Heat Network Technical Assurance Scheme

Existing Heat Networks

Assessment Procedures

Consumer Connection

Milestone 2

HNTAS-EX-AP-CC-M2

Version History

Revision	Notes	Date
V0.1	Draft issue	17/12/25

Disclaimer

The following HNTAS Code document is published in draft format. This document is intended to give the sector early sight of HNTAS requirements in their current stage of development for the purpose of facilitating sector understanding of the scheme.

Draft Code documents, including Technical Specifications and Assessment Procedures, have been reviewed and consulted on through a series of technical workshops with participation from a range of experts from across the heat network industry. The content of this document is still in development and subject to change. Requirements should not be considered as fixed at this stage.

Changes which may be made to this document in future include those to:

- reflect learnings from the New Build and Existing network pilot programmes;
- align with aspects of HNTAS which are subject to public policy consultation;
- align with new requirements in TS1 and MMS;
- align the terminology of this document with that used in other HNTAS documentation;
- rectify errors in this draft version; and
- improve clarity of contents.

The Key Failures set out in the draft Code documents have been identified as a specific area for review, to ensure that:

- all Key Failures enable a binary assessment;
- Key Failures are only included for genuine issues presenting major risks to KPIs, and that moderate or lower risks are considered via non-conformity processes; and
- Key Failures do not duplicate Technical Requirements unless there is a clear justification to do so.

DESNZ will be welcoming feedback on the information in this document via a change management process. This process will run in parallel to the HNTAS policy consultation and DESNZ invites stakeholders to engage with both, once they are open. You can sign up to receive updates on future detailed draft technical documents as they are published by contacting: heatnetworks@energysecurity.gov.uk.

Please be advised that this document references other HNTAS draft Code documents which have not yet been published. References to other documents will also be subject to change following the publication of updated standards. The final version of this document will be released before the launch of HNTAS.

Contents

Foreword

These Assessment Procedures form part of the UK Government's Heat Network Technical Assurance Scheme (HNTAS, The Scheme) delivered by the Department for Energy Security and Net Zero, in partnership with the Scottish Government and Ofgem. The Department for Energy Security and Net Zero appointed FairHeat as technical author for this document.

The Scheme has been designed and developed in consultation with a range of experts across the heat network industry in the form of Technical Sub-Working Groups, culminating in a series of Technical Specifications and Assessment Procedures to facilitate the validation and verification of performance outcomes of Elements within a Heat Network.

This document contains the Assessment Procedures for a Consumer Connection Element within an Existing Heat Network required at Milestone 2.

This document sits within a series of Assessment Procedures for a Consumer Connection, which features within a wider Code documentation structure, as outlined in Table 1.

These Assessment Procedures have been issued in draft format and will be updated prior to scheme launch.

For further information on the use of this document within the Heat Network Technical Assurance Scheme, please refer to the Heat Network Technical Assurance Scheme – Existing Heat Networks – Scheme Rules – Assessment Regime (HNTAS-EX-SR-XX-AS) document.

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Shadow Code Management Committee

During the development of HNTAS, a Shadow Code Management Committee has been established, with representation from the Department for Energy Security & Net Zero (DESNZ), the Scottish Government, Ofgem and Heat Trust. The following items have been presented to, and approved by, this committee:

- Structure of Code documents for Existing Heat Networks
- Approach to Technical, Performance Monitoring and Data Protection and Smart Metering Requirements at each Milestone
- KPIs and thresholds at each Milestone

Code Document Structure

Assessment Procedures

Document Type	Element		Milestone					
			Overview	Milestone 2	Milestone 3A	Milestone 3B	Milestone 4	Milestone 5
			M0	M2	M3A	M3B	M4	
Assessment Procedures	Energy Centre	EC	HNTAS-EX-AP-XX-M0	HNTAS-EX-AP-EC-M2	HNTAS-EX-AP-XX-M3A	N/A	HNTAS-EX-AP-EC-M4	HNTAS-NB-AP-EC-P4
	District Distribution Network	DD		HNTAS-EX-AP-DD-M2		N/A	HNTAS-EX-AP-DD-M4	HNTAS-NB-AP-DD-P4
	Substation	SS		HNTAS-EX-AP-SS-M2		N/A	HNTAS-EX-AP-SS-M4	HNTAS-NB-AP-SS-P4
	Communal Distribution Network	CD		HNTAS-EX-AP-CD-M2		N/A	HNTAS-EX-AP-CD-M4	HNTAS-NB-AP-CD-P4
	Consumer Connection	CC		HNTAS-EX-AP-CC-M2		HNTAS-EX-AP-CC-M3B	HNTAS-EX-AP-CC-M4	HNTAS-NB-AP-CC-P4

