

# METER READ HISTORY

This document outlines the methodology used to assess the Settlement Risk related to Meter read history. We are not seeking to exhaustively outline all aspects considered during this assessment; our aim is to draw out the main data items considered and any key assumptions when estimating a future impact range.

**The risk that...** On change of Supplier or agent, meter read history is incorrect or not transferred such that sufficient history is not available for validating and estimating energy volumes **resulting in...** erroneous or estimated data in Settlement

## Estimated impact in 2019/20

Lower	Middle	Upper
£512.6k	£2.7m	£7.8m

**Category:** Data retrieval and processing

**Sub category:** Meter read history

**Covers:** Transfer of Meter read history of a change of Data Collector

**Does not cover:** Change of agent for DCC serviced smart Meters as there is no requirement to transfer Meter read history

**Please note:** For the initial risk assessment, we have focused on assessing the impact of the risk occurring in the Non-Half Hourly (NHH) market, as this is where the risk has historically manifest. This is due to the need to validate a change of Supplier read in the NHH market and the Meter read history provided by the previous Data Collector (DC) is used to support that validation. As there is no change of Supplier read to validate in the Half Hourly (HH) market, a missing Meter read history will not have a similar impact than in the NHH market.

## At risk population

As part of this assessment, we seek to understand the population at risk in the upcoming period, i.e. how many times will the underlying process occur where the risk can manifest.

For the risk factor being assessed, the population at risk is changes of NHHDC, with or without a concurrent change of Supplier.

## Data point considered

To estimate future volumes, we considered historical change of Supplier events reported publically by Ofgem and change of DC events observed through quarterly snapshots of SMRS to which we have access. The following table displays change of DC events for Profile Classes 1-4 as observed in quarterly SMRS snapshots over the last two performance assurance operating periods (PAOP)

Market	2016/17	2017/18
NHH Profile Class 1-4	4.8m	6.0m

- SMRS extracts are obtained on a quarterly basis, therefore if there are multiple changes between snapshots, only the latest is captured
- We excluded change of DC events where both DCs were in the same organisation
- In the previous year, ELEXON noted an increase in change of DC numbers

## Forecast

Below are the key considerations and assumptions when forecasting the at risk population in the 2019/20 period:

- ELEXON noted the trend in change of DC activity over the previous two years
- There is no requirement to transfer the Meter read history on a change of Supplier for Data Communications Company (DCC) serviced smart Meters. As such, this risk is expected to diminish as we progress through the smart Meter rollout. To take this into consideration, we adjusted the population at risk by the expected proportion of the NHH market that will have a smart Meter installed during the 2019/20 period

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- The residual Profile Class 5-8 sites registered as NHH are not considered as part of this assessment as we are expecting the population to continue to diminish with the conclusion of P272

## Failure rate

From the population at risk, we need to estimate the proportion where the risk will manifest, i.e. the failure rate. To do this, we assess historical performance in the area and consider any upcoming changes that have the potential to impact future performance.

### Data points considered

When assessing historical performance in the area, we considered Meter read history data flows sent over the Data Transfer Network (DTN) and Performance Assurance Reporting and Monitoring System (PARMS) Serial NC11<sup>1</sup>. The below table provides the proportion of missing Meter read histories following a change of DC as per both data sources:

Source	2015/16	2016/17	2017/18
NC11	1.50%	1.63%	2.10%
DTN	1.22%	1.63%	1.92%

- DTN extracts do not provide a complete view of market performance, i.e. they provide insights into market performance
- The two data sources have different reporting contexts providing slightly different views, however they both show an increasing trend in missing data over the past three years

However, as a missing Meter read history will not always result in an erroneous consumption value, we sought to understand what proportion were likely material. ELEXON assessed whether the events concurrent with a change of Supplier with missing Meter read histories were also subject to a disputed read. The below tables provides the proportion of change of Supplier events with missing Meter reads histories and a disputed read.

Source	2015/16	2016/17	2017/18
DTN	0.30%	0.28%	0.42%

- We are unable to provide this additional view through PARMS Serial NC11
- There has been an increase in the proportion of changes of Supplier with missing Meter read histories and a disputed read in the most recent year

### Forecast

Below are the key consideration and assumptions when forecasting failure rates in the 2019/20 period:

- We are assuming that the Meter read that is later subject to a dispute was caused by the missing Meter read history
- We have assumed that change of DC events only (i.e. not concurrent with a change of Supplier) will have a similar failure rate as change of Supplier events with disputed reads

<sup>1</sup> Missing NHH Meter Reads & History from Old NHHDC to New NHHDC

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## Impact

To estimate the impact of a risk we need to understand the days impacted and error volume on average per instance.

### Average days impacted

When an erroneous Meter read enters Settlement, the previous and following Meter Advance Period (MAP) are likely to be impacted. To understand average MAP length, we assessed NHH consumption data flows sent over the DTN for Profile Class 1-4 sites. The following table provides average MAP length in days per Profile Class.

PC	2015/16	2016/17	2017/18
1	124	103	78
2	139	119	90
3	103	87	67
4	93	79	62

- We have seen a trend in average MAP decreasing over the past three years. This aligns with the several million remote NHH Meters that were installed over the same period
- Average MAP length for Profile Class 2 is the longest across all periods assessed

### Average error per day

As previously noted, when this risk occurs, it is likely that the previous and following MAPs will be impacted. However, we considered the impact for each MAP is likely to be different.

For the previous MAP, we considered that the primary impact will be an erroneous consumption value, i.e. an incorrect advance will be calculated when comparing the erroneous reads to the previous correct read. We used the standard rate card related to erroneous actual consumption values to provide a view of this impact on average.

For the following MAP, we considered that the primary impact will be an inaccurate forward-looking estimate. We used standard rate card related to inaccuracy associated with a default estimation (EAC), as we felt this would be the most comparable in terms of inaccuracy.

### Forecast

Below are the key considerations and assumptions when forecasting impact values in the 2019/20 period:

- As this risk is related to non-DCC serviced Meters (i.e. legacy Meters), we did not consider average MAPs for the two most recent periods in the forecast. This is due to the MAPs in these periods being more reflective of Meters which will have a similar read frequency to DCC serviced Meters and not legacy Meters
- Based on historical performance, we are forecasting that all change of DC events with a missing Meter read history will be subject to an inaccurate (default) estimate. For a subset of these change of DC events where no Meter read history is received, we are forecasting an erroneous Meter read will enter Settlement

We convert the error volume into a monetary value by the forecast system buy and sell price for the upcoming period.