

# Offtake Meter Performance Report

September 2024



**SGN**

Your gas. Our network.

# Contents

1. SGN Offtake Meter Performance.....	2
1.1 Introduction.....	2
1.2 SGN Network .....	2
2. ME2 Part3 FWACV Offtakes.....	3
2.1 Metering Errors.....	3
2.2 Reconciliation .....	3
2.3 Null Reports .....	3
3. Annual ME2 Meter Validations.....	3
Table 1: Meter Validations.....	4

## 1. SGN Offtake Meter Performance

SGN operates and maintains several exit points or offtakes from the National Transmission System (NTS) where offtake flow is measured and validated in accordance with the UNC, The Gas (Calculation of Thermal Energy) Regulations and The Gas Safety(Management) Regulations.

Requirements:

1. Number and magnitude of Meter Error reports.
2. Network Meter Performance.
3. Annual ME2 Meter Validation report.

### 1.1 Introduction

This document has been written to demonstrate that instrumentation and equipment associated with measurement systems for the calculation of mass, volume or energy flow rate of gas are functioning correctly. The ME2 Part 3 Work Procedure for Flow Weighted Average Calorific Value (FWACV) Offtakes is used to ensure metering equipment at the offtakes are validated and maintained correctly, thus ensuring that the complete metering system continues to perform within the uncertainty requirements.

### 1.2 SGN Network

SGN operates and maintains 3 Local Distribution Zones (LDZs), each LDZ has offtake points associated with them where the gas taken from the National Transmission System (NTS) is monitored, measured, and treated before entering the LDZs.

Each offtake has either duty and standby metering streams or one duty stream. SGN uses 3 types of gas metering; Orifice Plate, Ultrasonic (USM) or Turbine meters and utilises gas chromatography or Gas PT's for Calorific Value (CV) determination and Pressure, Temperature, and Density for volume flow correction.

## 2. ME2 Part 3 - FWACV Offtakes

The ME2 Part 3 Work Procedure sets out a number of tests and calibrations designed to ensure all aspects of flow metering such as flow computers, pressures and temperatures are setup and working within tolerances. All sites must be validated annually with a maximum interval of twelve months between validations.

### 2.1 Meter Errors

The Offtake Arrangements Document (OAD) requires the offtake metering measurement equipment to be operating within its “Permitted Range” as indicated in the site specific “Supplemental Agreement”. If the measurement equipment is found to be operating outside its Permitted Range or with a systematic bias, it is classed to be a “Fault”. The Measurement Error Notification Guidelines only require the notification of faults which are likely to result in a systematic bias to the measured quantity. They do not cover faults associated with equipment operating outside its permitted range when the mismeasurement is of a random nature. Systematic bias is deemed to be a bias resulting from the measurement system, leading on average to biases in measurement which results in measured values being systematically too high or too low.

SGN reported no metering errors so far this year in 2024.

### 2.2 Reconciliation

On identification of a possible meter error the Distribution Network is required to supply corrected readings for reconciliation only when the fault identified has a systematic bias of over 0.1% of the total offtake flow during the period of the error. These corrected readings are supplied as part of the “Measurement Error Report (MER)” or the “Significant Measurement Error Report (SMER)” where a SMER will be an error estimated to exceed 50 GWh.

### 2.3 Null Reports

Should the magnitude of the total error be calculated at less than 0.1% of the total offtake flow during the period of the meter error then no reconciliation will be made for any day within the error duration and a null report written.

## 3. Annual ME2 Meter Validations

ME2 maintenance activities for the period January 2024 to December 2024 as shown in Table 1.

The SGN network consists of 31 NTS Offtakes, these were inspected and tested following the ME2 Maintenance Work Procedure. However, due to operational constraints, 7 ME2's were started slightly outside of the ME2 12-month validation window.

Any ME2 functional tests that failed to meet the required test tolerances, which may indicate the measurement systems are not performing correctly were corrected/recalibrated and investigated for potential meter errors.

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Table 1 –ME2 Meter Validations

Site Name	LDZ	Meter Type	Validation Due	Validation complete	Started within 12 months of last?	Reconciliation Required?	Comments
Aberdeen AGI (Offtake)	SC	USM	15/03/2024	24/04/2024	N	N	Re-scheduled mid April due to USM repairs
Hume AGI (Offtake Tracker)	SC	Turbine	15/03/2024	08/03/2024	Y	N	
Ipsden A AGI (Offtake)south	SO	OP	15/03/2024	12/06/2024	N	N	Awaiting return of OP before completion
Soutra (Offtake Tracker)	SC	OP	15/03/2024	15/03/2024	Y	N	
Kinknockie (Offtake Tracker)	SC	Turbine	15/04/2024	25/04/2024	Y	N	
Nether Howcleugh AGI (Offtake Tracker)	SC	Turbine	15/04/2024	11/04/2024	Y	N	
Bathgate AGI (Offtake)	SC	USM	15/05/2024	11/04/2024	Y	N	
Winkfield AGI SO (Offtake)	SO	OP	15/05/2024	07/03/2024	Y	N	Site upgrade
Winkfield AGI SE (Offtake)	SE	USM	15/05/2024	14/03/2024	Y	N	
Ipsden B AGI (Offtake)	SO	OP	15/05/2024	08/05/2024	Y	N	
Mappowder AGI (Offtake)	SO	OP	15/05/2024	17/07/2024	N	N	Site upgrade
Careston AGI (Offtake Tracker)	SC	Turbine	15/05/2024	08/05/2024	Y	N	
Armadale AGI (Offtake)	SC	OP	15/05/2024	08/05/2024	Y	N	
Braishfield A AGI (Offtake)	SO	USM	15/06/2024	28/06/2024	Y	N	
Braishfield B AGI (Offtake)	SO	USM	15/06/2024	08/07/2024	N	N	
Farningham AGI B (Offtake)	SE	USM	15/06/2024	09/07/2024	N	N	
Hardwick AGI (Offtake)	SO	USM	15/06/2024			N	
Farningham AGI A (Offtake)	SE	USM	15/06/2024	27/06/2024	Y	N	
Lockerbie AGI (Offtake Tracker)	SC	OP	15/06/2024	04/09/2024	N	N	
Isle Of Grain MP (Offtake)	SE	Turbine	15/07/2024			N	
Shorne AGI (Offtake)	SE	OP	15/07/2024	23/07/2024	Y	N	
Broxburn AGI USM (Offtake)	SC	USM	15/07/2024	04/09/2024	N	N	
Drum AGI (Offtake)	SC	USM	22/07/2024	02/05/2024	Y	N	
Glenmavis (Offtake)	SC	USM	15/08/2024			N	
Tatsfield AGI (Offtake)	SE	USM	21/08/2024			N	
Pitcairngreen AGI (Offtake Tracker)	SC	Turbine	15/09/2024	12/04/2024	Y	N	
St Fergus AGI (Offtake Tracker)	SC	Turbine	15/09/2024			N	
Isle Of Grain LP (Offtake)	SE	Turbine	09/10/2024			N	
Balgray AGI (Offtake)	SC	USM	15/10/2024			N	
Stranraer AGI (Offtake Tracker)	SC	Turbine	15/10/2024			N	
Langholm AGI (Offtake Tracker)	SC	Turbine	15/11/2024	10/05/2024	Y	N	Re-scheduled for May 2025 next year.
Burnhervie AGI (Offtake)	SC	USM	15/11/2024			N	