

Managing CMS Under and Over Reports

1. Introduction

All Central Management Systems (CMS) report switching events in event logs which are processed by a Meter Administrator. The events reported should align exactly with the assets declared as CMS controlled in the detailed inventory. It is not uncommon for assets to fail to produce events, known as an under report; or for additional assets not in the inventory, to report events, known as an over report. Both will have an impact on the consumption calculated by the Meter Administrator.

2. Under Reports

An under report occurs when an asset with a CMS Unit Reference declared in the detailed inventory does not appear in the daily event log produced by the CMS¹. In the circumstance of an under report, a Meter Administrator is required to calculate consumption as if the asset had operated from dusk to dawn at full power. This means that any intended savings from energy reduction measures such as dimming, trimming or part-night operation are not captured causing consumption to be higher than perhaps it should be.

Causes of under reports can be categorised under three broad headings:

2.1. Data errors

The most common cause of an under report is a mismatch between the CMS Unit Reference in the detailed inventory and CMS. The CMS Unit Reference must match for the events to be correctly allocated.

The asset must be correctly configured within the CMS. This includes assigning a CMS control and ensuring it is set to report into the correct energy account.

2.2. Physical/Hardware Fault

If an asset has lost power due to an operational fault it will be unable to report events. Similarly, if a component of the CMS has stopped working missing events will occur. How many events are missing will depend on which component has failed. For example, if a single control fails only one asset will fail to report however if a base station/branch node/segment controller fails then events from multiple assets will be lost. The CMS should provide a report of failures and unexpected events directly to the user, this should be reviewed regularly to identify any faults.

2.3. Communications failure

CMS's rely on a range of communication methods to return the switching events. Occasionally these can become intermittent or fail completely resulting in a loss of events.

¹ www.powerdataassociates.com/central-management-systems

3. Minimising/Rectifying Under Reports

Under reports will have an impact on the calculated kWh consumption so it is important that they are reviewed regularly, and any problems resolved. A report of any CMS Unit Reference that has failed to report on one or more days during the previous month is included in the monthly report.

The image below illustrates four CMS Unit References that have failed to report an event at various points throughout the month.

CMS Unit Reference	Total	01 Jun 2020	02 Jun 2020	03 Jun 2020	04 Jun 2020	05 Jun 2020	06 Jun 2020	07 Jun 2020	08 Jun 2020	09 Jun 2020	10 Jun 2020	11 Jun 2020	12 Jun 2020	13 Jun 2020	14 Jun 2020	15 Jun 2020	16 Jun 2020	17 Jun 2020	18 Jun 2020	19 Jun 2020	20 Jun 2020	21 Jun 2020	22 Jun 2020	23 Jun 2020	24 Jun 2020	25 Jun 2020	26 Jun 2020	27 Jun 2020	28 Jun 2020	29 Jun 2020	30 Jun 2020
000025518001	30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
000030696001	30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
000032089001	7																														
000033752001	1																														

The first two have failed to report any events throughout the month, this suggests either a data error in the inventory or long-term physical fault. A check should be carried out to ensure that the correct CMS Unit Reference is held within the inventory and CMS and that the asset is correctly configured within the CMS. If the data is found to be correct the reports from the CMS should be checked to see if there are any power level warnings or service failure alerts.

The third CMS Unit Reference has stopped reporting towards the end of the month, this suggests a physical fault rather than a data issue as it reported correctly during most of the month.

The last CMS Unit Reference has only failed to report on one day during the month, this suggests a temporary communications issue.

BSCP520 now requires us to advise the UMSSO if levels of under reports exceed 5% of the total units declared in the inventory on 2 or more days within a calendar month.

4. Over Reports

An over report occurs when a CMS Unit Reference is reported by the CMS but the CMS Unit Reference was not contained within the detailed inventory. A Meter Administrator will be unable to process these events as they will be unable to allocate them to an asset.

Over reports are expected when CMS is being rolled out as there will be a delay between the physical work being carried out and an updated inventory submission being made however, this is not the sole cause of an over report. They may also occur when some metered CMS controlled equipment is included in the CMS reporting, but correctly excluded from the unmetered inventory.

They can also occur due to data errors such as incorrect CMS Unit References or the asset being assigned incorrectly within the CMS. Therefore, it is important that they are reviewed regularly as an over report is an indication that an asset is CMS controlled and potential energy savings could be being lost.

If you require further advice or information, please contact your Account Manager or the Operations team on 01525 601201 or email UMS@PowerDataAssociates.com.

Last update: 18/10/2022