

# Eastern Partnership workshop

## Market monitoring in Great Britain

Yasmin Valji

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ofgem

- Introduction – about Ofgem
- GB market structure and background
- Why do we monitor?
- What do we monitor?
- Results of monitoring – case studies and Ofgem’s data portal

## About us

- Office of Gas and Electricity Markets (Ofgem)
- Independent regulator for both gas and electricity markets in Great Britain (separate regulator for Northern Ireland, The Utility Regulator)
- Chairman, Chief Executive, and board lead approximately 700 staff

## Our statutory Principal Objective and general duties

- promoting value for money
- promoting security of supply and sustainability, for present and future generations of consumers, domestic and industrial users
- the supervision and development of markets and competition
- regulation and the delivery of government schemes

## National Regulatory Authority and National Competition Authority

- Regulation of the network monopolies through licences and domestic and EU legislation; price controls; economic and efficient tests
- Suppliers in competitive market. No price controls but some regulation of behaviours through licences

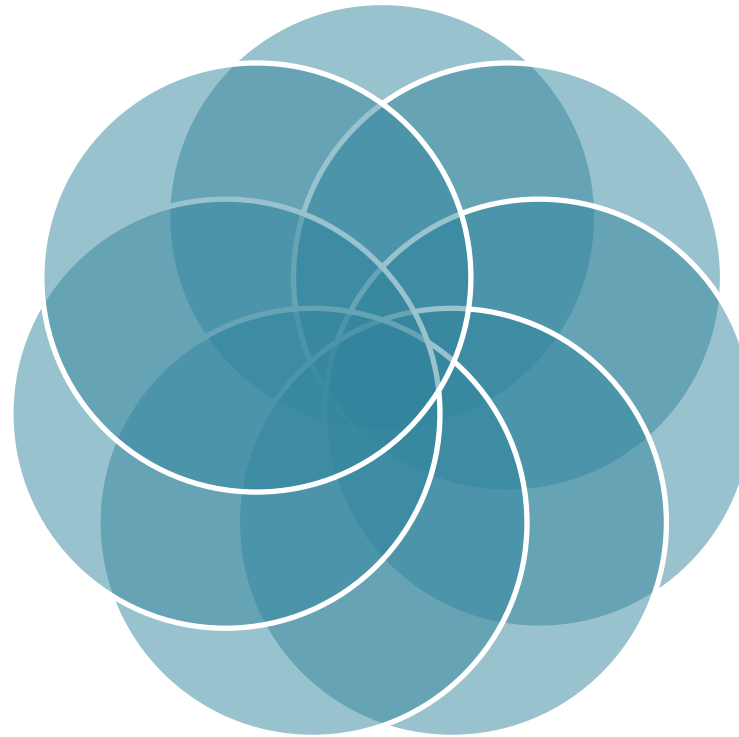
## Functioning

Compliance

Security of  
supply

Horizon  
scanning

Abuse



Competition

Evaluation

The rationale to monitor a market and the choice of what data to collect depends on the:

- structure of the market in question
- priorities of the regulator
- resources available

At Ofgem, we monitor for three main reasons:

- Remit
- To inform policy (development and impacts of existing policy)
- Market surveillance/ horizon scanning

We will briefly look at GB's market structure and how this informs our choice of what data we collect

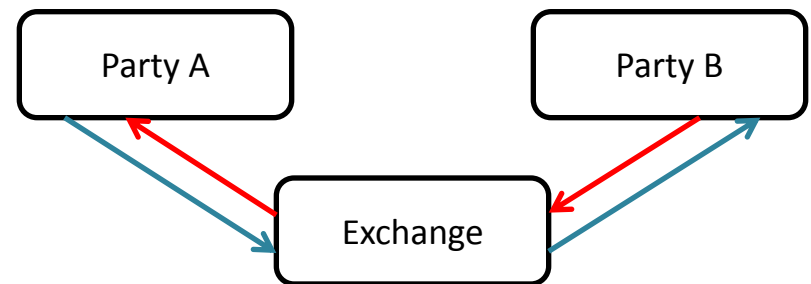
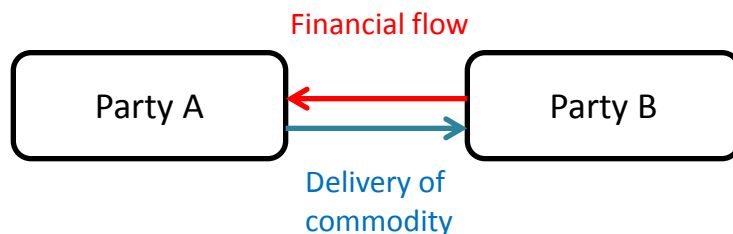
# GB Market structure and background

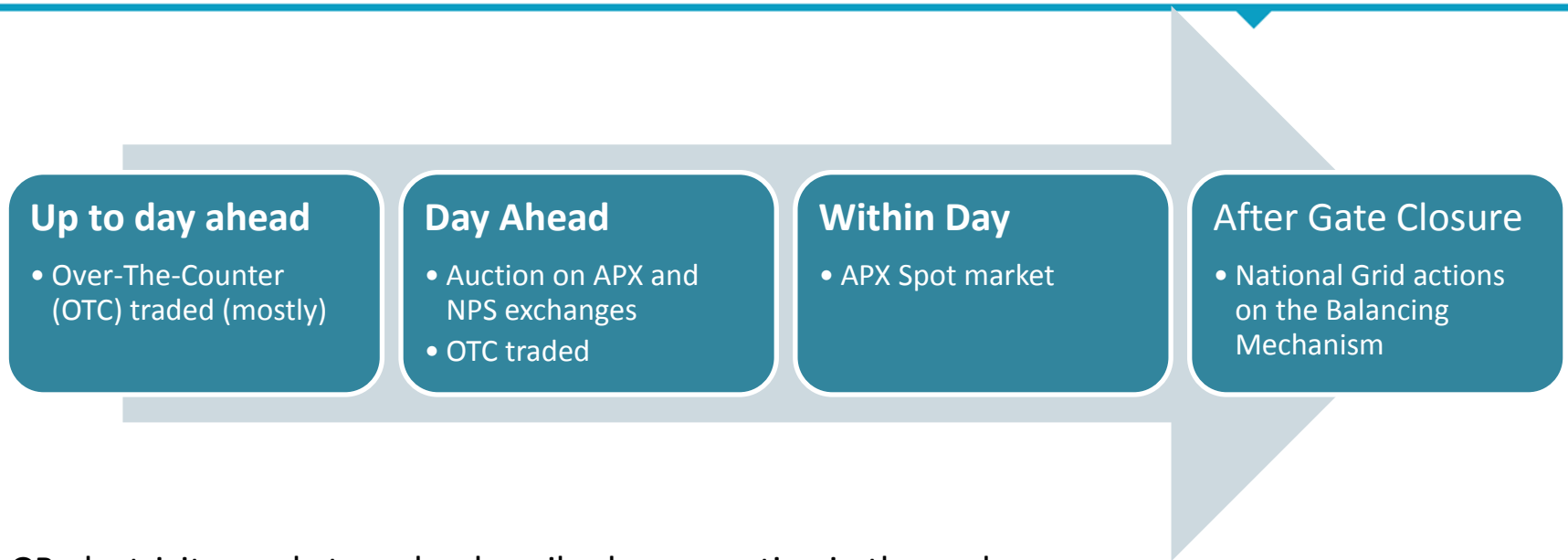
## Over-the-Counter (OTC)

