METER TECHNICAL DETAIL TRANSFER AND PROCESSING

This document outlines the methodology used to assess the Settlement Risk related to the transfer and processing of Meter Technical Details (MTDs). 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 a Change of Agent, Meter Technical Details are not transferred or processed correctly or at all, such that parties do not use the latest Meter Technical Details **resulting in...** erroneous or estimated data in Settlement.

Estimated impact in 2020/21

Market	Lower	Middle	Upper
NHH	£310k	£709k	£1.75m
HH	£775k	£2.1m	£5.5m

Category: Metering

Sub category: Meter Technical Detail transfer and processing

Covers: Transfer of MTDs on a change of agent, including those concurrent with change of Supplier

Does not cover: Transfer of MTDs following a change to or of the Metering System (captured under the notification of changes to Metering Equipment risk – 004)

Please note: It is recognised that due to industry workarounds for issues related to MTD transfer (e.g. use of historical MTDs if held from a previous appointment) this risk will not always result in a material impact to Settlement. We have not attempted to adjust figures to account for these workarounds as they would not be required if BSC obligations were met, they present a risk to Settlement that old and inaccurate details are used, and the underlying issue directly impacts the BSC assurance objective related to the transfer of Metering System data (Section Z5.1.4).

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.

The at risk population for this risk is all change of agent events that result in the transfer of MTDs. This will be any changes of Meter Operator Agent (MOA) or Data Collector (DC) in both the Half Hourly (HH) and Non-Half Hourly (NHH) markets.

Data point considered

To identify previous change of MOA or DC events, we analysed quarterly snapshots of the Supplier Meter Registration Service (SMRS) to which we have access. Please see below the volumes of change of MOA or DC events for the previous two annual periods.

CoA Market /PAOP	NHH PC1-4	HH sub 100 kW	HH 100 kW
2016/17	7,356,049	72,248	27,032
2017/18	16,561,084	221,869	61,957
2018/19	10,049,498	63,323	32,850

- SMRS extracts are obtained on a quarterly basis, therefore if there are multiple changes between snapshots, only the latest is captured
- The volume of change of agent events has been relatively static for NHH and HH 100 kW in the last 2 years
- The volume of change of agent events for HH sub 100 kW in the previous 2 years will have been heavily impacted by the migration to HH Settlement required under Modification P272

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Forecast

Below are the key considerations and assumptions when forecasting the at risk population in the 2020/21 period:

- Due to increased change of Meter activity as a result of the smart Meter rollout, we are forecasting similar numbers of change of agent events in the upcoming period
- When forecasting future change of agent events for the sub 100 kW market, we felt the proportion observed in the 100 kW market is more likely to be representative of what we may see in the upcoming period due to the historical impacts on activity caused by Modification P272
- 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

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:

- PARMS Serials that report on missing MTDs following a change of agent (NM12 and HM12)
- Data flow analysis from Data Transfer Network (DTN) extracts

The following table provides a view of the proportion of late MTDs following a change of MOA as per analysis of DTN extracts.

- DTN extracts do not provide a complete view of market performance, i.e. they provide insights into market performance
- This analysis of DTN flows was previously used as justification for a TAPAP in 2017/18
- For a MTD to be reported as late, it must have been received, i.e. this does not cover MTDs currently missing
- The proportion of late MTDs in the HH sub 100 kW market in the previous two years will have been influenced by P272

Late CoA /PAOP	NHH PC1-4	NHH PARMs	HH sub 100 kW	HH 100 kW	HH PARMS
2016/17	0.19%	0.43%	2.73%	3.89%	3.56%
2017/18	0.48%	0.47%	2.00%	2.44%	2.89%
2018/19	0.47%	0.44%	1.93%	2.22%	2.25%

Forecast

Below are the key considerations and assumptions when forecasting failure rates in the 2020/21 period:

- We have used historical performance observed through DTN analysis when forecasting future failure rates due to the historical issues with the consistency and accuracy of PARMS data, which is due to undergo a review as part of the technique review of the PAF Review
- We have assumed that the failure rate of MTD transfer MOA to DC is comparable to the observed failure rate MOA to MOA
- We are forecasting failure rates in the NHH market that are comparable to those observed in previous years, with the potential for some slight degradation as activity levels increase as part of the smart Meter rollout

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- We are forecasting failure rates in the HH 100 kW market that are comparable to those we have observed in the previous years, of which we have been an improving trend, however we could see failure rates as high as observed historically
- When forecasting future failure rates for the HH sub 100 kW market, we felt the performance observed in the HH 100 kW market is more likely to be representative of what we may see in the upcoming period due to the historical impacts on activity caused by Modification P272Impact

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

Average days impacted

Considering the data points previously discussed, we looked at average days that MTDs have been historically late. The following table provides a view of the average calendar days MTDs are late following a change of MOA as per analysis of DTN extracts.

Avg Days Late /PAOP	NHH PC1-4	HH sub 100 kW	HH 100 kW
2016/17	143	47	79
2017/18	119	87	114
2018/19	173	100	104

- The limitations the DTN extracts previously noted are the same for this data
- These figures represent the average days late MTDs, however the data display a downward curve in terms of the proportion late as the number of days increases
- The proportion late MTDs in the HH sub 100 kW market in the previous two years will have been influenced The proportion late MTDs in the HH sub 100 kW market in the previous two years will have been influenced

Average error per day

For this risk we considered that the main Settlement impact of missing MTDs will be estimated data, i.e. without a set of MTDs following a change of agent, the DC will be unable to validate Meter reads and it will revert to estimating consumption. As previously noted, we are not seeking to adjust the potential due to industry workarounds around missing MTDs for the reasons previously noted.

When estimating the error per day, we used the standard rate card related average daily inaccuracy when estimating consumption for the associated markets. An extract of the relevant rate card for average daily estimation accuracy is as follows.

Market	Avg. error per day (kWh)
HH 100 kW	318.09
HH sub 100 kW	91.74
NHH	2.42

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

- To assess the difference between an estimate and an actual, an actual consumption value needs to be available
- An estimate can either over or understate consumption on a Metering System level. When assessing inaccuracy we have used for gross difference on average
- We noted instances of extremely large consumption differences in the dataset that we can attribute to issues such as erroneously large estimates or actuals. We removed these outliers using a standard approach
- Due to fundamental differences between estimating in the HH and NHH market (i.e. at a Settlement Period level or a forward looking estimate (EAC)), the differences in inaccuracies should not be compared like for like