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The Management and Resolution of Erroneous Large EACs and AAs

Introduction

This document provides guidance to Suppliers and Agents on managing and resolving Erroneous Large Estimated Annual Consumption and Annual Advances (EAC and AAs). It describes;

- the issue and its impact on the market;
- what ELEXON is doing to monitor the problem;
- what the industry can do to address the issue;
- the Trading Disputes process used to correct errors.

Further information on Erroneous Large EAC/AAs can be obtained by contacting the ELEXON helpdesk at helpdesk@elexon.co.uk, or by contacting your Operational Support Manager (OSM). If you do not know who your OSM is, please contact the OSM Delivery Manager at OSMmanagement@elexon.co.uk.

General comments on Guidance Notes and suggestions for other topics should be sent to communications@elexon.co.uk.

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Erroneous Large EACS and AAS

Background

An average domestic customer (on Profile Class 1) uses about 3,500 kWh per year or approximately 10 units a day. Most domestic customers will use less than 25,000 units per year. A 100kW business customer (on Profile Class 8) who maintained full load for the entire year (a theoretical situation, never achieved in real life) would use:

$$100\text{kW} \times 8760 \text{ hrs} = 876,000 \text{ kWh}$$

However, we have discovered many EACs and AAs that are tens of millions in size - consumption more common for Steel Works. These EACs and AAs are unlikely to reflect the actual consumption. Not only is the consumption unrealistic, the distribution network infrastructure would not support such demands. These excessive values do not occur very often but their size makes their impact on Supplier Volume Allocation (SVA) significant.

To identify excessive consumption, ELEXON produced a set of thresholds above which Erroneous Large EACs and AAs can be identified. The thresholds are set per Profile Class and represent a kWh per register per year value. For each Profile Class there is also a negative threshold below which negative Erroneous Large EACs and AAs can be identified. Consumption that exceeds ELEXON's consumption thresholds is not necessarily wrong. There may be genuine consumption above the thresholds, conversely there may be erroneous large consumption below these thresholds.

Figure 1: Excessive Consumption Thresholds by Profile Class

Profile Class	Description	Threshold (kWh/Year/Register)	
		Upper	Lower
1	Domestic Unrestricted	160,000	-50,000
2	Domestic with Switched load	110,000	-50,000
3	Non-Domestic Unrestricted	200,000	-50,000
4	Non-Domestic with Switched load	140,000	-50,000
5	Load Factor < 20%	220,000	-50,000
6	Load Factor 20% to 30%	320,000	-50,000
7	Load Factor 30% to 40%	430,000	-50,000
8	Load Factor >= 40%	690,000	-50,000

History

We identified the issue of Erroneous Large EACs and AAs in Settlement in 2000. The issue was of sufficient materiality to contribute to a qualified BSC Audit Opinion. In April 2000, the Pool Executive Committee (PEC) and Trading Stage 2 Committee (TS2) authorised the processing of Post-Final (DF) Settlement Runs to correct Settlement data. DF runs started in July 2000. It was agreed to use the disputes process to re-run Settlement until the issue was “substantially addressed within the Final Reconciliation Runs”. Eight years later, DF Settlement Runs are still processed in most GSP Groups. Erroneous Large EACs and AAs are a major Settlement issue and appear on the BSC Auditor’s Statement of Significant Matters.

The Settlement Impact of Erroneous Large EACs and AAs

Erroneous Large EACs and AAs can significantly impact Suppliers. At a market level, error is absorbed through the application of Group Correction Factor. The issue affects Suppliers through the misallocation of the error during Supplier Volume Allocation. Erroneous Large EACs and AAs distort a Supplier's share of the market consumption. Suppliers pay for any resulting erroneous electricity consumption and also face additional cost through higher Distribution Use of System (DUoS) and Transmission Network Use of System (TNUoS) charges.