- Bilateral agreements
- 'Opaque' market
- Facilitated by brokers and Price Reporting Agencies
- Counterparties won't necessarily post collateral

## Exchanges

- Act as an intermediary between parties
- Transparent market
- Counterparties have to post collateral



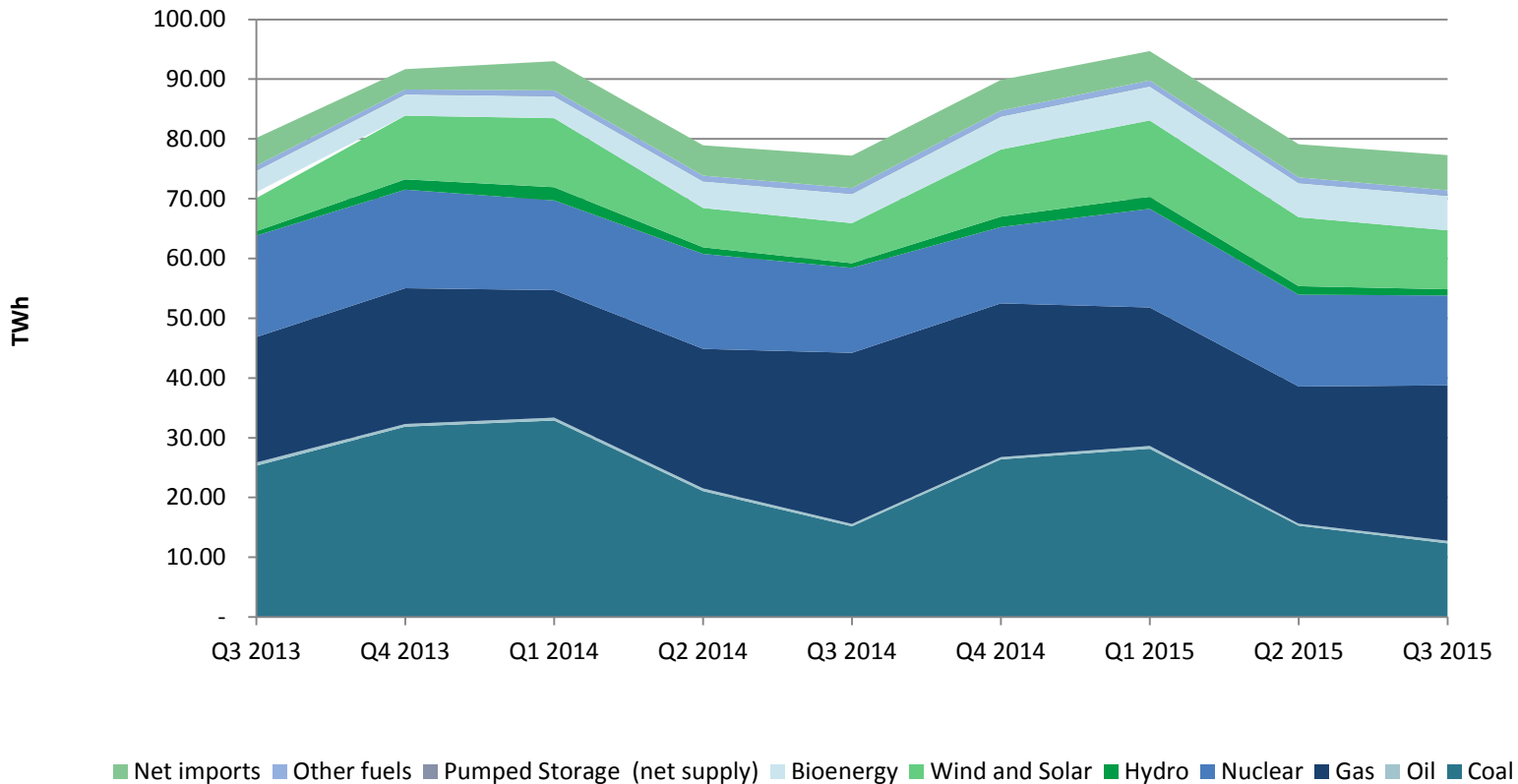


The GB electricity market can be described as operating in three phases:

