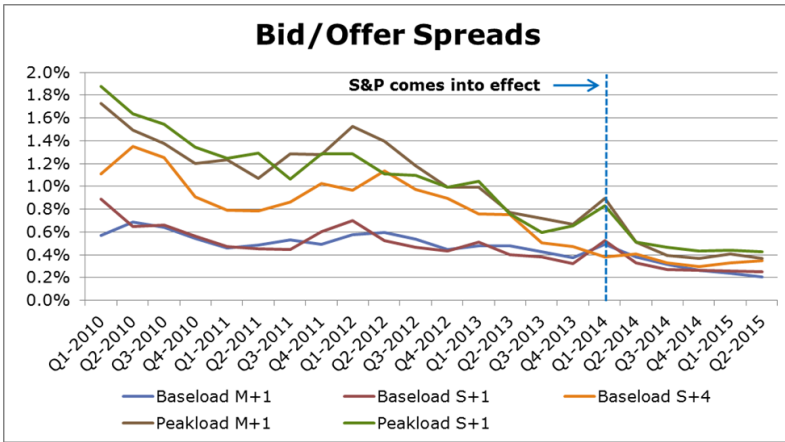
- Shows what time trades are made throughout the day since the beginning of 2014 in terms of volume.
- The grey sections show the market making windows.
- Applies to market making mandated contracts only



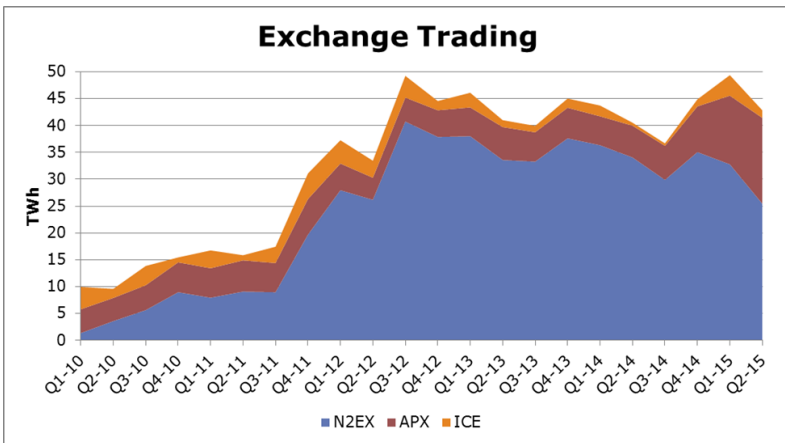
- Shows the percentage share of volumes of electricity traded for future delivery and how this has changed over the last year.
- It covers the baseload mandated market making contracts only.



- Total OTC trading in market making contracts over the last five years in TWh.

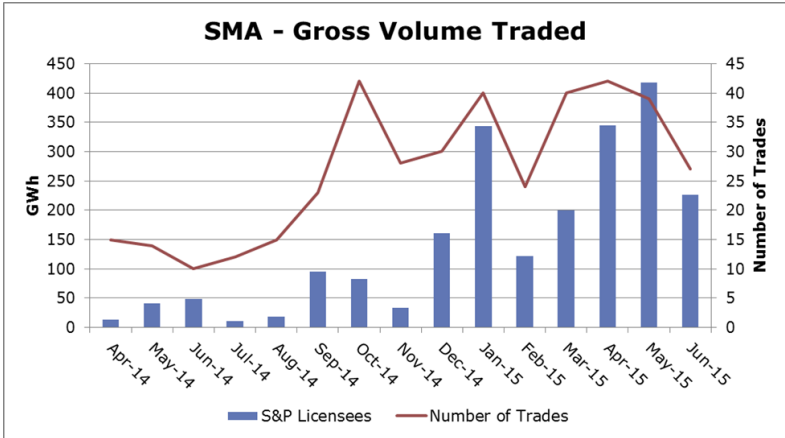


- Bid-Offer spreads show the difference between the prices parties are willing to buy at and willing to sell at.
- The graph shows the average spreads by quarter since 2010 for selected market making contracts.