Table 1: Existing Network Assessment Procedures structure

Scope

This document specifies Assessment Procedures applicable for a Consumer Connection within an Existing Heat Network at Milestone 2.

A Consumer Connection is defined as a connection between a Distribution Network (either District or Communal) and a single Consumer Heat System, where the instantaneous hot water system is ≤ 70 kW and/or the heating/cooling system is ≤ 20 kW.

A detailed definition of the Consumer Connection is contained within the Heat Network Technical Assurance Scheme – Existing Heat Networks – Technical Specification – Overview (HNTAS-EX-TS-XX-M0) document.

References

Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- Heat Network Technical Assurance Scheme – Existing Heat Networks – Scheme Rules – Assessment Regime (HNTAS-EX-SR-XX-AS)
- Heat Network Technical Assurance Scheme – Existing Heat Networks – Assessment Procedures – Overview (HNTAS-EX-AP-XX-M0)

Informative references

The following informative references apply to this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- ISO 17029: Conformity Assessment — General principles and requirements for validation and verification bodies (ISO, 2019)

Terms and Definitions

For the purposes of this document, the terms and definitions given in the Heat Network Technical Assurance Scheme – Terms and Definitions (HNTAS-XX-TD) document apply.

M2. Assessment Procedures for Milestone 2

M2.1. Assessment of Technical Requirements

For each HNTAS Technical Requirement, the Assessor shall follow the Assessment Procedures and minimum Level of Assessment specified in Table 2.

Technical Requirement	Minimum Level of Assessment	Assessment Procedure
M2.1.1.	4	Review the O&M Manual to confirm the expected documentation is present. Undertake a review of a sample number of items to ensure updated documentation has been included.
M2.1.2.	3	Review the PPM Schedule to ensure that expected items are present and that maintenance is scheduled to minimise disruption.
M2.1.3.	4	Undertake a sample check that the as-built Consumer Connection drawings (or other documentation) are reflective of the Consumer Connection in operation.
M2.1.4.	3	Review Document Storage System Statement to ensure that Heat Network documentation is being stored in a manner that facilitates the easy access of information for personnel carrying out operation and maintenance activities on the Consumer Connection.
M2.1.5.	4	Undertake a sample check of the Maintenance and Remedial Action Log to ensure maintenance has been carried out in line with the requirement for sampled items.
M2.1.6.	3	Check photographic evidence of insulation condition to ensure it appears visually in accordance with the HNTAS requirement.
M2.1.7.	4	Undertake a check for a sample number of Operatives to ensure they have received specific training related to the activity being undertaken or previously undertaken.
M2.1.8.	4	Undertake a check for a sample number of Operatives and Specialists to ensure they have received an appropriate site induction.
M2.1.9.	4	Review the Operating Risk Register and undertake a sample check that updates to the O&M Manual and PPM Schedule have been made where necessary.