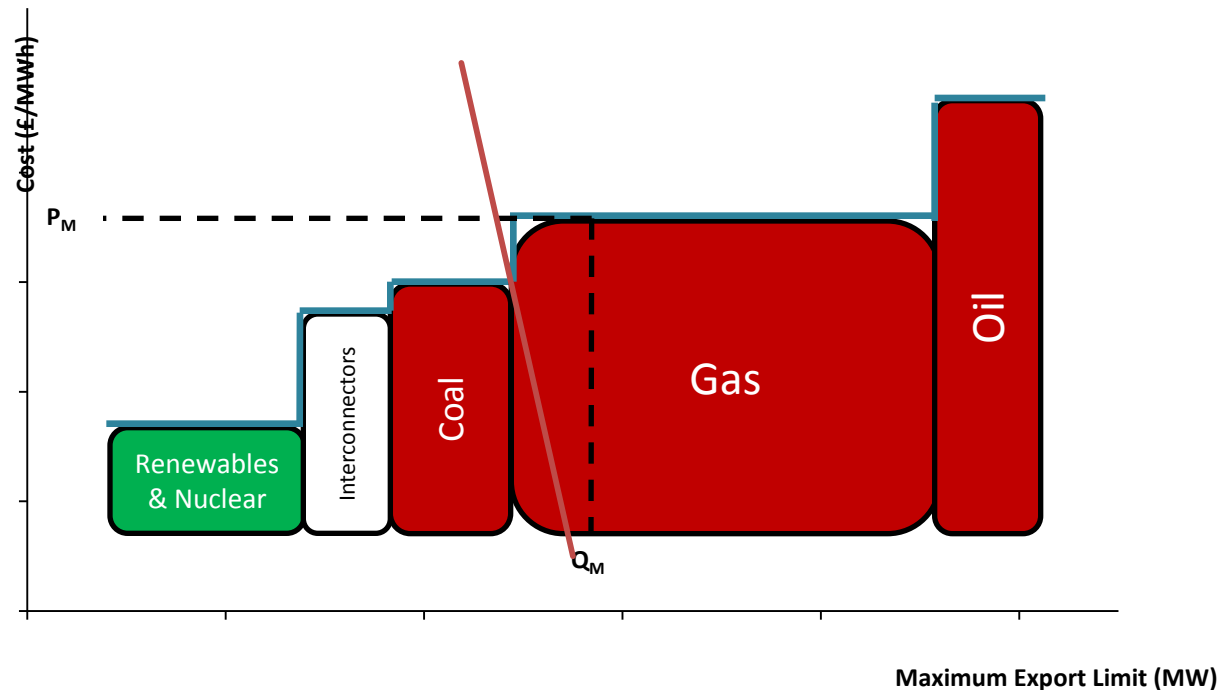
- Forward markets – operate from a year or more ahead down until Gate closure (one hour before real time)
- The balancing mechanism – operates from Gate Closure through to real time, managed by National Grid as the System Operator
- Imbalance exposure – any difference between notified contractual positions and what was physically delivered or taken determines the imbalance. Participants are exposed to the imbalance or ‘cash out’ price



- Power demand is highly volatile, albeit predictable, based on a set of drivers like:
  - Time of year, day, temperatures, economic activity, special events, etc
- GB has a varied mix of generation technologies. Increasing intermittent generation requires very good forecasting.



- The merit order shows the cost of electricity production against cumulative power capacity. Capacity is grouped by fuel type.
- Able to identify the marginal fuel and cost of production.
- Change in marginal fuel drives power price.
- Putting supply and demand together gives as a clearing price for the market



We monitor key indicators to understand market conditions, potential market abuse, and security of supply in the short and longer term, for example –

- **Plant available** to the market (including availability factors, outages), particularly the amount of renewable capacity available (wind and solar)
- **Prices** – elec and gas - forward and spot prices (day ahead, intraday), and balancing market prices
- **Supply side factors** – spark and dark spreads to see what the marginal source of fuel will be, Margins – short term and forecast margins for future winters.
- **Demand** – in particular, the difference between outturn demand and forecast at peak, and the components of demand
- **Market trends** – for example, negative prices (system or balancing)
- Specific indicators to understand policy impacts and the market, e.g. churn, market share

- What we choose to monitor in the market surveillance team depends on the cost, the complexity, the availability, and its usefulness for different monitoring. Both market and fundamental data are essential to monitor security of supply and compliance.
- Data comes from public and confidential sources and includes:
  - Webportals
  - Subscriptions
  - Bloomberg terminal
  - Databases
- Ofgem receives Remit data from GB brokers and exchanges. Ofgem will shortly begin to receive standard ACER Remit data, including bilateral contracts and non-standard bilateral contracts. Ofgem will also receive EU fundamental data from ACER in the upcoming months.
- Data is stored in a secure location and we have the necessary tools to process it –usually excel, but we also use plexos and stata, for example.
- Data can be accessed using the platform’s protocol and imported into excel or a database.
- Our methodologies are fully transparent and are explained on our site, e.g. the formula used for dark and spark spreads is clearly explained

# Monitoring the market on a daily basis



- ‘Secure and Promote’, a policy to improve liquidity in the GB power market (introduced in March 2014)
  - To monitor the impacts of the policy, we collect a range of data from the market, (e.g. bid offer spreads) and also get data from participants (e.g. trading volumes)
- Ofgem now publishes a range of interactive data charts on its site in an effort to make the energy market as transparent as possible. Ofgem data portal (wholesale and retail market data):

<https://www.ofgem.gov.uk/data-portal/overview>



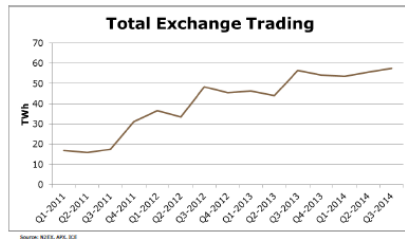
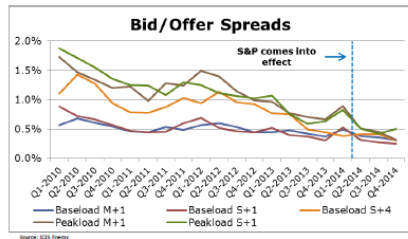
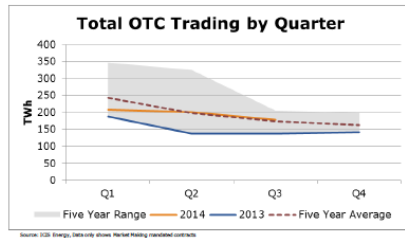
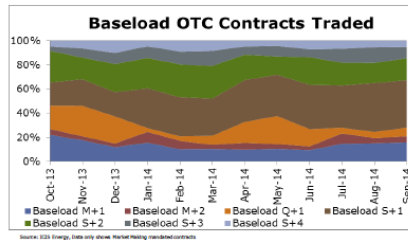
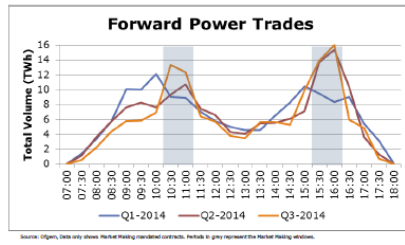
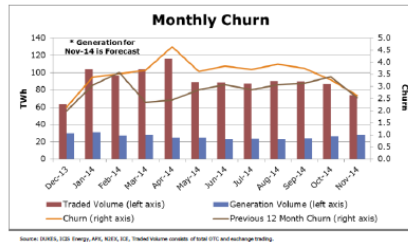
Secure and Promote Monitoring – Q3 2014