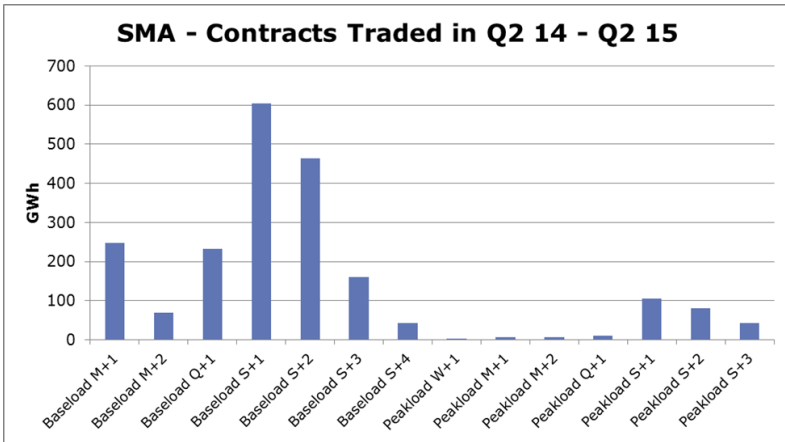


- Total exchange trading since 2010 in TWh.
- The data covers trading on the N2EX, APX, and ICE platforms.

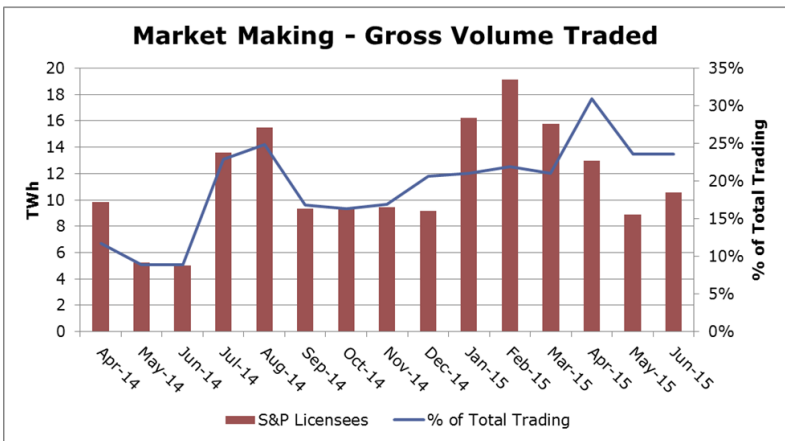
Wholesale Power Market Liquidity: Annual Report 2015



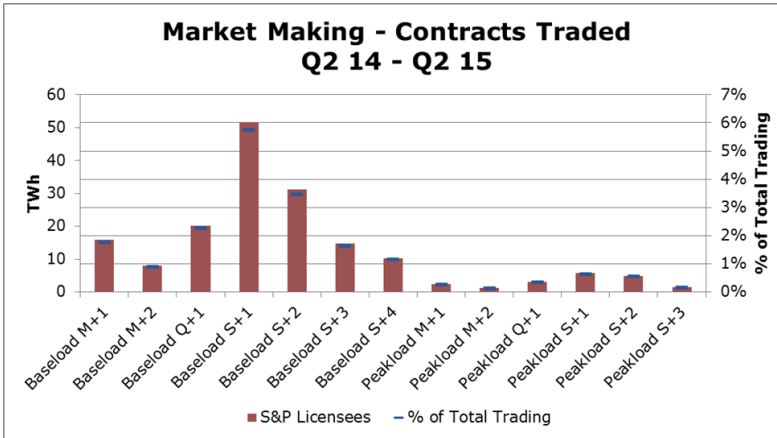
- Trades made with eligible suppliers as part of Supplier Market Access by month.
- Blue bars (left axis) show gross volume in GWh.
- Red line shows the number of trades (right axis).



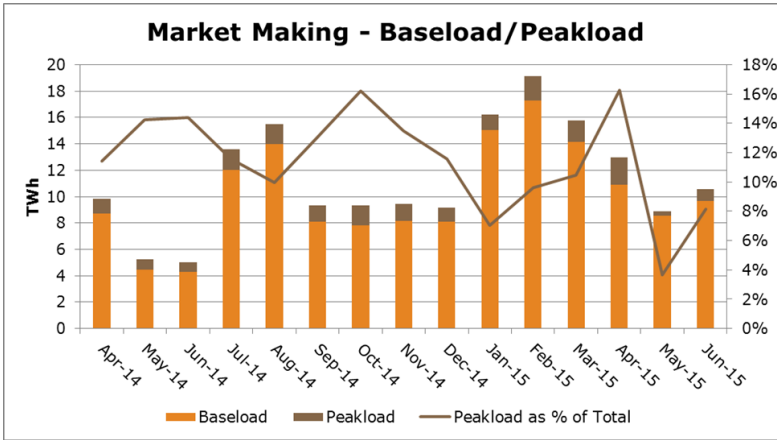
- The gross volume traded with eligible suppliers as part of Supplier Market Access (GWh) by baseload and peakload contract type.



