

# ELEXON Monitoring of Incorrect Non Half Hourly (NHH) Energisation Status

## What is the Issue?

Metering System Energisation Status is used by Non-Half Hourly Data Aggregators (NHHDA) to determine whether consumption for a Metering System is included in data aggregation. If the Energisation Status in the Supplier Meter Registration Service (SMRS) does not match the actual physical status, this can result in a Settlement error. Settlement Risk SR0026 relates to incorrect Energisation Status. This document gives an overview of the issue and outlines how we monitor it.

## How does incorrect Energisation Status impact Settlement?

Where a Metering System is energised in SMRS, any consumption (Estimated Annual Consumption (EAC) or Annualised Advance (AA)) will be used in Settlement. However, the rules are more complex when it comes to De-energised Metering Systems. Settlement aims to omit consumption for De-Energised Metering Systems from data aggregation. This is done using logic. Where a Metering System is De-energised in SMRS but an AA exists in NHHDA, the AA will be used in Settlement. The reasoning is that if an AA exists, it is based on an actual Meter Reading and is therefore correct. The Metering System can be considered to be logically Energised. Where a Metering System is De-energised in SMRS but only an Estimated Annual Consumption (EAC) exists in NHHDA, the EAC will not be used in Settlement. The Metering System can be considered to be logically De-energised. The table below shows the different potential scenarios and the inferred logical Energisation Status.

Physical Energisation Status	Energisation Status according to SMRS	Consumption in NHHDA	Logical Energisation Status	Settlement Error?
D	D	EAC	D	NO
E	D	EAC	D	YES
D	D	AA	E	YES
E	D	AA	E	NO
D	E	EAC/AA	E	YES
E	E	EAC/AA	E	NO

Errors arise in Settlement where the logical Energisation Status of a Metering System does not match its physical Energisation Status. The error can be in two forms:

- either a Metering System is logically Energised in Settlement but physically De-energised resulting in an overstatement of energy in Supplier Volume Allocation; or
- a Metering System is logically De-energised in Settlement but physically Energised resulting in an understatement of energy in Supplier Volume Allocation.

Only errors resulting in an understatement of Supply Volume Allocation are monitored by the Performance Assurance Board (PAB).

## What do ELEXON do?

We monitor the issue of incorrect energisation status and report information to the industry. This includes instance reporting to Suppliers identifying potential Settlement errors. We also provide Material Error Monitoring to the PAB. This highlights the Suppliers which are underperforming at the issue. We carry out monitoring on a quarterly basis, and [a calendar is published on the ELEXON website](#).

## Supplier Instance Reports

Instance Reports are produced for each Supplier Id. The reports identify Metering Systems within NHHDA databases which are at risk of having an incorrect Energisation Status. Instance reporting is carried out for data at R3. This identifies potential errors to Suppliers ahead of RF so that they can be corrected.

It is not possible, based solely on the data within NHHDA, to determine whether a Metering System has an incorrect Energisation Status. However, it is possible to identify specific scenarios for which this is a high risk. These “at risk pots” are used to monitor the issue. There are nine “at risk pots” in total, each of which is determined by a particular scenario in NHHDA. They are:

- 1) Non Zero AA (NZAA)
- 2) Zero AA (ZAA)
- 3) Non Zero EAC (NZEAC)
- 4) Zero EAC (ZEAC)
- 5) Long Term De-energised (LTD)
- 6) SMRS De-energised & DC Null (DC Null)
- 7) Long Term De-energised & DC Null (LTD DC Null)
- 8) SMRS Energised & DC Null (E DC Null)
- 9) Other

Instance Reports include all Metering Systems in NHHDA that fit into these nine “at risk pots”. Appendix 1 illustrates at a high level the different NHHDA scenarios that compile each “at risk pot”. Appendix 2 defines the specific criteria used to assign Metering Systems to the different pots.

## Material Error Monitoring and Incorrect Energisation Status

Material Error Monitoring is a detective technique under the Performance Assurance Framework. It is used to estimate the impact of a Settlement error, monitor error levels over time, and estimate contributions made by individual Party's and their Agents. We carry out material error monitoring for incorrect Energisation Status and report the results to the PAB. This information is also included in Materiality Reports to Suppliers.

Similarly to the Instance Reports above, the data used for material error monitoring is extracted from NHHDA. However, the aim with material error monitoring is to obtain a view of the error that exists at RF. It therefore uses data extracted for an RF Settlement Date.

Material error monitoring is done for just four of the nine “at risk pots”. The monitored pots are for scenarios resulting in an underestimate of Supplier Volume Allocation and benefit the Suppliers responsible for the error. Any Metering Systems in these pots which were physically energised on the RF date in question, have resulted in energy incorrectly omitted from Settlement.

The monitored pots are:

- Non Zero EAC (NZEAC)
- Long Term De-energised (LTD)
- SMRS De-energised & DC Null (DC Null)
- Long Term De-energised & DC Null (LTD DC Null)

To estimate the size of this error we ask Suppliers to analyse a sample from each of their four monitored pots. This gives us an estimate of the proportion of instances which were physically energised and causing an error. We apply the proportions to the relevant pot counts to estimate the total number of Metering Systems in error. Finally to establish a material error value we apply an average annual consumption figure to the error counts. This gives us an estimate of the material error associated with the issue and the contribution of each Supplier Id.