November 2014

## Metrics: Q2-Q3 2014

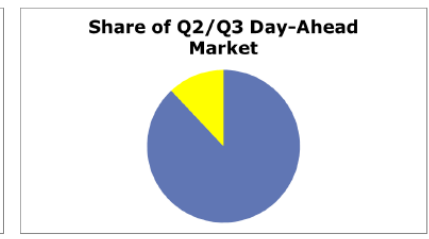
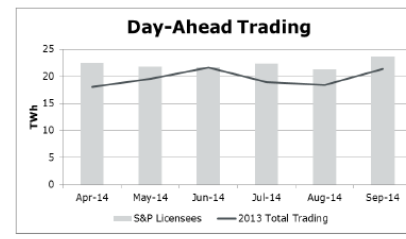
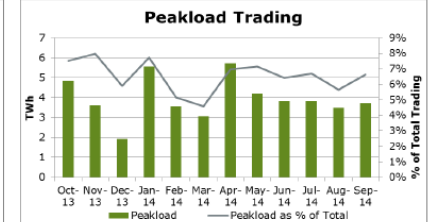
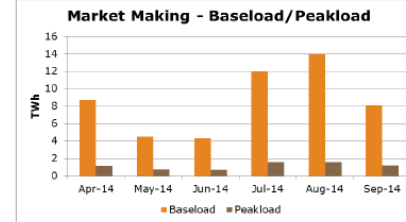
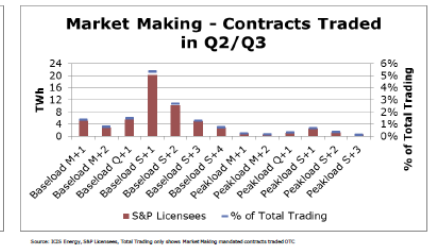
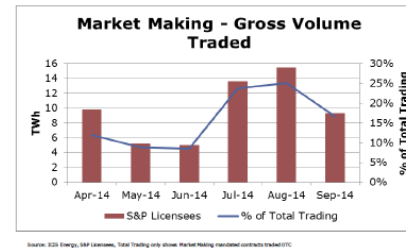
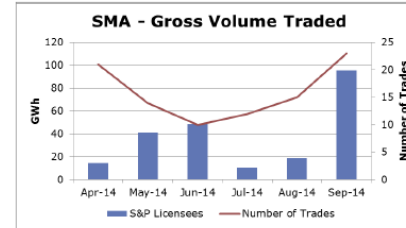
### Key Messages

- Churn is higher in Q3 2014 on average compared with Q3 2013 and has fallen slightly since Q2 2014
- Bid offer spreads are following a declining trend, in line with mandated spreads under S&P
- There appears to be some concentration of trading in the market making windows since Q1 2014
- The OTC market is showing higher volumes year to date compared to 2013
- Volumes are increasing under the Supplier Market Access condition, with an initial tendency to see fewer, larger trades
- The number of eligible suppliers is now 8, up from 6 at the outset of the S&P
- Market making volumes have increased in Q3 compared with Q2 2014
- We generally see an overall positive movement in liquidity since S&P came into effect, however it is too early to draw any conclusions – there are too many contributing factors to the trends

