

ELEXON BRIEFING NOTE: Half-Hourly Settlement

This briefing note provides background information to the Competition and Markets Authority (CMA) remedy relating to the introduction of half-hourly settlement to all customers as set out in the CMA's report of its investigation into the energy market. For further information please contact communications@elexon.co.uk

What is settlement?

Settlement is the process for determining if the total energy produced or consumed by a participant in the electricity market (mainly a generator or supplier) matches with energy they have purchased/sold in the forward market. The rules for settlement are set out in the Balancing and Settlement Code (BSC), managed and operated by ELEXON. Any mismatches incur 'imbalance' charges, therefore participants are incentivised to match their contracted and actual positions.

ELEXON takes the information obtained from electricity meters and compares this to the amount of energy that participants have contracted. Participants notify ELEXON in advance of the amount of energy they have contracted for.

The settlement calculations are performed for every half hour of every day using ELEXON systems.

Settlement is distinct from an electricity supplier billing a customer for their energy use, even though both processes use consumption data.

Why is settlement performed half-hourly?

In Great Britain we decided to perform settlement on a half-hourly basis when we set the competitive market up. At the time generators and large customers had metering that was capable of allocating volumes on a half-hourly basis. We can (and have been) settling these participants on a half-hourly basis for over 20 years.

Note: In other countries settlement is performed at different granularity (e.g. hourly). There are European wide proposals to eventually move to 15-minute settlement.

What about customers who do not have a meter capable of recording data in half-hourly intervals?

The majority of customers still do not have meters which record data on a half-hourly basis (and even if they do they may not currently choose to be settled half-hourly). Therefore ELEXON has to use a **profile**. A profile is a shape of a customer's consumption that we can model for each day of the week, season and year.

A typical domestic customer has a profile that looks like that in figure 1.

As there is no half-hourly data available from these meters, ELEXON uses data from readings taken between two points in time from a customer's electricity meters to allocate the total energy used under the shape of the profile. This means that suppliers' imbalance charges are based on calculations that use a profile of energy consumed rather than the accurate consumption in the half-hourly period. In a future half hourly metered world Suppliers should be able to ensure their customers' energy volumes can be more accurately reflected in settlement as well as billing.

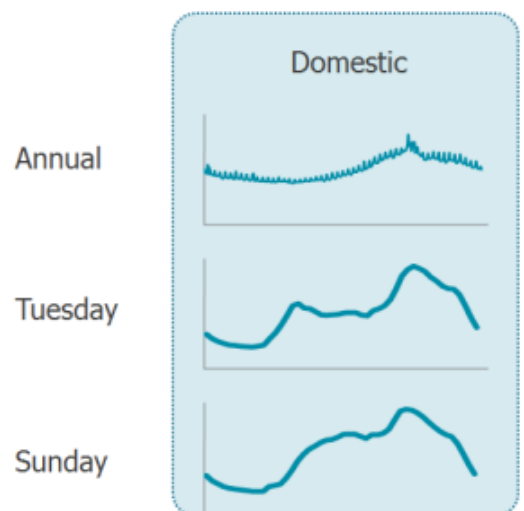


Figure 1: Typical domestic customer profile

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The Competition and Markets Authority (CMA) proposal on half-hourly settlement

In June 2016, the CMA published its Energy Market Investigation [Final Report](#). It concluded that government and Ofgem should proceed with establishing a timetable for the introduction of half-hourly metering across all customers.

The CMA noted that '**accurate and timely settlement is fundamental to well-functioning retail energy markets**' to ensure suppliers have the right incentives to minimise the overall costs of energy.

In 2010, ELEXON made the case for investigating half-hourly settlement to drive forward the agenda. This work has led directly to industry change for non-domestic customers.

Ofgem is currently running a programme of work which firstly is encouraging greater 'elective' half-hourly settlement and secondly to determine when it would be suitable to move to full half-hourly settlement for all customers. ELEXON is supporting Ofgem in this work as the GB settlement agent and we anticipate that Ofgem will soon launch a Significant Code Review (SCR) to deliver this.

When can we have full half-hourly settlement?

More granular settlement requires more granular data. We will get the half-hourly data when meters are installed that are capable of recording the data.

The government's smart meter rollout is the catalyst for this, but **we will be unable to move to full half-hourly settlement until significant progress is made on the rollout.**

How will half-hourly settlement enable new services and products?

Once there is more granular data then the opportunity for market services and tariffs increases. With smart or half-hourly capable meters the customer and supplier can engage on tariffs and see billing information that reflects actual consumption in any agreed period of time. In turn the data can be used to accurately settle the energy volumes associated with the supplier, so there is no mismatch. In addition greater opportunities are afforded to allow the market to capture and record movements of energy (from consumption to small scale generation). This will broaden the reach for services and new technology such as:

- Storage
- Microgeneration
- Dynamic Time of Use Tariffs
- Prepay services
- Aggregation
- Demand Side Response
- Localised balancing activities

Want to know more?

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