### **How should I carry out Supplier Sampling?**

If you are a Supplier, you will receive a sample of instances within each of the four "at risk pots" used for material error monitoring. The sample size depends on the total number of instances within each pot. As a Supplier you should investigate each Metering System on the list to determine its physical Energisation status, either Energised or De-energised.

As a Supplier you should have a good view as to the physical energisation status at the site on the RF date in question. Evidence to determine this may be available from your billing & data flow management system. Key indicators are:

- Is the customer electricity account being billed? If so are the bills being paid?
- Is any consumption being recorded against the account?
- Have you received any instructions or notifications that confirm the energisation status, e.g. data flow from the Meter Operator?
- Is there any additional information on the customer in the Supplier's records? This could be from communications with the customer, or additional information from a dual fuel account.

If a comparison to the billing system is not possible, the data should be compared to the Supplier's own registration system.

Once Energisation status has been assessed this should be indicated by putting a "D" for de-energised or an "E" for energised in the appropriate column of the Sample Spreadsheet. A comment can also be included but this is not mandatory. The results should be returned to ELEXON.

### **Who should I contact for further information?**

We are happy to answer any further questions you may have on this topic or any other. For further information, please contact the BSC Service Desk on **BSCservicedesk@logica.com** or on **0870 010 6950**.

### Appendix 1: "At Risk Pot" Descriptions

At Risk Pots:		DC = D	DC = E	DC = Null <i>(no consumption in NHHDA)</i>
	1) Non Zero AA (NZAA)	SMRS = D <i>(effective after market start up - 31/12/1998)</i>	Non Zero AA	Non Zero AA
2) Zero AA (ZAA)	Zero AA		Zero AA	
3) Non Zero EAC (NZEAC)				
4) Zero EAC (ZEAC)	Zero EAC		Zero EAC	
5) Long Term De-energised (LTD)				
6) SMRS De-energised & DC Null (DC Null)	SMRS = D <i>(effective before market start up - 31/12/1998)</i>			
7) Long Term De-energised & DC Null (LTD DC Null)	SMRS = E	Other	X	E DC Null
8) SMRS Energised & DC Null (E DC Null)				
9) Other				

Pots used in material error monitoring are marked with a red box.

Please note: ELEXON monitoring does not include instances where the Energisation Status according to both DC and SMRS is E.

## Appendix 2: "At Risk Pot" Detail

### Category ID 1. Non Zero AA (NZAA)

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
D	D	AA > 10 kWh	25
D	D	AA < -10 kWh	26
D	E	AA > 10 kWh	45
D	E	AA < -10 kWh	46
D	Null	AA from a previous DC	101

### Category ID 2. Zero AA (ZAA)

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
D	D	AA = 0 kWh	21
D	D	-10 kWh < AA < 10 kWh	22
D	E	AA = 0 kWh	41
D	E	-10 kWh < AA < 10 kWh	42

### Category ID 3. Non Zero EAC (NZEAC)

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
D	D	No AA, EAC > 10 kWh	27
D	D	No AA, EAC < -10 kWh	28
D	D	No Consumption from DC	31
D	E	No AA, EAC > 10 kWh	47
D	E	No AA, EAC < -10 kWh	48
D	E	No Consumption from DC	51

### Category ID 4. Zero EAC (ZEAC)

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
D	D	No AA, EAC = 0 kWh	23
D	D	No AA, -10 kWh < EAC < 10 kWh	24
D	E	No AA, EAC = 0 kWh	43
D	E	No AA, -10 kWh < EAC < 10 kWh	44
D	Null	Low or Zero EAC from previous DC	102

**Category ID 5. Long Term De-energised (LTD)**

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
D	D	De-energised in SMRS before 31/12/1998, No AA, EAC missing or EAC effective from date before 31/12/1998	30
D	E	De-energised in SMRS before 31/12/1998, No AA, EAC missing or EAC effective from date before 31/12/1998	50

**Category ID 6. SMRS De-energised & DC Null (DCNull)**

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
D	Null	De-energised in SMRS after 01/01/1999, DC Energisation status is Null	80

**Category ID 7. Long Term De-energised & DC Null (LTD\_DCNull)**

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
D	Null	De-energised in SMRS before 31/12/1998, DC Energisation status is Null	90

**Category ID 8. SMRS Energised & DC Null (EDCNull)**

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
E	Null	DC Energisation status is Null	100

**Category ID 9. Other**

SMRS ES Status	NHHDC ES Status	Analysis Description	Analysis Id
		Not in any other group	0
E	D	AA = 0 kWh	61
E	D	-10 < AA < 10 kWh	62
E	D	EAC = 0 kWh	63
E	D	-10 kWh < EAC < 10 kWh	64
E	D	AA > 10 kWh	65
E	D	AA < -10 kWh	66
E	D	EAC > 10 kWh	67
E	D	EAC < -10 kWh	68
E	D	De-energised in SMRS before 31/12/1998, No AA, EAC missing or EAC effective from date before 31/12/1998	70
E	D	No Consumption from DC	71