Monitoring the Issue

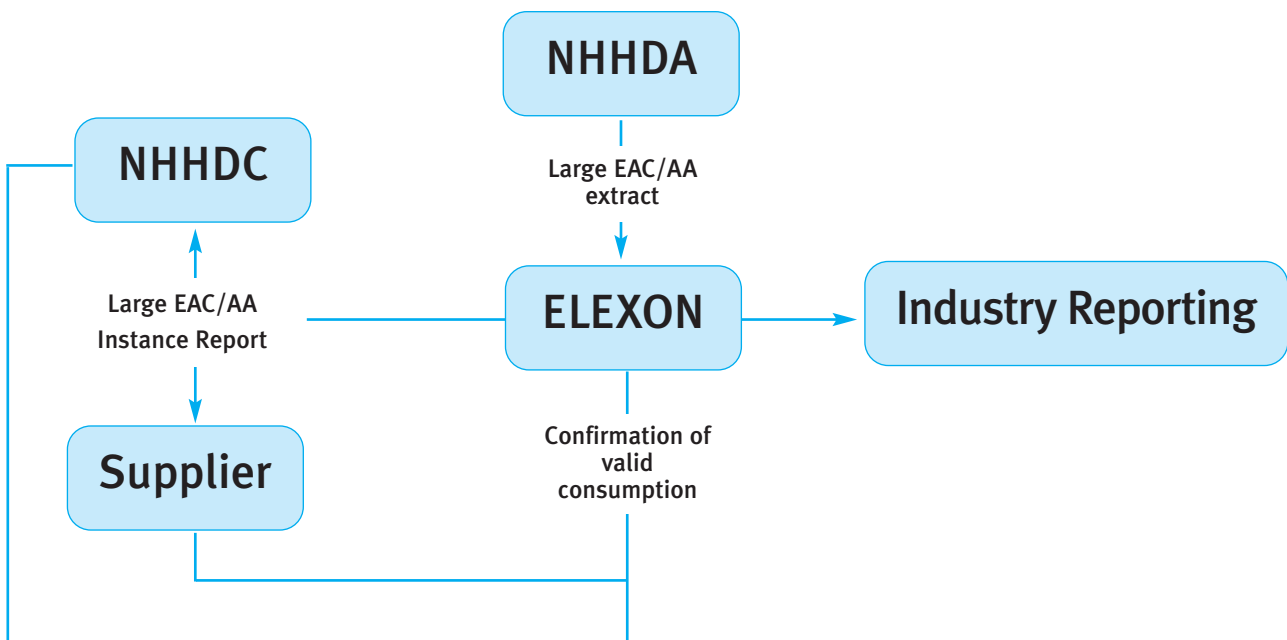
ELEXON's Large EAC/AA System

ELEXON has built a system to monitor the issue and provide reporting to Panel Committees and the industry. The Large EAC/AA system uses data collected from Non Half Hourly Data Aggregators (NHHDA), Suppliers and Non Half Hourly Data Collectors (NHHDCs). Data is collected monthly before running the system. The monthly process is illustrated in figure 2 below.

The primary information is obtained from NHHDA databases. Each NHHDA, using consistent interrogation scripts provides us with details of all consumption values above the agreed Large EAC/AA thresholds (see figure 1 above). This information is provided each month and processed by the Large EAC/AA system. The system compiles a complete list of the instances of excessive consumption that currently exist in NHHDA.

From the outputs provided, Suppliers and NHHDCs can notify us of consumption values they believe are genuine. The Supplier/NHHDC can notify us that a specific value (EAC or AA) is correct and provide a reason why that Metering System genuinely consumes over the threshold. Instances of genuine high consumption confirmed by the relevant Supplier are removed from materiality calculations. High consumptions that are confirmed by NHHDCs are noted by the system but are included in materiality calculations until also confirmed by the relevant Supplier.

Figure 2: The Large EAC/AA System and the Monthly Process



The Large EAC/AA system is the data source for all the reports that ELEXON produces on the issue. We produce a number of standard monthly reports on the Erroneous Large EAC/AA issue including:

- The Instance Report - A report for Suppliers and NHHDCs identifying all instances of large EACs and AAs that exist in Settlement. The Instance Report is explained in more detail later in this section.
- The Summary Report - A report for Suppliers and NHHDCs that shows the gross error associated with the identified erroneous instances.
- TDC Graphs - Graphs showing the Supplier Energy Allocation Error (SEAE) by GSP Group for each Settlement month. These are used to authorise DF Settlement Runs. The Trading Disputes Process is described later in this guidance note.
- Materiality reporting - A report for Suppliers and the Performance Assurance Board (PAB). These show gross error figures by Supplier and are used to monitor performance.

Measures of Materiality – SEAE and GUEE

ELEXON uses two measures to report the Large EAC/AA issue: Supplier Energy Allocation Error (SEAE) and Gross Uncorrected Energy Error (GUEE). Both measures are produced by the Large EAC/AA model. SEAE is a measurement to show the Settlement impact on Suppliers. It incorporates the effects of GSP Group Correction Factors and the netting of positive and negative errors within the Supplier calculations. GUEE indicates the extent of the issue in terms of the amount of energy that is incorrect. It does not net positive and negative values and does not take into account the effects of GSP Group Correction Factor.

SEAE is used by the Auditor as a primary measure of materiality. The materiality reports use GUEE because Suppliers can measure reductions in gross error without reference to the errors produced by other Suppliers.

The Instance Report

The Instance Report (xxxx_instance.csv) details, for a given Supplier or NHHDC all the EACs and AAs that exist in NHHDA that are above ELEXON's excessive consumption thresholds (see figure 1). Its purpose is to inform Suppliers and NHHDCs of the errors that need to be addressed.