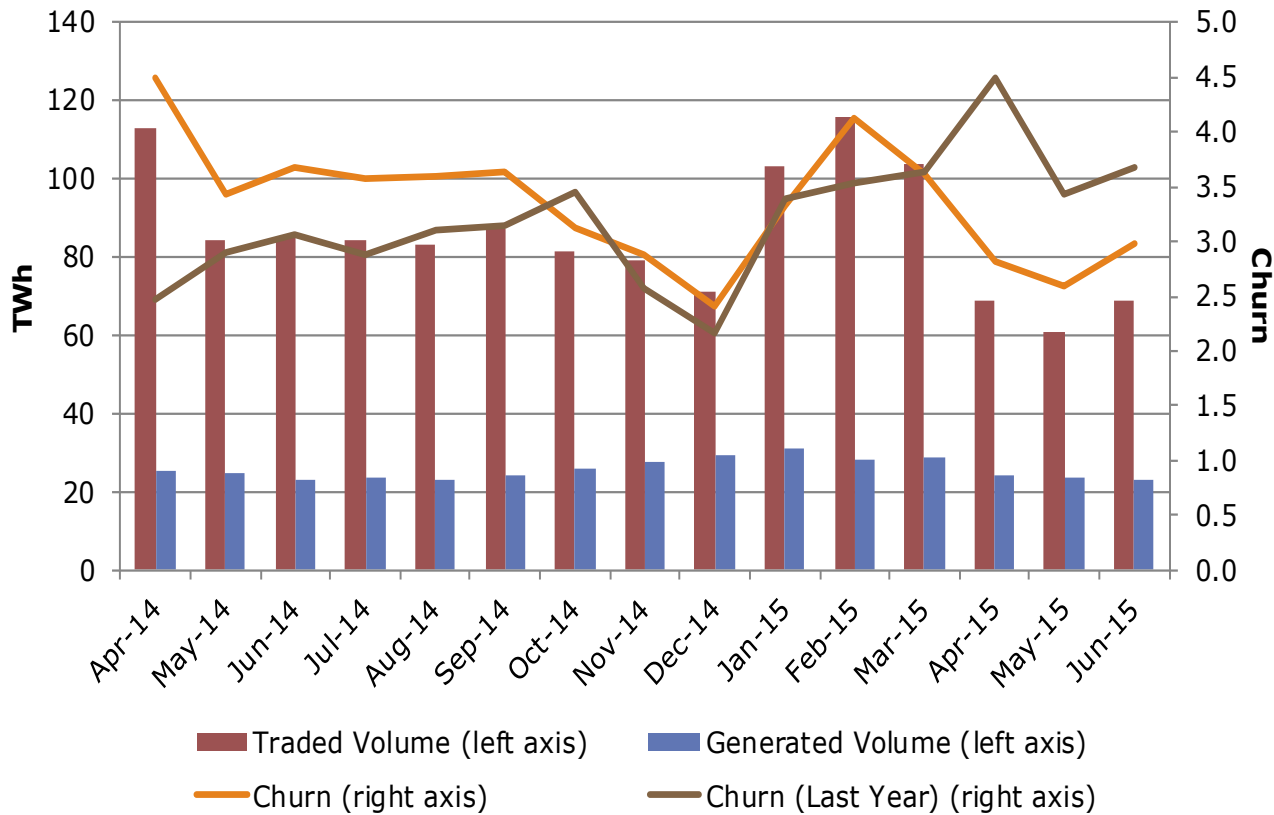


Secure and Promote Monitoring – Q3 2014

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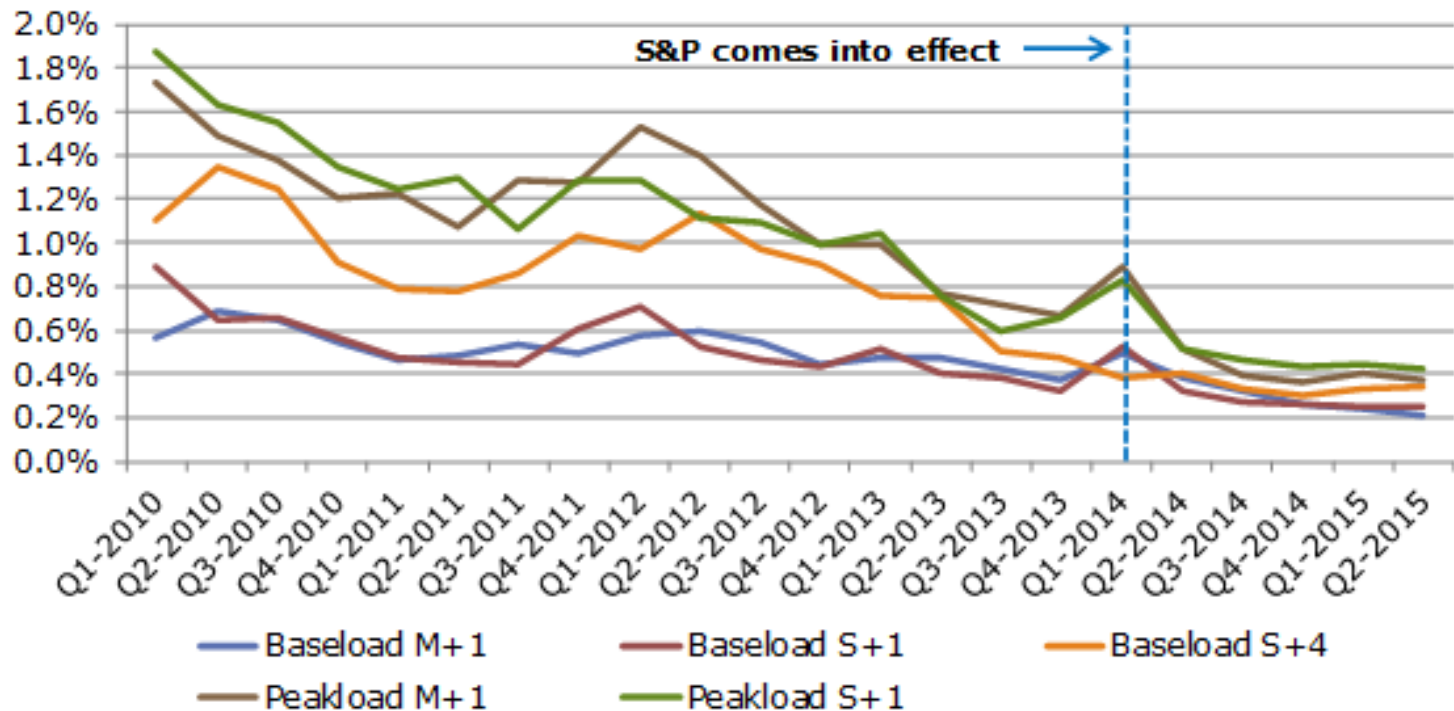
## Churn



- The churn shows how often a unit of generation is traded before it is delivered.
- The graph shows churn by month over the previous 12 months.
- The left hand axis shows the volumes generated and traded in TWh
- The right hand axis shows the churn (orange line)

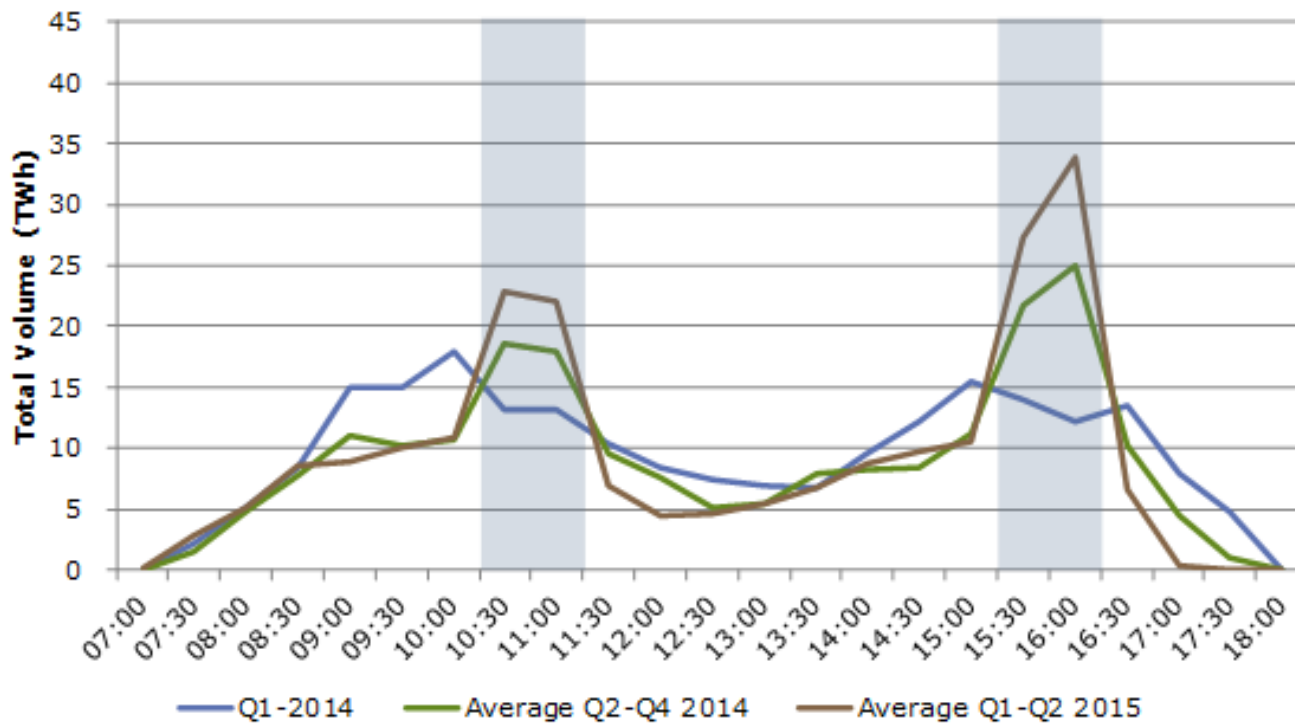


## Electricity bid-offer spreads



Spreads are assessed at 4.30 pm

## Trading during the day



- 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.

# Data portal

Overview

All charts

Retail indicators

Wholesale indicators

Customer service indicators

## Welcome to the Ofgem data portal for the energy markets in Great Britain

We're making the energy market as transparent as possible so consumers, market participants and other interested parties can see how it is working. This portal gives direct access to all of our interactive data charts in a single location, alongside indicators we consider key to our performance monitoring.

