Heat Network Technical Assurance Scheme

New Build Heat Networks

Assessment Procedures

Energy Centre

Phase 1: Feasibility

HNTAS-NB-AP-EC-P1

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Version History

Revision	Notes	Date
V0.4	Draft issue	05/12/25

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.

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Note on Phase 4: Operation (initial) and Phase 5: Operation (ongoing)

The New Build Technical Specification and Assessment Procedures Overview (Phase 0) documents indicate that there are separate New Build Code Documents for Phase 4: Operation (initial) and Phase 5: Operation (ongoing).

These documents have since been consolidated to reduce the number of Code Documents, so the Phase 4: Operation documents cover requirements for New Build networks during both initial and ongoing operation.

This change does not impact the assessment of New Build networks in operation, which still occurs:

- after 1 year of operation; and
- after 2 years of operation.

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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 an Energy Centre Element within a New Build Heat Network in Phase 1: Feasibility.

This document sits within a series of Assessment Procedures for an Energy Centre, 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 – New Build Heat Networks – Scheme Rules – Assessment Regime (HNTAS-NB-SR-XX-AS) document.

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Code Document Structure

Assessment Procedures

Document Type	Element		Part/Phase				
			Overview	Phase 1: Feasibility	Phase 2: Design	Phase 3: Construction	Phase 4: Operation
			P0	P1	P2	P3	P4
Assessment Procedures	Energy Centre	EC	HNTAS-NB-AP-EC-P0	HNTAS-NB-AP-EC-P1	HNTAS-NB-AP-EC-P2	HNTAS-NB-AP-EC-P3	HNTAS-NB-AP-EC-P4
	District Distribution Network	DD	HNTAS-NB-AP-DD-P0	HNTAS-NB-AP-DD-P1	HNTAS-NB-AP-DD-P2	HNTAS-NB-AP-DD-P3	HNTAS-NB-AP-DD-P4
	Substation	SS	HNTAS-NB-AP-SS-P0	HNTAS-NB-AP-SS-P1	HNTAS-NB-AP-SS-P2	HNTAS-NB-AP-SS-P3	HNTAS-NB-AP-SS-P4
	Communal Distribution Network	CD	HNTAS-NB-AP-CD-P0	HNTAS-NB-AP-CD-P1	HNTAS-NB-AP-CD-P2	HNTAS-NB-AP-CD-P3	HNTAS-NB-AP-CD-P4
	Consumer Connection	CC	HNTAS-NB-AP-CC-P0	HNTAS-NB-AP-CC-P1	HNTAS-NB-AP-CC-P2	HNTAS-NB-AP-CC-P3	HNTAS-NB-AP-CC-P4
	Consumer Heat System	CH	HNTAS-NB-AP-CH-P0	HNTAS-NB-AP-CH-P1	HNTAS-NB-AP-CH-P2	HNTAS-NB-AP-CH-P3	N/A

Table 1: New Build Network Assessment Procedures structure

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Scope

This document specifies the Assessment Procedures applicable for an Energy Centre within a New Build Heat Network in Phase 1: Feasibility.

An Energy Centre is defined as a plant room that contains heat generation equipment; and/or equipment connecting to an energy source; or a Substation which contains heat generation equipment (e.g. building connection with heat pumps or top-up boilers).

A detailed definition of the Energy Centre is contained within the Heat Network Technical Assurance Scheme – New Build Heat Networks – Technical Specification – Energy Centre – Overview (HNTAS-NB-TS-EC-P0) document.

Detailed definitions of the Levels of Assessment specified in this document are provided in Heat Network Technical Assurance Scheme – New Build Heat Networks – Assessment Procedures – Energy Centre – Overview (HNTAS-NB-AP-EC-P0).

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New Build Heat Networks

There is one stage within Phase 1: Feasibility, which is Stage 1: Concept Design. This is outlined in Figure 1.

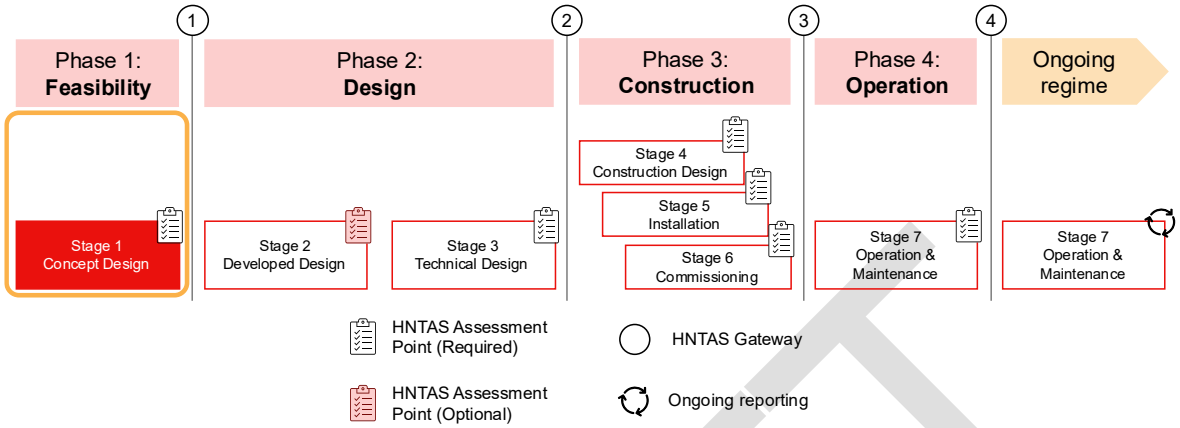

Figure 1: HNTAS New Build regime phases and stages

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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 – New Build Heat Networks – Scheme Rules – Assessment Regime (HNTAS-NB-SR-XX-AS)
- Heat Network Technical Assurance Scheme – New Build Heat Networks – Assessment Procedures – Energy Centre – Overview (HNTAS-NB-AP-EC-P0)

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)

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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.