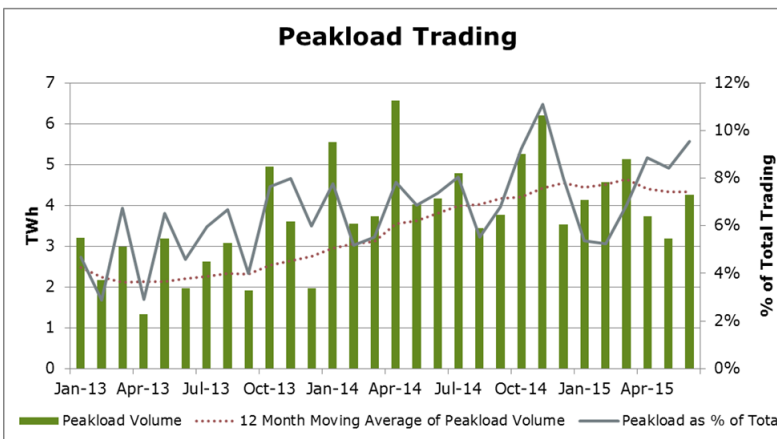
- Trades made in the market making windows by month.
- Red bars (left axis) show gross volume (TWh)
- The blue line (right axis) shows the percentage of volume traded by market making participants compared with total OTC trading in the relevant contracts.



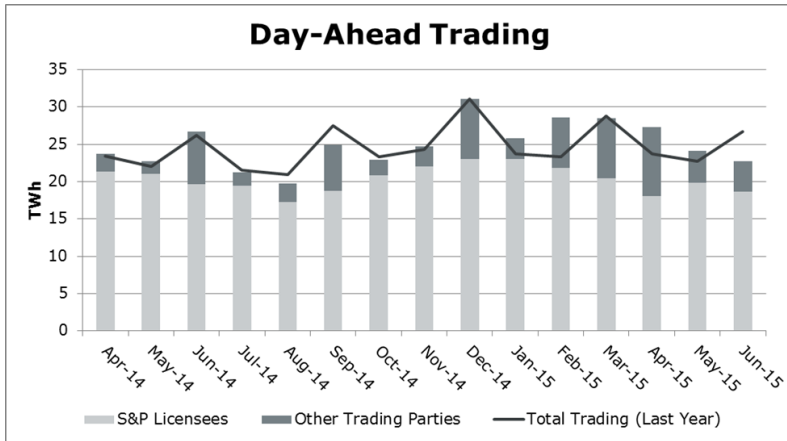
- The gross volume traded in the market making windows by baseload and peakload contract type.
- Red bars (left axis) show gross volume (TWh)
- The dashes (right axis) show the percentage in volume the contract contributes to total OTC trading.



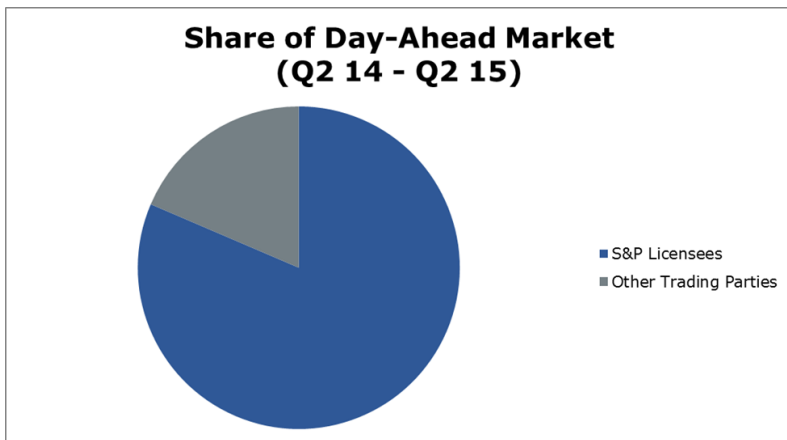
- Compares the gross volume of baseload and peakload type contracts in the market making windows by month.
- The brown line shows the percentage of peakload products traded during the windows.



- 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 on 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.