Select from the below to view a library of all data charts, or for a detailed view of indicators against our monitoring themes for the retail and wholesale markets and customer service. These include links to our annual reports.

## Our interactive charts and indicators



[All data charts](#)



[Retail market](#)

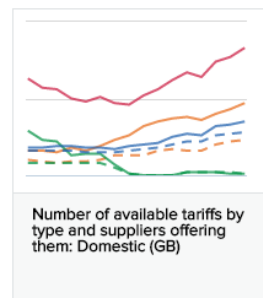
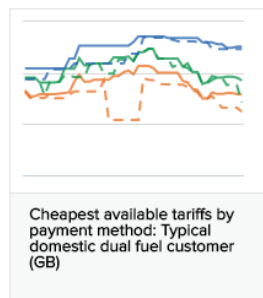
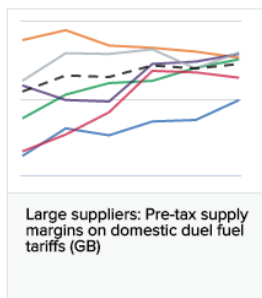
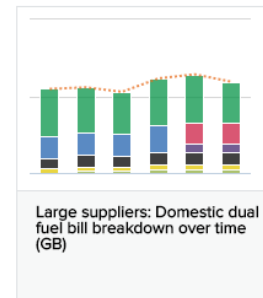
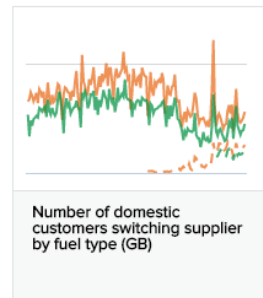
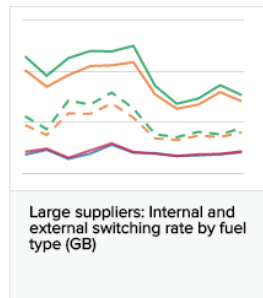
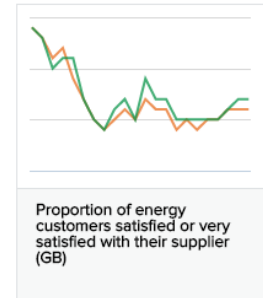
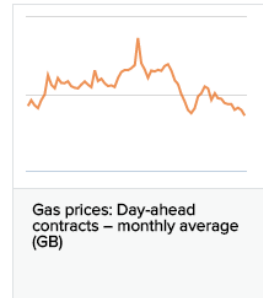
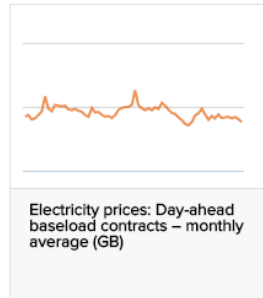
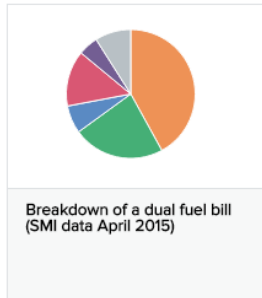


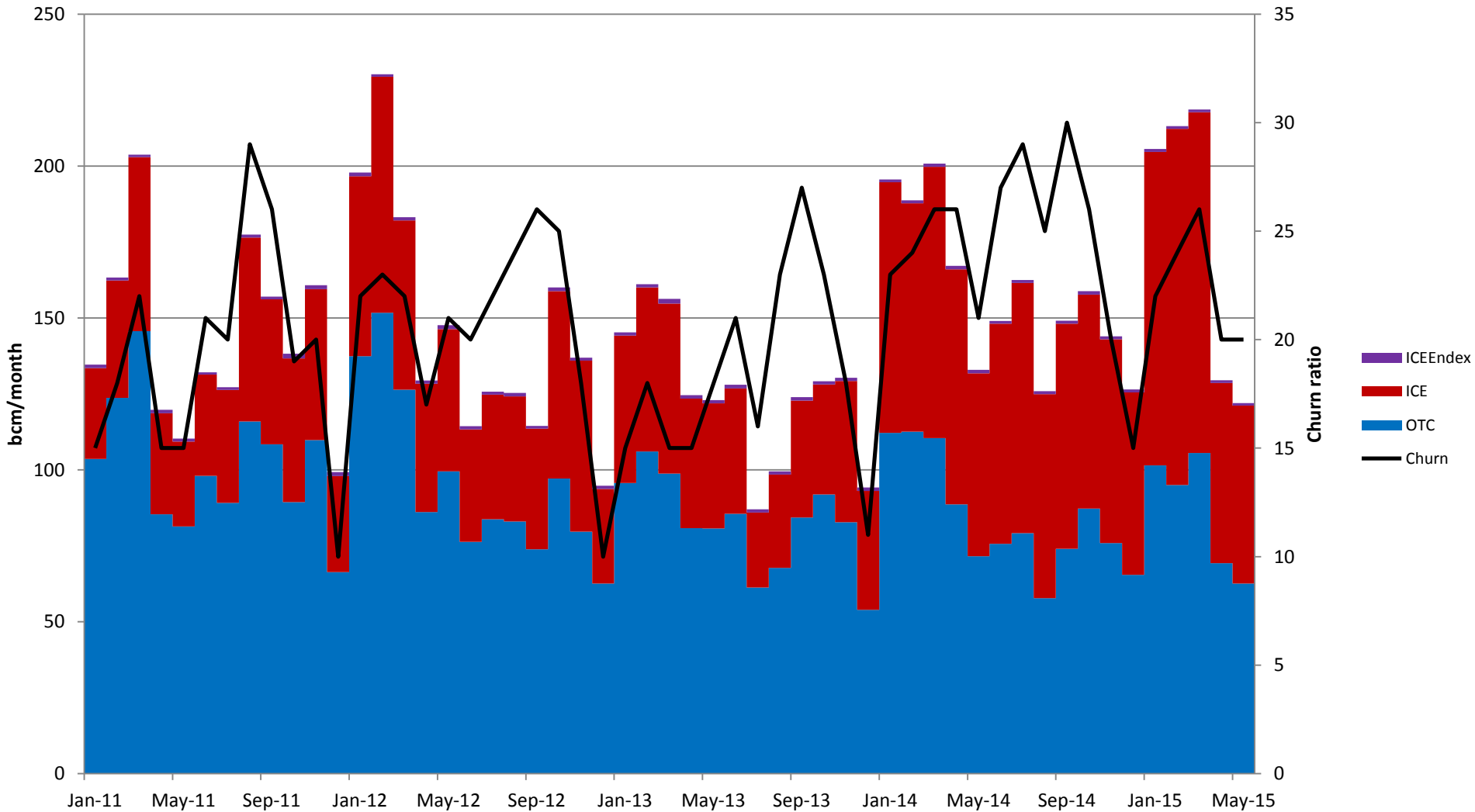
[Wholesale market](#)