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1. Assessment Procedures for Stage 1: Concept Design

1.1. 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
1.1.1.	3	Confirm that the assumptions made and methodology used to calculate the peak heat demand and annual heat consumption are in accordance with the applicable technical standard(s).
1.1.2.	3	Confirm that the assumptions made and methodology used to develop the phasing plan are in accordance with the applicable technical standard(s). Confirm that the phasing plan has been considered within the overall Energy Centre design (for example, equipment selection, spatial requirements and Energy Centre location).
1.1.3.	3	Review selection of operating temperatures and confirm it has been undertaken in accordance with the applicable technical standard(s).
1.1.4.	3	Review the assumptions made and methodology used to calculate the working pressures and confirm that a calculation of the System Maximum Working Pressure and Local Maximum Working Pressure has been undertaken in accordance with the applicable technical standard(s). 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.
1.1.5.	3	Confirm that the methodology and criteria used to determine the heat source and generation technology are in accordance with the applicable technical standard(s).
1.1.6.	3	Confirm that the assumptions made and methodology used to set up the operating model and determine the size of heat source(s) and thermal storage are in accordance with the applicable technical standard(s).
1.1.7.	1	Responsible Party to self-validate that the location of top-up and standby boilers and the use of

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Technical Requirement	Minimum Level of Assessment	Assessment Procedure
		existing boilers has been determined in accordance with the applicable technical standard(s). No assessment by the Assessor is required.
1.1.8.	3	Review the hydraulic arrangement and controls strategy to confirm that the design intent is achievable and will result in the low carbon heat source being maximised and KPIs being achieved.
1.1.9.	3	Review the cost model to confirm that the assumptions made and methodology used are in accordance with the applicable technical standard(s). Undertake a qualitative check to ensure all items that should be present within the cost model are present. The assessment will not validate the accuracy of the cost figures.
1.1.10.	2	Confirm evidence has been provided but does not undertake a review of the evidence contents.
1.1.11.	1	Responsible Party to self-validate that an initial heat tariff structure has been developed and has taken into consideration the mix of input energy sources and time-based input energy costs. No assessment by the Assessor is required.
1.1.12.	3	Confirm that the assumptions made and methodology used to estimate carbon dioxide emissions are in accordance with the applicable technical standard(s).
1.1.13.	3	Confirm that a Resilience Strategy has been developed. Confirm that the assumptions made and methodology used to determine the Resilience Strategy are in accordance with the applicable technical standard(s).
1.1.14.	3	Review the repair and replacement strategy to confirm that the assumptions made and methodology used to develop the strategy are in accordance with the applicable technical standard(s).
1.1.15.	2	Confirm that a Water Quality Statement has been provided but do not undertake a review of the contents.
1.1.16.	3	Review the assessment undertaken to select the Energy Centre site(s) to confirm that the

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Technical Requirement	Minimum Level of Assessment	Assessment Procedure
		assumptions made and methodology used are in accordance with the applicable technical standard(s). Undertake a qualitative check to ensure that the spatial requirements are appropriate and in accordance with the applicable technical standard(s).
1.1.17.	4	Confirm that the Technical Parameters Schedule has been completed (with all parameters present and references to correct documents present). Undertake a review of a sample of parameters to confirm the accuracy of sampled outputs.

Table 2: Assessment Procedures for Technical Requirements at Stage 1: Concept Design for the Energy Centre

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1.2. 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
1.2.1.	3	Review the Metering and Monitoring Strategy to confirm that it is reasonable in the context of the wider system design and characteristics, is in accordance with the applicable technical standard(s), and that nothing present or missing would prevent the Metering and Monitoring Strategy from being achieved at the Developed Design and Technical Design stages.
1.2.2.	4	Review the KPI schedule and ensure that the applicable Energy Centre KPIs are present, and the schedule contains the required content. Undertake a sample check of KPIs to confirm the suitability of KPI thresholds and the required measurement points for sampled KPIs.
1.2.3.	4	Review the Monitoring Points Schedule to confirm that the schedule contains the required content. Undertake a sample check of KPIs to confirm that the Monitoring Points required for the sampled KPIs are present and located correctly.
1.2.4.	4	Undertake a review of a sample of Monitoring Points to ensure that the sampled Monitoring Points are present and are labelled with the unique ID code correctly.

Table 3: Assessment Procedures for Performance Monitoring Requirements at Stage 1: Concept Design for the Energy Centre

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