For each large EAC or AA identified on the Instance Report full Settlement details are provided; GSP Group, NHHDC ID, Supplier ID, MSID, Profile Class, SSC ID, TPR ID, Effective From Settlement Date and Effective to Settlement Date. In addition, the Report contains several additional system assigned fields. These are:

- EAC/AA Indicator Indicates whether the consumption is an EAC (E) or an AA (A).
- Start / End Date These indicate the dates where the instance is being used in Settlement. This will not necessarily be the same as the Effective to and From Dates.
- Excessive The annual consumption value of the EAC or AA.
- Realistic A realistic consumption value for the MSID. Where provided by the Supplier this will be the Annual Billed Units, otherwise a Class Average EAC will be used.
- Process Indicator This is assigned by the system and indicates the ELEXON view of the consumption, whether genuine or erroneous. Process indicators range from 0 – 10. Process indicators 0, 6, 8 and 9 are treated as erroneous, all others are considered to be genuine. Appendix 1 includes a complete breakdown.
- Impact Indicator A rough Settlement impact – this has been replaced by the EAC/AA Materiality calculator (see later).
- Significance Flag This column indicates whether the instance contributes to the top 50% of error.

Identify Genuine Consumption

There are a number of secondary issues that result in genuine EACs and AAs above the ELEXON thresholds; this includes incorrect Measurement or Profile Class, Erratic Consumption, or a Long period of Estimated Consumption.

The Instance Report contains a complete list of all EACs and AAs in NHHDA that exceed the Large EAC/AA thresholds. This will include instances where the consumption is genuine. It is important that Suppliers and NHHDCs inform ELEXON of genuine consumption to ensure the resulting monitoring information is accurate. We ask Suppliers and NHHDCs to submit an Excel file to ELEXON each month confirming any consumption on the Instance report they believe is genuine. An appropriate confirmation code should be used. A different set of codes are used for Suppliers and NHHDCs. These are in Appendix 2 and 3. Suppliers can delegate the confirmation of genuine consumption to their agents. This process is called “Delegated Authority”. Please inform ELEXON if this is required.

Once a Metering System has been identified as being on the wrong Profile Class or Measurement Class and the instances flagged as genuine, they are not included in the materiality calculations. The secondary issue should still be addressed. Advice and guidance for this is on the ELEXON website: <http://www.elxon.co.uk/Publications/notes/>.

For repeatedly flagged genuine instances, Suppliers can also notify ELEXON of annual billed units. These can be used to validate future excessive instances that occur for the same metering system. If any excessive instance is less than twice the annual billed units for that Metering System, the new instance will be confirmed as genuine and removed from any materiality calculations. This prevents Suppliers from repeatedly confirming instances for Metering Systems with consistently excessive consumption.

Instances will continue to be reported so long as they remain in the NHHDA database. Suppliers and agents need to adopt procedures to recognise reporting occurrences of high but genuine consumption (where the ELEXON system is not able to do so automatically).

It is likely that the BSC Auditor will check that any excessive EAC/AAs excluded from the materiality calculations have been excluded on reasonable grounds. Keep appropriate audit trails and make them available when you are audited.

Corrective Action

Work Management

Correcting Erroneous Large EACs and AAs is often a lengthy process and involves cooperation between Suppliers and Agents. Effectively managing corrective activity is crucial. Monitoring systems should include an action tracking and escalation process to ensure resolutions are successful. The ELEXON Instance Report is a useful check of whether instances have been successfully cleared from NHHDA. The instance report can be the basis for managing corrective action. This can be enhanced by adding additional columns or by developing applications / databases into which the instance report can be loaded.

Managing Erroneous Large EACs and AAs is a largely manual process where staff have specialised skills. It is important to capture and document processes in Local Working Practices (LWIs) to ensure that the knowledge base is not hindered by staff turn over.

Prioritisation

The Instance Report will in most cases contain a large number of instances. It includes all excessive consumption that exists in NHHDA databases. This includes instances that have crystallised and those that have previously been confirmed as genuine consumption. There are about 6,000 Erroneous Large EACs and AAs in the market at any time, compared to some 200,000 that will be reported in total. It is crucial that Suppliers and NHHDCs can identify and prioritise corrective action.

All instances with a process indicator 0, 6, 8 or 9 are considered to be erroneous. The remaining process indicators (1, 2, 3, 4, 5, 7 and 10) indicate that we consider the consumption to be genuine. Suppliers and NHHDCs need to focus on the erroneous process indicators. Suppliers also need focus on EACs and AAs that are affecting fluid Settlement Dates that haven't passed the last reconciliation (DF for GSP Groups in the Trading Disputes Process, RF for the remainder).

Suppliers and NHHDCs should be left with a manageable number of Erroneous Large EACs and AAs to resolve. Of these it is likely that a small proportion of very large instances will cause the majority of the error. Typically about 20% of the instances will cause 80% of the total error. Correcting Erroneous Large EACs and AAs is largely a manual process. It is therefore important that Suppliers and NHHDCs prioritise which they focus on.

