



**Mod 0799 H100 Fife
Proposed Solution**

11 March 2022

Background

- The H100 trial in Fife will use a derived Multiplication Factor to ensure that customers who receive 100% hydrogen gas as part of the trial are not overbilled
- Change Proposal XRN5298 sets out this approach – approved at Change Management Committee on 10th November 2021
- The Multiplication Factor is usually 1 for Domestic-type meters and is an attribute of the meter – held in the MDD (Market Domain Data) table in central systems
- The value of the derived Multiplication Factor will be set by SGN
- The following slide demonstrates how this will work

Example of use of a derived Multiplication Factor for H100 trial sites

	Customer using standard natural gas	Customer using Hydrogen with a standard Multiplication Factor	Customer using Hydrogen with a special Multiplication Factor
Customer Annual Quantity (AQ)	13,000 kWh	13,000 kWh	13,000 kWh
Metered usage for a period (hydrogen customer uses greater quantity due to lower gas quality)	100 m3	329 m3	329 m3
SC LDZ Gas Calorific Value (CV)	39.5	39.5	39.5
Standard Conversion Factor (CF)	1.02264	1.02264	1.02264
Multiplication Factor (MF)	1	1	0.294 (estimated value)
Calculated Energy: $m3 \times CV \times CF \times MF / 3.6$	1,122 kWh	3,691 kWh	1,085 kWh

Standard customer unaffected by Hydrogen use in the LDZ

Hydrogen customer would be overbilled if a standard multiplication factor were used

Special multiplication factor ensures that the Hydrogen customer is not overbilled

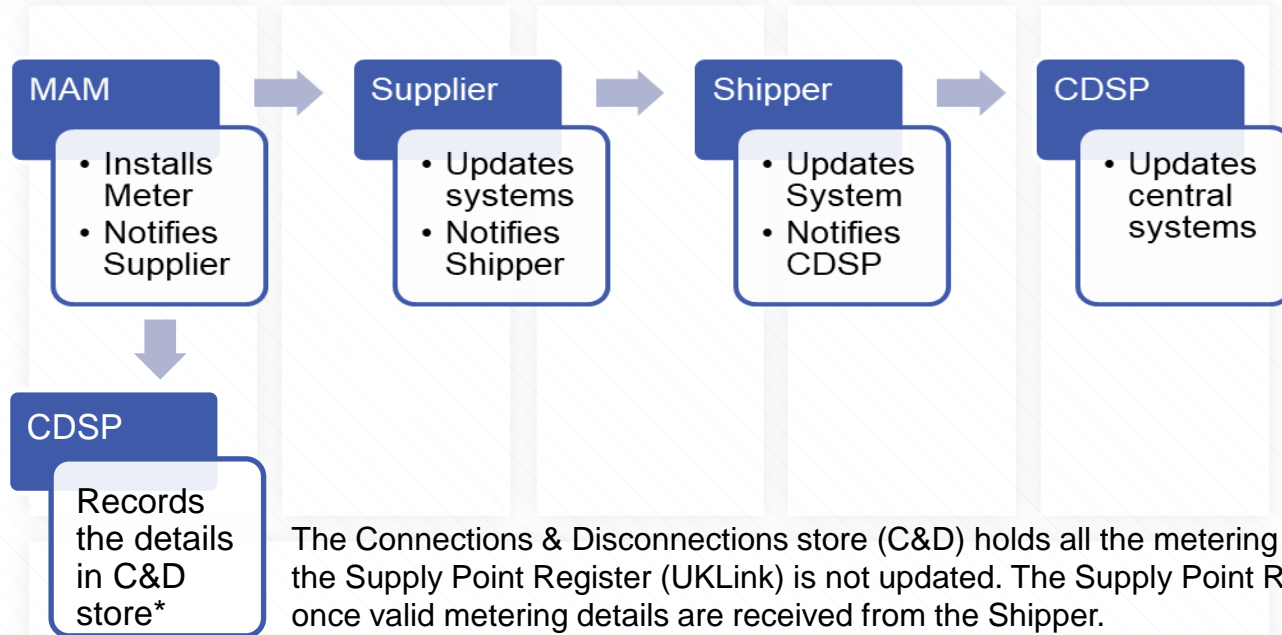
Market Domain Data (MDD)

- The Retail Energy Code maintains a register of all Meter Products (within MDD) which contains the meter attributes for every gas meter in the market
- The Register is updated once a month with any new, amended or deleted meters and is used by all industry parties to validate metering information
- The derived Multiplication Factor will be attributed to the meter by the manufacturer

Product Id (A0109)	Equivalent	Model Code (A0083)	Manufacturer Code (A0060)	Measuring Capacity (A0112)	Multiplication Factor (A0120)	Number of Dials or Digits (A0121)	Pulse Value (A0194)	Units of Measure (A0123)	Meter Type (A0025)	Meter Mechanism (A0085)	Conversion Basis Code (A0036)	Payment Method (A0163)
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Updating Metering Details

Below shows the flow of data following a meter installation – at each step validations take place to ensure the meter is compliant against Market Domain Data



The Connections & Disconnections store (C&D) holds all the metering details however the Supply Point Register (UKLink) is not updated. The Supply Point Register is updated once valid metering details are received from the Shipper.

How to identify H100 sites in Central Systems

Shippers can identify MPRNs, within their ownership, taking part in the H100 Fife Project through Data Enquiry Service (DES) and the Data Discovery Platform (DDP)

- The Network Project Name will be the description of the project
- The Network Indicator will be H100FIFSGN
- The Network Project Start Date is the date the consumer will first receive hydrogen
- The Network Project End Date is the date the consumer stopped receiving hydrogen

DES example

Shipper Name	
Shipper Short Code	
Current Supplier	
Current Supplier Short Code	
Incoming Supplier	
Previous Supplier	
Previous Supplier ID	
Confirmation Reference	
Confirmation Effective Date	
Withdrawal Status	
Market Sector Code	
Meter Link Code	
Supply Meter Point Class	
Interruption Contract Exists	
Network Project Name	SGN 100% H2 LEVENMOUTH FIFE
Network Indicator	H100FIFSGN
Network Project Start Date	10 Jun 2023
Network Project End Date	10 Mar 2027

The logo for xserve is centered within a stylized house outline. The house has a white background with a light blue diagonal line pattern. The house's roof is a simple triangle, and the main body is a rectangle divided into four vertical panes by thin grey lines. The logo itself consists of the word "xserve" in a blue, sans-serif font. The "x" is a stylized, bold character with a dark blue left half and a light blue right half. The "s", "e", "r", "v", and "e" are in a uniform light blue color. The entire logo is positioned in the middle of the four panes of the house.

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