Energy Market Data Specification

Treatment of remotely retrieved meter readings from SMETS2+ gas meters

Version: 2.2 Effective Date: 31 January 2022

Change History

Version Number	Implementation Date	Reason for Change
2.2	31 January 2022	Added to REC Data Specification as part of R0012

Introduction

This document provides guidance on the treatment of meter readings retrieved from SMETS2+ Gas Smart Metering Systems where the number of digits in the meter reading is not consistent with the 5 register digitstandard set out in the Meter Product Tables.

For the avoidance of doubt, this guidance is not applicable for Large Gas Meters.

This document is not legally binding, and compliance is not a formal requirement of this Code.

Background

Gas Smart Metering Systems that are compliant with SMETS2 (version 3.1 or greater) have a requirement in the Smart Metering Equipment Technical Specification (SMETS) (4.4.5.1 Presentation of information on the User Interface) to display meter readings on its physical display.

This requires the device to display the reading to 8 decimal digits representing 1/1000th m^3, with a decimal point being between the 3rd and 4th least significant digit (e.g. nnnnn.nnn). This is equivalent to what would be considered a 5 dial register in the Meter Product Table, and would be recorded as a 5 dial register reading by the Central Data Service Provider (CDSP) when validating readings received from the Shipper.

As the requirement in SMETS only applies to what is displayed on the user interface of a smart meter, and not to what is stored on the internal register, it is possible that remotely retrieved meter readings may not follow the same convention and may differ to those taken 'onsite' by a Consumer or meter reading agent. For example, a gas meter register may 'clock over' (on the user interface) from 99999.999 to 00012.123 but the remotely collected reading would be 100012.123. There is a risk that a Supplier may interpret this differently resulting in a mismatch of readings.

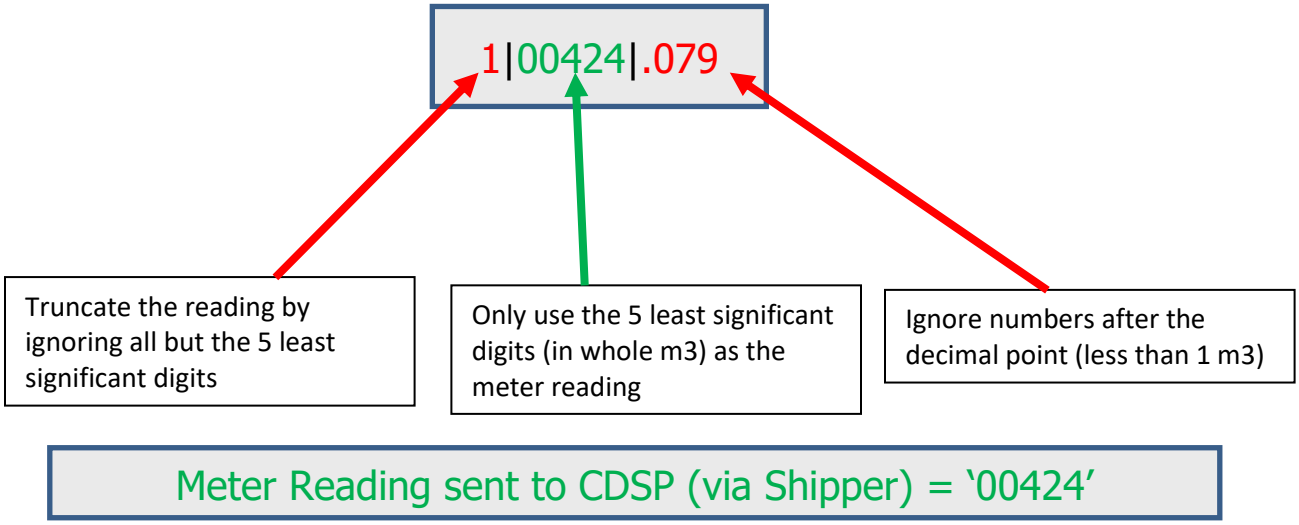
Where necessary, the Gas Supplier should truncate or pad (as required) the remotely retrieved meter reading for this to be consistent with what is displayed on the smart meter's user interface, and the number of register digits held by the CDSP. The Supplier will still need to validate that the meter reading is correct before making any amendments (such as confirming this is for the correct Meter Serial Number).

Process – Reading exceeds 5 register digits

Where the Gas Supplier retrieves readings remotely from a SMETS2+ Smart Metering System, the Gas Supplier should ensure that the number of register digits passed to the CDSP (via the Shipper) is consistent with the Number of Register Digits (A0121) held by the CDSP for those meter details. Where the reading received has more than 5 register digits, the reading should be truncated to ensure consistency.

Example – Reading received of '100424.079':

```
<ra:ConsumptionRegister>
 <ra:Value>100424.079</ra:Value>
 <ra:Unit>m3</ra:Unit>
```