Suppliers and NHHDCs should aim to resolve all error before it crystallises. It is therefore essential to prioritise instances approaching the relevant last reconciliation Run whether RF or DF. Suppliers should also focus on instances that have the largest Settlement impact. This will depend on the size of the excessive consumption and the length of the meter advance. Suppliers and NHHDCs should have a system for prioritising that takes into account Settlement Impact and the time until crystallisation.

We have created a tool to use in conjunction with the Instance Report to prioritise work. This is called the Large EAC/AA Materiality Calculator. Please contact the ELEXON Helpdesk to request this.

The calculator recreates ELEXON's error materiality calculation for any Erroneous Large EACs and AAs in the Instance Report. It does so for any given range of Settlement Dates. The result is a total positive or negative for the given period. This can be sorted to identify the MSIDs contributing the greatest error.

Data Cleansing

The method for cleansing erroneous EACs and AAs is defined by BSCP504: Non-Half Hourly Data Collection for SVA Metering System Registered in SMRS. The corrective approach depends on a number of factors, including whether the excessive EAC/AA was caused by an invalid Change of Supplier (CoS) reading and if any part of the excessive EAC/AA is crystallised in Settlement.

The rules for deciding what data cleansing approach to take are complicated. An audit trail must be maintained irrespective of the approach taken.

Incorrectly Processed Readings

If the reading is valid but it has been incorrectly processed to give erroneous EAC/AAs (for example in an incorrectly identified meter rollover scenario) and these erroneous EAC/AAs have not been used in the last reconciliation of a Settlement Date, correctly re-process the reading.

Invalid Non-CoS Readings

If the EAC/AAs derived from the invalid reading were not used in the last reconciliation of any Settlement Date, the invalid reading should be withdrawn. Once withdrawn, re-process subsequent readings. It is important to check the subsequent readings don't generate further erroneous large EACs or AAs.

Invalid CoS Reading

When an invalid CoS reading occurs, Suppliers can agree a revised reading through the Disputed Read process. If the agreed revised reading is reasonable, this should be processed.

Suppliers and their NHHDCs should ensure that an Erroneous Large EAC/AA, caused by an invalid change of Supplier reading, is resolved before the EAC/AA is used in the last reconciliation of a Settlement Date. When the erroneous CoS reading is subject to the large EAC/AA Trading dispute, the Supplier can use the DF period to withdraw and correct the erroneous CoS reading.

Part Crystallised Consumption

If an Erroneous Large EAC or AA is part crystallised in Settlement, Gross Volume Correction can be applied to minimise its impact in the fluid period. Gross Volume Correction (GVC) is a complex process described in section 4.14 of BSCP504. A GVC Guidance Note is also available from the Publications section of the ELEXON website. Measures should be made such that errors are corrected prior to the last reconciliation run and GVC is not necessary. It should be noted that GVC can not be used to compensate for consumption that has completely crystallised in Settlement.

Preventative Action

Accurate Meter Reading

Meter read quality is fundamental to reducing the number of Erroneous Large EACs and AAs. Accurate and frequent meter reads ensures the simplicity of the remainder of the process. Initial investment in training meter readers and developing high quality systems to support them can lead to lower running costs and better performance figures.

Training of meter readers should include an overview of the entire process instilling a good understanding of the implications of incorrect readings. This should include errors in customer bills, Settlement and Distribution Use of System (DUoS) charging.

Training and incentive schemes should focus on quality as well as quantity. This should be reflected in performance measures.

Monitoring should trap repeated errors, e.g. registers entered in the wrong order, tenth digit included and wrong meters read in multi-meter installations. The meter reader's identifier should be attached to the readings to support the monitoring process. Results can be fed back to the meter reader and incorporated into future training.

All meter readers' reports must be reviewed and passed to the appropriate area for action. If they contain information necessary to successful reading of the meter, this should be available to future readers.

On-site Validation

Some human error is unavoidable. NHHDC systems can identify erroneous meter readings. On-site controls in data collection hand held units can confirm the readings entered are accurate. However, they cannot confirm that the advance generated is valid as this requires additional information only available in the NHHDC's main systems. We recommend that on-site validation is used to complement, rather than as a substitute for, validation performed in the main systems.

Entry of meter readings that give rise to advances outside the expected range (half to twice the expected advance) should require positive verification, for example, re-keying the reading and entering the meter serial number. There should be additional safeguards where the reading is completely inconsistent with the expected value (e.g. five times the expected value or a credit reading).

System Validation

NHHDC systems should include tight controls against erroneous readings. These should incorporate;

Reasonableness Checks

Reasonableness checks are incorporated into the EAC/AA calculation software used by NHHDCs. The default tolerance thresholds are used in ELEXON's monitoring of the issue and are shown in Figure 1. The thresholds can be lowered by NHHDCs to investigate consumption below the threshold. We recommend this is done only when the levels of exceptions above the thresholds are sufficiently reduced.