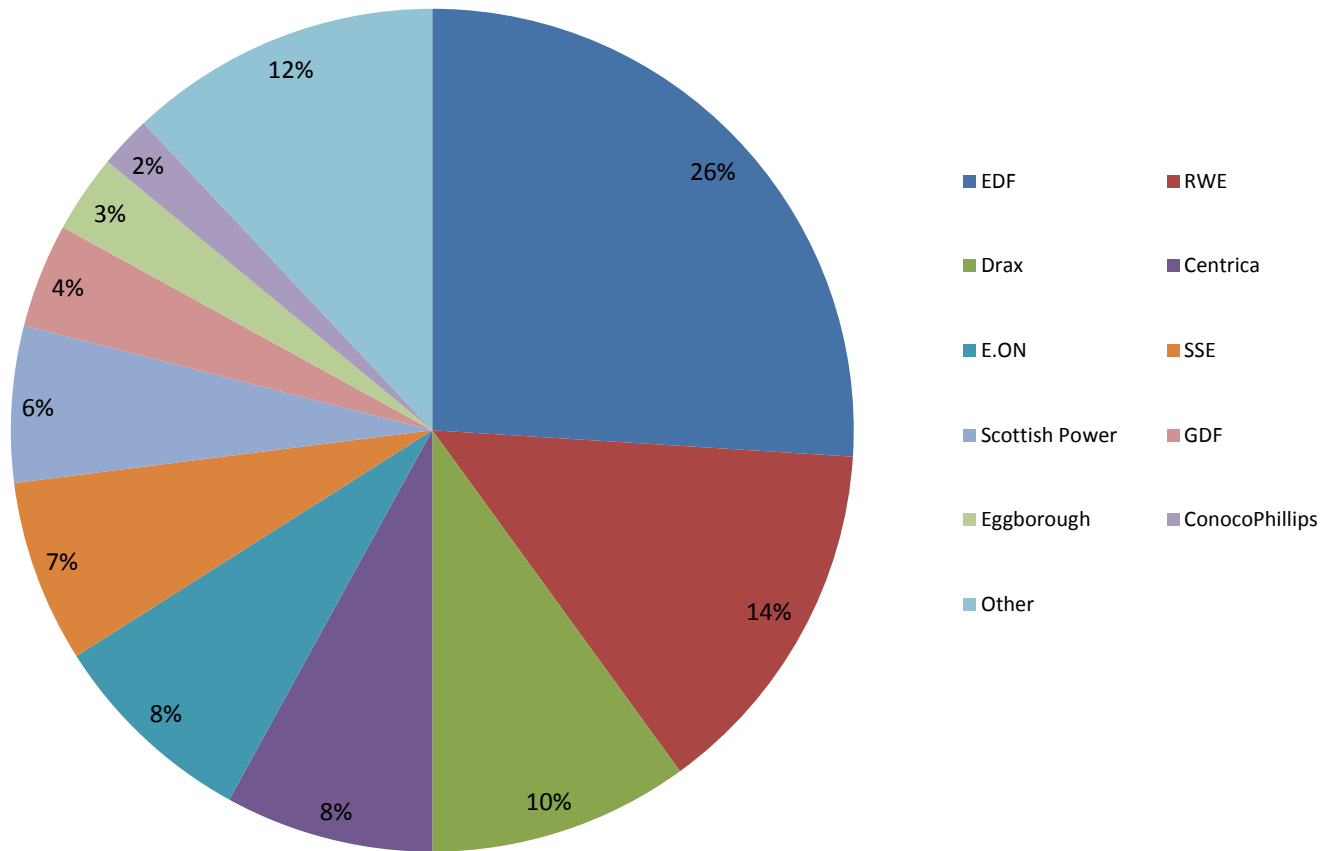


[Customer service](#)