Technical Requirement	Minimum Level of Assessment	Assessment Procedure
M2.1.10.	4	Review that, where an abnormal number of failures of the same type have occurred within a Consumer Connection or multiple Consumer Connections on a Heat Network, that the non-destructive and/or destructive testing of equipment has been undertaken and that the Condition Log has been updated to reflect findings. Check that remedial actions identified through previous audits/surveys have been completed and the Condition Log has been updated to reflect this.
M2.1.11.	4	Check that a Resilience Strategy has been produced and includes all content as outlined within the Evidence Requirement. Check that the Resilience Strategy remains relevant to the network and has been reviewed and updated if: • an unplanned interruption has occurred that lasted longer than 12 hours; or • new risks have been identified within the Operational Risk Register.
M2.1.12.	3	Check that sufficient circulation has been established where stagnant conditions have occurred (for example, a "pay as you go" system that has not been used for extended periods of time).
M2.1.13.	3	Check to confirm equipment disconnection where applicable.
M2.1.14.	5	Undertake an in-depth review of the working pressure assessment to confirm that the assumptions made, the methodology used to calculate working pressures, and the outputs of the assessment are reasonable given the design characteristics of the system and are in accordance with the applicable technical standard(s). Where required, undertake independent calculations to confirm the accuracy of the working pressure assessment. Confirm that the identification and assessment of risks from the working pressure assessment has been undertaken in accordance with the applicable technical standard(s) and that mitigation measures have been considered and implemented where appropriate.

Technical Requirement	Minimum Level of Assessment	Assessment Procedure
M2.1.15.	5	Confirm KPI Schedule has been completed (all parameters present, references to correct documents present). Undertake a detailed assessment of all KPIs to confirm appropriateness and accuracy of thresholds.
M2.1.16.	4	Confirm Technical Parameters Schedule has been completed (all parameters present, references to correct documents present). Undertake a review of a sample number of parameters to confirm accuracy of sampled outputs.

Table 2: Assessment Procedures for Technical Requirements for the Consumer Connection at Milestone 2

M2.2. Assessment of Performance Monitoring Requirements

For each HNTAS Performance Monitoring Requirement, the Assessor shall follow the Assessment Procedures and minimum Level of Assessment specified in Table 3.

Performance Monitoring Requirement	Minimum Level of Assessment	Assessment Procedure
M2.2.1.	2	Confirm that KPIs are being reported at the required frequency.
M2.2.2.	3	Check that a minimum of 3 months worth of KPI data has been provided. Check that KPIs are within required thresholds. Check that where a KPI fell outside of its required threshold (if applicable), the root cause(s) have been outlined, remedial actions were undertaken to resolve the issue and there is a low risk of KPIs not meeting their required thresholds in the future.
M2.2.3.	3	Review that the Metering and Monitoring Strategy is in accordance with the applicable technical standard(s) and that it is up to date and reflective of the Heat Network.
M2.2.4.	3	Review the Thermal Energy and Utility Meter Maintenance Strategy to confirm that all expected items are present.
M2.2.5.	3	Confirm that the Automatic and Remote Monitoring System (ARMS) has been specified in accordance with the applicable technical standard(s).
M2.2.6.	5	Review the Monitoring Point Specification to confirm that the applicable technical standard(s) have been met. Undertake a detailed review of meter sizing methodology and outputs to confirm that sizing is acceptable.

Performance Monitoring Requirement	Minimum Level of Assessment	Assessment Procedure
M2.2.7.	4	Check that Thermal Energy Meter Records are kept which include all detail as listed within the Evidence Requirement. Conduct a sample check that, where required, thermal energy meters within the Consumer Connection: • have undergone a successful sampling and testing procedure; • have been recalibrated; or • have been replaced.
M2.2.8.	2	Confirm that KPIs are being reported at the required frequency.

Table 3: Assessment Procedures for Performance Monitoring Requirements for the Consumer Connection at Milestone 2

M2.3. Assessment of Data Protection and Smart Metering Requirements

For each HNTAS Data Protection and Smart Metering Requirement, the Assessor shall follow the Assessment Procedures and minimum Level of Assessment specified in Table 4

Data Protection and Smart Metering Requirement	Minimum Level of Assessment	Assessment Procedure
M2.3.1.	3	Review evidence to confirm that the Metering and Monitoring System enables system operators to meet data protection obligations in accordance with the applicable technical standard(s).
M2.3.2.	3	Review evidence to confirm that the Metering and Monitoring System enables system operators to meet secure data processing obligations in accordance with the applicable technical standard(s).
M2.3.3.	3	Review evidence to confirm that the Smart Metering/AMI system is in accordance with the applicable technical standard(s).

Table 4: Assessment Procedures for Data Protection and Smart Metering Requirements for the Consumer Connection at Milestone 2