Associated changes to the BSCPs and Party Service Lines place obligations on NHHDCs to investigate all AAs exceeding the tolerances, and report actions to resolve the exception to the relevant Supplier. As the EAC/AA database does not include Supplier details, NHHDCs will need to process further the exception log of excessively large AAs produced by the EAC/AA software. The exceptions can be distributed to the relevant Suppliers and the status of each reported following initial investigation.

Expected Reading Calculation

Meter read validation should include a comparison of the calculated meter advance with the expected advance. The reading is rejected when the difference between the calculated advance and the expected advance exceeds the tolerance. This process relies on reasonable accuracy of the expected advance. Some NHHDCs cannot always establish a reasonably accurate expected advance. This is often due to incorrectly migrated data, incorrect initial EACs, lack of consumption history and/or incorrect acceptance of a previous reading.

We recommend that NHHDCs review their method of establishing the expected advance. Ideally, it should be calculated using the current EAC and profile data, although any equivalent process can be used. When calculating expected values before profile data is produced, use substitute profile data from the previous year. For new connections, it is important to establish an expected consumption to calculate an expected advance. NHHDCs and Suppliers must provide a realistic initial EAC for this.

Supplier Feedback

We advise Suppliers to feedback to the NHHDC when readings the NHHDC mark as valid are not accurate enough for Supplier billing. The NHHDC can then consider withdrawing the reading from Settlement.

Conversely, provide feedback when readings marked as invalid by the NHHDC are accurate enough for Supplier billing. In these situations the NHHDC should not automatically accept the reading. Instead the reading should be reviewed, taking the Supplier feedback into consideration, and should only enter Settlement if the reviewer is satisfied that it is correct. It may be appropriate to accept a reading that generates a meter advance three times the expected advance on the basis of the Supplier's feedback. It isn't appropriate to accept a reading that generates a meter advance of one hundred times the expected advance, solely on the basis of the Supplier's feedback.

Review of Suspect Readings

Where a reading fails automated validation, it can be overridden via a manual review process. It is important that this process is robust and readings aren't accepted too readily. For example, if a NHHDC is under pressure (e.g. through commercial incentives) to progress as many readings as possible to help the Supplier achieve performance levels for the Energy on actual meter readings (serial SPo8), this can result in poor readings going through the suspect reading review process. Suppliers should incentivise the quality as well as the quantity of readings.

It is important that reviewers have enough information to determine whether readings are genuine. This includes a complete history of Meter Readings and the associated EACs and AAs for each register on the Metering System. It is also useful to have a record of what type of reading each is, for example, Deemed, Customer Own Reads or corrective (GVC). Where possible, Supplier billed units, the business type and details of any previous Change of Agent or Supplier activity are a useful resource.

Common Issues

Filters have an important role in preventing Erroneous Large EACs/AAs from entering Settlement. However, they only remove the main symptom of the problem – the Erroneous Large EACs/AAs – they do not address the root cause. It is important that root causes are identified and addressed. NHHDC systems should contain feedback loops to correct errors that led to Erroneously Large EACs/AAs. If they don't, the NHHDC system is left with an invalid reading, an incorrect expectation for the next advance and is out of step with the NHHDA system.

For all exceptions identified by filters it is important that NHHDCs resolve the instance moving forward. Identified root causes should be investigated and preventative controls put in place. Some known issues include:

Switched Registers

It is common that Meter readings on multi-register Meters are switched over by the Meter Reader. This often leads to the generation of two erroneous large AAs. In this case the readings can be switched back and re-validated - described in BSCP504 section 4.6.

Our analysis has shown that multi-register Meters, while accounting for only 20% of the market, contribute almost half of the Erroneous Large EACs and AAs in Settlement. Suppliers and NHHDCs should ensure that they have robust processes for identifying and correcting switch register readings.

Meter Changes

Where meter exchanges are not timely processed, meter readings for the new meter can enter data collection systems before the final and initial readings associated with the meter change. This can cause the NHHDC to identify a meter rollover incorrectly.

By implementing controls to trap such situations NHHDCs can prevent readings for a new meter being processed before its initial reading is processed. We also advise Suppliers/NHHDCs to generate management information to report where excessive delays occur.

Step changes in consumption following a meter exchange may be due to incorrect Meter Technical Details (e.g. Pulse Multiplier) for the new meter. Potential pulse multiplier errors should be checked with the Meter Operator.

Meter Rollover Algorithms

Failure to identify a 'rolled over' or 'clocked around' meter can lead to incorrect meter advances. Depending on what the previous reading was, this can lead to advances that have the same number of digits as the meter. In the worst cases, credit readings (readings that are less than the previous reading) are automatically assumed to be a positive advance caused by a meter rollover.