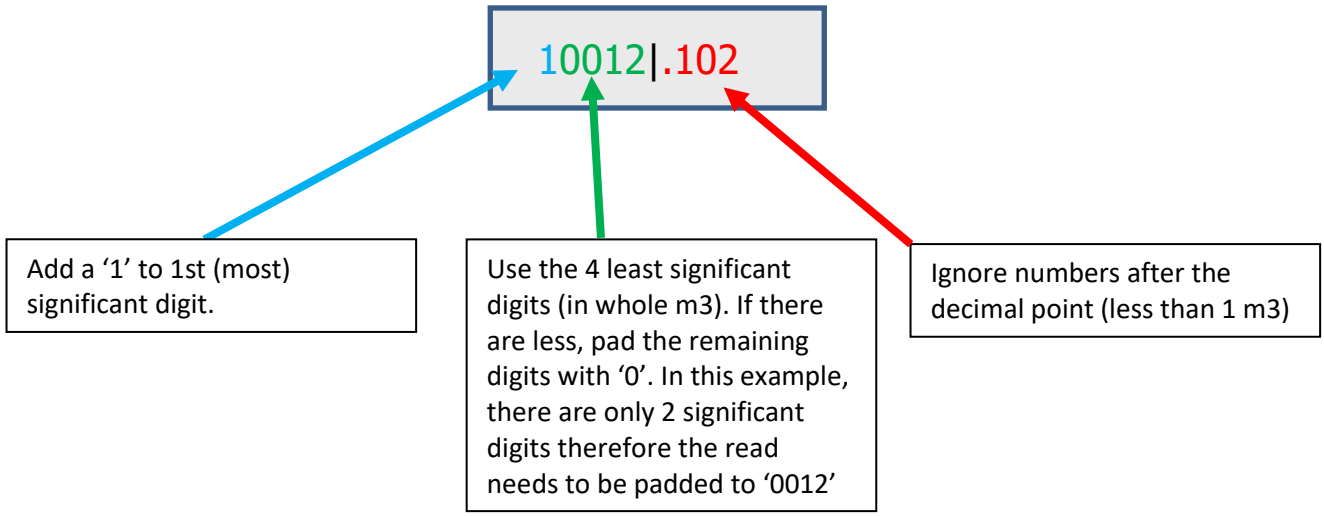
Process – Reading 'clocks over' with less than 5 register digits

It is possible that the meter will record using 4 register digits and will 'clock over' once the consumption register has recorded 9999.999 m^3. In this instance, where the CDSP may expect the next reading to be, for example, 10013, the meter reading retrieved remotely would be 13. As the CDSP will record the meter as having 5 register digits, this would indicate to the CDSP that the meter had recorded over 90000 m^3, where it may have only recorded 20 m^3.

At the time of drafting this document, there are no known SMETS2+ meters with 4 or fewer register digits. However, as it is still possible for meters to be manufactured with 4 or fewer register digits on the internal consumption register, this example has been included for any future occurrences.

In this circumstance, the Gas Supplier should pad out the meter reading to reflect what it would have displayed as a 5 register reading.

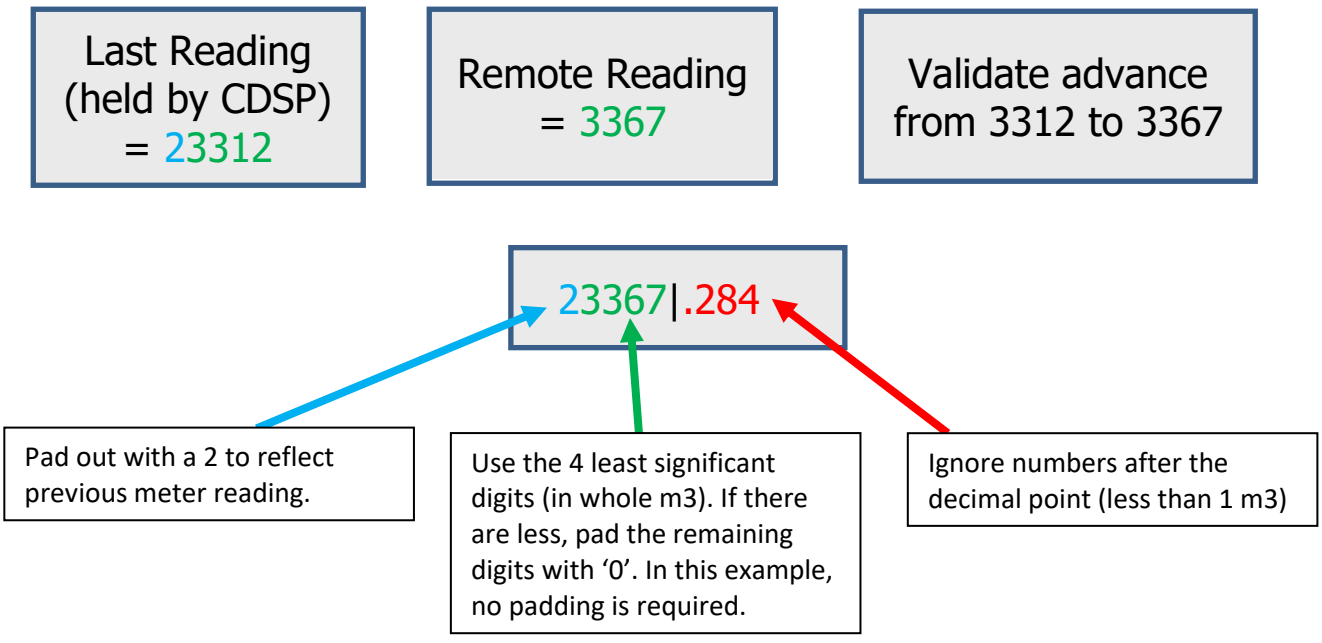
Example – Reading 'clocks over' to 12.102 and last actual reading was 9987.224:



Meter Reading sent to CDSP (via Shipper) = '10012'

If a Gas Supplier retrieves a reading that has 4 (or less) register digits, but the last actual reading held by the CDSP was a 5 digit reading (greater than 10000), the reading should be treated as valid if the 4 least significant digits are consistent with the previous reading. Where this is the case, the Gas Supplier should pad out the meter reading to reflect what it would have displayed as a 5 register reading.

Example – Gas Supplier retrieves a remote reading of 3367.284, last actual reading held by the CDSP was 23312:



Meter Reading sent to CDSP (via Shipper) = ‘23367’