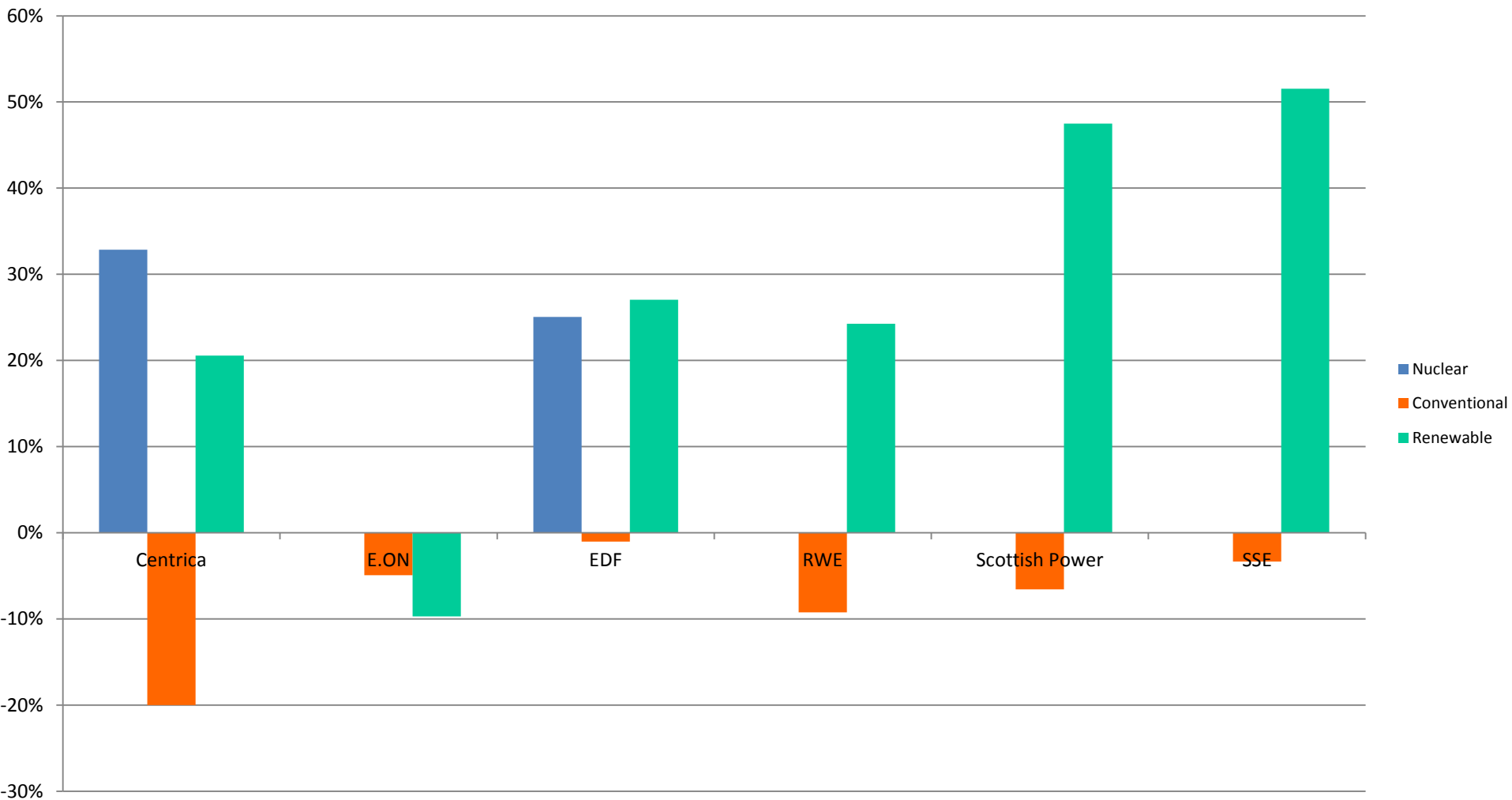
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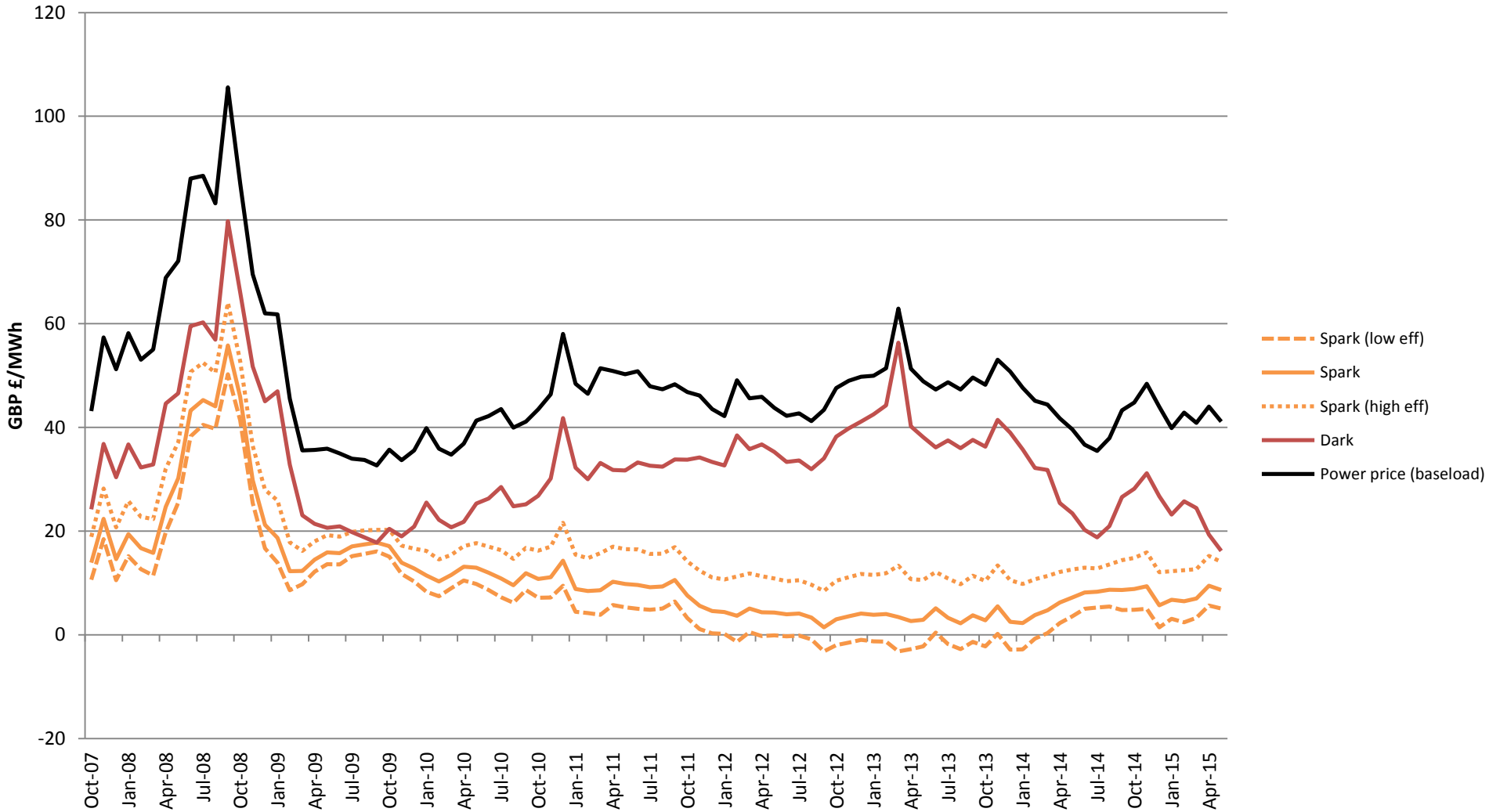






# Data portal – EBIT margins







- Market monitoring means different things to different people.
- Key tools to understand market include:
  - Forward curves
  - Spark spreads
  - Merit order
- Monitoring in short- medium and long term often focus on different market aspects
- Horizon scanning is important for Ofgem and the industry as the market adapts to change

<http://www.bmreports.com/> - Balancing Mechanism data, latest forecasts etc

<https://www.elexonportal.co.uk/> - Historical Data including generation, system prices

<https://www.gov.uk/government/collections/total-energy-statistics> - Government data and commentary on historical trends

<http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/> National Grid publications, scenarios

<https://www.ofgem.gov.uk/monitoring-market/wholesale-market-indicators> Ofgem wholesale market indicators

<https://www.ofgem.gov.uk/electricity/wholesale-market/electricity-security-supply> Ofgem electricity security of supply

**Ofgem is the Office of Gas and Electricity Markets.**

**Our priority is to protect and to make a positive difference for all energy consumers. We work to promote value for money, security of supply and sustainability for present and future generations. We do this through the supervision and development of markets, regulation and the delivery of government schemes.**

**We work effectively with, but independently of, government, the energy industry and other stakeholders. We do so within a legal framework determined by the UK government and the European Union.**