We recommend NHHDCs check their meter rollover algorithm. It is important that errors such as swapped registers and incorrect number of digits do not cause a meter rollover to be incorrectly identified. It is also worth checking that if an algorithm is specified more than once, for example in validation and later on during processing, that they are the same.

Erroneous Transfers

If an erroneous Change of Supplier occurs, it is usually rectified by a Change of Supplier back to the original Supplier; this is done for the next day and with a meter advance of one unit. This one unit is usually below the expected advance range for one day and consequently fails validation.

If not reviewed and accepted promptly, it can be automatically replaced by a cyclical or customer own reading that is available or a deemed reading may be triggered. This can cause the meter advance to be more than one unit.

Any consumption errors between the two Change of Supplier readings are concentrated into a meter advance of one day and can lead to very large AAs. These consumption errors may be caused by a deemed reading for the first Change of Supplier that underestimates the reading, followed by a cyclical or customer own reading for the second.

We advise NHHDCs to check that their procedures surrounding treatment of erroneous transfers are appropriate.

Gross Volume Correction

Gross Volume Correction is described in the section on correcting error. However it can lead to an excessive value, especially if the error in the "crystallised" period is compensated for in a short period.

Long Term No Access

Where readings are not obtained for a Metering System for a long time, the consumption in Settlement is unlikely to reflect the actual consumption. When a reading is obtained it may result in a large corrective reading that breaches the excessive consumption thresholds. The result is likely to be more extreme when a meter is de-energised or disconnected. This can result in a compensatory negative advance, which can be erroneously large if applied over a short period.

Daily Profile Coefficients

Daily Profile Coefficients normally sum to one over a year. However, DPCs can sum to less than one in extreme cases. This usually occurs for seasonal registers, where a register is only active for a few hours of the day for a few months of the year. The correct volume of energy will be settled, but the AA will be too high. These values are genuine. However, if readings are transposed on a seasonal time of Day (SToD) Meter, this can lead to large values of erroneous consumption.

Doo19 Monitoring

Suppliers should have controls to monitor the Large EAC/AA issue in addition to ELEXON's reporting. Monitoring Doo19 flows sent by NHHDCs for values that appear to be unreasonable is one way of doing this. Initially, the Supplier should monitor any values that exceed ELEXON's monitoring thresholds. We will include these in error materiality calculations unless the values are confirmed as genuine. However, once these levels are under control, the Supplier should monitor below the ELEXON thresholds. This will ensure further data quality.

Suppliers systems should link Doo19s to their billing system as an additional check. Suppliers' billing systems typically include a comprehensive range of checks to minimise the number of inaccurate bills sent to customers. Whether a reading is suitable to bill a customer is an extremely good independent check on the validity of the reading. Doo19s can also be compared against previous Doo19s for the same register and any extreme changes to the level of consumption can be identified.

The Trading Disputes Process

Post-Final Reconciliation Settlement Runs

The Erroneous Large EAC and AA Trading Dispute enables Suppliers and Supplier Agents to correct instances of erroneous large consumption after the Reconciliation Final (RF) Settlement Run. As part of the Trading Disputes Process the Trading Disputes Committee (TDC) authorises Post Final (DF) Settlement Runs approximately 14 months after RF. Suppliers and Supplier Agents have until the DF Run to correct the erroneous large consumption in Settlement using the corrective procedures explained above.

The TDC authorises post RF changes to Settlement Data for Metering Systems that exceed ELEXON's monitoring thresholds (defined in section 1). These instances are identified by ELEXON in the xxxx_instance.csv report. Suppliers and Agents can use the DF period to address the identified Large EACs and AAs.

The Trading Dispute is managed by GSP Group. Given consistently good performance a GSP Group may be granted exit from the Trading Disputes process. Conversely, poor performance may require a GSP Group to re-enter Disputes. The TDC has agreed a set of Entry and Exit guidelines to determine whether Post-Final Settlement Runs should take place in a given GSP Group. These are included in Appendix 4.

It is important that Suppliers and Agents are aware of which GSP Groups are in the Disputes Process to ensure they take advantage of the DF period to clear Large EAC/AA errors.

The Trading Disputes Process

An authorisation process has been established for Dispute Final Runs. This process is used to ensure that Disputes are only run once the NHHDA databases are fit for purpose. This authorisation process is:

A separate Dispute is raised for each Settlement Month in each GSP Group. Each month, ELEXON presents a new Settlement Month to the TDC for authorisation. The TDC makes its decision based on three pieces of evidence:

- i. **Supplier Confirmations:** In the month before each TDC meeting, Suppliers are asked to confirm that, for the Settlement Dates in Settlement month presented to TDC:
 - a. the Non Half Hourly Data Aggregation database is fit for purpose. That large erroneous AA and EAC values spanning the Settlement Days under consideration for the relevant Supplier are resolved to an acceptable level;
 - b. data cleansing is effective and has not had any secondary effects that might prejudice the outcome of the Post-Final Settlement Runs and potentially lead to further Disputes for the same days;
 - c. other changes to non half hourly data were not made that would undermine the purpose of scheduling Post-Final Settlement Runs and lead to additional Disputes.
- ii. **ELEXON Monitoring Information:** Each month ELEXON produces monitoring information based on the results from the latest NHHDA extract scripts and the Supplier and NHHDC confirmations of genuine consumption. This shows for each GSP Group the level of crystallised SEAE at RF and DF with a forward projection of the SEAE that will crystallise for future Settlement months. All SEAE levels relate to a given threshold.
- iii. **Error and Failure Resolution Process:** ELEXON confirms that all NHHDCs are continuing their participation in the Error and Failure Process and have Action Plans to address existing non compliances.

ELEXON's monitoring information enables the TDC to see a projection of the error that will crystallise should the DF run be carried out for each disputed period. This is used to determine whether to process the run, i.e. is there sufficient benefit to justify the Run. If Settlement Data in a GSP Group deteriorates after the RF Run is processed, the TDC may decide not to authorise the DF Run for a specific range of Settlement Dates.

The projections give the TDC early visibility of any performance issues that may occur. These are communicated to the industry and action taken. Where performance is sufficient, the TDC may provisionally authorise a DF Run in a GSP Group well ahead of the NHHDA Run.

The industry is informed of TDC decisions including GSP Group Entries or Exits through Newscast.

NHHDA Considerations

The Trading Disputes timetable is not included in the Data Aggregation and Settlement Timetable (Do286) flow that some NHHDAs use to electronically schedule aggregation runs. Consequently, all NHHDAs need to manually schedule the aggregation runs required for Trading Disputes. Guidance on this is included in the NHHDA Operations Guide. ELEXON publishes a DF calendar each year at: <http://www.elexon.co.uk/marketdata/default.aspx>

The Settlement Code used for these Post Final Settlement Runs is "DF". We ask NHHDAs to carry out DF Runs for all GSP Groups whether the GSP Group is in or out of the Disputes Process. The SVA Agent controls which DF files are submitted to the SVA Run. Where a GSP Group is not to carry out a DF Run the SVA Agent will process the RF file in its place.

The Trading Disputes timetable contains a contingency period between the NHHDA aggregation run and SVA run. This contingency period provides time to resolve any operational issues before the SVA Agent performs the Settlement run. NHHDCs and NHHDAs should notify ELEXON as soon as a problem appears so appropriate guidance can be given.

Appendix 1: Process Indicators

Process Indicator	ELEXON View	Explanation
0	Erroneous	No information has been provided by NHHDC or Supplier to suggest that the EAC/AA is genuine.
1	Genuine	The EAC/AA is within twice the MPAN's Annual Billed units.
2	Genuine	The Supplier has advised that they and their NHHDC believe the EAC/AA is correct.
3	Genuine	The AA*Meter Advance Period $\leq 500,000\text{kwh}$ (PC1-4) or $\leq 1,000,000$ (PC5-8);
4	Genuine	The DPCs for the settlement register sum to ≤ 0.5 and the EAC/AA $\leq 500,000\text{kwh}$ (PC1-4) or $\leq 1,000,000$ (PC5-8);
5	Genuine	The EAC/AA is within twice a previous EAC/AA with a meter advance period greater than 30 days that the Supplier has confirmed as genuine;
6	Erroneous	The NHHDC believes that the EAC/AA is correct, is within 25% of the average EAC/AA for that profile class and there are four or more instances exceeding the threshold.
7	Genuine	Known issue, where EAC known not to be used in Settlement. Used in EMEB GSPG only.
8	Erroneous	Known issue, for TPRs where registers have been swapped. Used in NEEB GSPG only.
9	Erroneous	Known issue, where NHHDC has confirmed that the site is HH and not used in NHH Settlement. Used in SEEB GSPG only.
10	Genuine	Delegated authority, where the NHHDC has confirmed instances of genuine consumption on behalf of a Supplier.

Appendix 2: Supplier Reporting code

Code	Description	Comment
V1	Valid instance within annual billed unit tolerance	This field should only contain the annual billed units
V2	Valid instance i.e. GVC, Seasonal demand	Confirmation of whether the instance is compensatory or seasonal demand
VC1	Valid Crystallised within annual billed unit tolerance	This field should only contain the annual billed units
VC2	Valid Crystallised instance	Confirmation of whether the instance is compensatory or seasonal demand
EC	Erroneous Crystallised	Advise NHHDC on course of action for treatment of future occurrences of error
E	Erroneous	Advise NHHDC to withdraw instance/ correct
U	Work in progress/ Requires data fix	Any actions that the NHHDC/ Supplier is required to carry out/ information required for resolution

Appendix 3: NHHDC Reporting Codes

Code	Description	Comment
E1	Erroneous - Customer Own Read Incorrect	Not Required
E2	Erroneous - Deemed Reading Incorrect	Not Required
E3	Erroneous - Other Read Type Incorrect	Not Required
E4	Erroneous - Doo52 EAC Incorrect	Not Required
E5	Erroneous - Faulty Meter	Not Required
E6	Erroneous - Cannot Withdraw - Error Crystallised	Not Required
E7	Erroneous - Incorrectly validated read - to be withdrawn	Not Required
V99	Valid - Gross Volume Correction	Detail
V98	Valid - Consistent High Consumption - Half Hourly Metering Required	Detail
V97	Valid - Consistent High Consumption - Profile Class Change Required	Detail
V96	Valid - Consumption Squeezed - Meter Technical Details Late	Detail
V95	Valid - Consumption Squeezed - Supplier Registration Late	Detail
V94	Valid - Daily Profile Coefficients Cause Unusual EAC/AA	Detail
V93	Valid - Seasonal Consumption	Detail
V92	Valid - Genuine High Consumption	Detail
U1	Unsure - Not Enough History to Determine	Detail
U2	Unsure - Number of Meter Digits Uncertain	Detail
U3	Unsure - Site Visit Required	Detail
U4	Unsure - Supplier Feedback Requested	Detail
U5	Unsure - Under Investigation	Detail

Appendix 4: Guidelines for Entry to and Exit from Trading Disputes

Entry Guidelines

On 17 May 2007, the TDC agreed the following guidelines to be used with the Historical SEAE graphs when considering whether to bring a GSP Group into the Trading Disputes process.

“A GSP Group may be brought into the Trading Disputes process if BOTH;

- i. The level of monthly crystallised Supplier Energy Allocation Error (SEAE) at Final Reconciliation exceeds the threshold for the last three consecutive months; and
- ii. The level of monthly projected Supplier Energy Allocation Error (SEAE) at Final Reconciliation exceeds the threshold for the next three consecutive months.”

Exit Guidelines

The TDC also approved a revision to the exit guidelines for granting a GSP Group exit from the disputes process (TDC101/01). The revised guidelines are detailed in the table below.

Guideline	Evidence
Erroneous AA and EAC values impacting Settlement Dates for which Dispute Runs would not take place have been substantially cleansed ahead of Final Reconciliation.	Written confirmation received from the major NHHDCs that erroneous values have been substantially cleansed ahead of Final Reconciliation.
The level of any residual error is consistent with any guidance on acceptable materiality obtained from the BSC Panel or its sub-committees.	Graphs showing the historic monthly SEAE performance of the GSP Group against the threshold. The GSP Group will be expected to be within the threshold at Final Reconciliation for a period of at least 3 consecutive months. The GSP Group should also be projected to stay within target for a further 3 month period if no further errors were introduced and no further data cleansing took place.
Controls and procedures have been put in place by the Non Half Hourly Data Collector(s) active in the GSP Group to prevent excessive levels of further erroneous AA and EAC values being submitted to Settlement or that they can be withdrawn ahead of the relevant Final Reconciliation Runs.	Written confirmation received from the major NHHDCs. Estimation from ELEXON of the rate of creation of excessive AA/EAC values over the last month. A Technical Assurance visit will confirm that there are the systems and controls in place, especially that there is a clear methodology to identify erroneous values, track the work in progress and manage the process through to resolution. The creation rate of erroneous values will be checked, as will the ability to cope with lower thresholds on any filter tool.
The Non Half Hourly Data Collector(s) active in the GSP Group is in the position to implement the principle of “gross volume correction” (as defined in NHHTAG/16/04) in the eventuality that any erroneous EAC and AA values are used in Final Reconciliation of Settlement Dates that would not be subject to Dispute Final Runs.	Written confirmation received from the major NHHDCs. A central Technical Assurance check will be conducted on a sample from data provided by the DC/DA as requested.
Confirmation obtained that Suppliers active in the GSP Group during the Settlement Dates in question are satisfied that they and their agents have put the necessary processes in place to ensure that erroneous consumption has ceased to be a material issue.	Confirmation received from all Suppliers with NHH registrations in the relevant GSP Group. Where confirmation is not received from a Supplier the TDC will determine whether error attributable to the Supplier exists in the GSP Group and whether this level of error ceases to be a material issue in context to the total error present in the GSP Group in question.

<p>The NHHDC must have rectification plans in place to address the root causes of the issue.</p>	<p>Baselined problem proformas to be held by ELEXON, and progress against the proformas to be satisfactory.</p> <p>Consideration will also be given to any other relevant performance issues captured within the Audit or Technical Assurance processes, or the PAB Escalation Cycle.</p>
<p>A Communications process must be in place between the NHHDC and all relevant Suppliers to assist in the resolution of erroneously large AA/EAC values.</p>	<p>Confirmation received from all majority NHHDCs and Suppliers with NHH registrations in the relevant GSP Group.</p>