

## ECO3 District heating system (DHS) Factsheet and Summary of Proposal (SoP)

### DHS Factsheet

#### Overview

The Energy Company Obligation (ECO) is a government scheme obligating larger suppliers to deliver energy efficiency measures to domestic premises in Great Britain. District heating is an eligible measure under ECO.

We recommend that suppliers contact us before undertaking a District Heating System (DHS) connection in order to confirm that requirements for DHS projects are fully understood. This factsheet draws together the key areas of information for suppliers when engaging with us prior to delivering district heating measures.

It is the responsibility of each supplier to understand the provisions of the Electricity and Gas (Energy Company Obligation) Order 2018 (the "[ECO3 Order](#)") and how those provisions apply to them. This factsheet is not intended to be a definitive guide to these provisions.

#### Introduction

This document has been created to assist suppliers and the supply chain in satisfying the requirements for delivering district heating measures under ECO3<sup>1</sup>.

The ECO3 Order defines district heating system as: a system that delivers heat through pipes or conduits to –

- (a) at least two domestic premises in at least two separate buildings; or
- (b) at least three domestic premises located in a single building, provided that those premises are not all located within one house in multiple occupation.

Work undertaken to connect or improve the efficiency of a DHS which meets this definition may be eligible under ECO3.

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<sup>1</sup> A new obligation has been outlined under the ECO3 Order and the scheme that runs during that period is called 'ECO3'. The ECO3 scheme, will run until 31 March 2022.

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## Completing the District Heating System Summary of Proposal

This factsheet details the information we expect to receive in each section of the Summary of Proposal (SoP). Each section of the SoP is numbered accordingly.

### 1. Overview of project

- 1.1. This section should be used to provide a brief summary of the project being completed. This helps us to understand the scope of the works.
- 1.2. In the overview section we expect to see; the location of the project (house/flat number, street name and postcode), the construction type(s), e.g. solid brick, metal framed etc. of the premises involved in the project and in the case of flats, the relative position within the building. This information assists us in understanding the context of the project and how preconditions may apply (section titled "*Relevant district heating connections*" of the [ECO 3 Guidance: Delivery](#)<sup>2</sup> and further outlined in this factsheet).
- 1.3. This section should also include the expected timeframe for completion of the project. Due to longer timescales for the delivery of DHS measures this information allows us to highlight any future changes to legislation that may impact upon the project or its eligibility under ECO.

### 2. Number of properties being connected to the system, Total Floor Area and tenure type

- 2.1. Please provide details of the number of properties being connected to the system, the tenure type of these properties and the total floor area.

### 3. Which heat generator(s) are being connected or upgraded?

- 3.1. The type of heat generator being connected or upgraded should be included in the SoP. A heat generator refers to the heat source, e.g. gas or biomass boiler. Please consult the ECO team if you are using a heat generator not listed in the SoP or mark as 'not listed' and provide further details.
- 3.2. This section of the SoP may not be relevant if a heat generator is not being upgraded or installed. If this is the case, please record N/A in the SoP.
- 3.3. If you are dealing with a DHS upgrade measure (heat generator) or DHS new connection (all generator types) which is not listed in our [ECO3 Measures Table](#), you will need to record this in the SoP and contact ECO team before proceeding.

### 4. Is DHS work to an existing connection, new connection or heat meters?

- 4.1. The main DHS measure types which can be notified under ECO3 are listed in the [ECO3 Measures Table](#)<sup>3</sup>. Suppliers must determine the correct DHS measure to notify. Each DHS measure type is defined below:
  - ***District Heating Connections – Upgrade (combined heat and power)***: The upgrade of a DHS system where substantial replacement work is carried out to the plant and/or pipework can be an eligible measure type under ECO3. The only

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<sup>2</sup> [https://www.ofgem.gov.uk/system/files/docs/2018/12/eco3\\_guidance\\_delivery\\_v1.1.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/12/eco3_guidance_delivery_v1.1.pdf)

<sup>3</sup> [https://www.ofgem.gov.uk/system/files/docs/2018/12/eco3\\_measures\\_table\\_v3.1.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/12/eco3_measures_table_v3.1.pdf)

DHS upgrade that SAP can produce a cost saving for is CHP. Other types of upgrade may be established via [alternative methodology](#) applications.

- **District Heating Connections - New Connection (All generator types):** To be notified where a DHS is being connected to a domestic premises where heating was not previously provided by a DHS.
- **District Heating Connections – Heat Meters:** Heat Meters are notified as an individual measure where there is not a notification of a DHS upgrade or new connection.

## 5. Space Heating Fuel Type(s)

- 5.1. The fuel type of a generator may have an impact on the cost savings or eligibility of a measure under ECO3. As per the table in appendix 1 of the [ECO3 Guidance: Delivery](#), we require that evidence of fuel types are made available on request at any time before 30 September 2022.
- 5.2. This section should be used to provide details of the fuel type for the space heating in the premises before and after installation of the DHS measure. For example, if the premises were previously heated by electric storage heaters, the 'before' fuel type would be 'electricity' and the 'after' fuel type would be the fuel type of the new DHS system.

## 6. Heating Controls

- 6.1. Heating controls are an efficient way of boosting the efficiency of a DHS scheme and it is worth considering installing heating controls as part of a DHS measure. When installed as part of a DHS measure they are considered inclusive within that particular DHS measure for notification purposes, and therefore are not notified to us as a separate heating controls measure.
- 6.2. This section should be used to provide details of the heating controls before and after installation of a DHS measure and whether any existing controls have been improved. For example, if a premises was previously heated using electric storage heaters, the controls may read in SAP; 'manual charge controls'. The new heating controls may be different (e.g. programmer, room thermostat & TRVs) and could result in greater savings.

## 7. System efficiency

- 7.1. This section should be used to provide details of the efficiency of the space heating in the premises before and after the installation of the DHS measure. In a 'before' installation example, system efficiency/efficiencies for the in-situ system such as an electric storage heater may read 100%. In an 'after' installation, system efficiency/efficiencies for a new or upgraded system such as a gas boiler installed may read 89%.
- 7.2. For heat pump installations, the efficiency for the in-situ system should be used, with the co-efficient of performance provided for the heat pump.

## 8. Energy Demand, Installed Capacity (kW)

- 8.1. To ensure that the DHS is correctly sized, details of the energy demand and installed capacity (before and after install) should be provided in this section of the SoP.

## 9. Explanation of how the installation has been correctly sized?

- 9.1. DHS provides heat to multiple premises which may have contrasting heat loss factors, different heat emitters (radiators, underfloor heating etc.), and occupants with

varying needs. Information should be provided that explains how these aspects have been considered when determining the capacity of the DHS to be installed.

9.2. This should also include consideration of the following:

- Existing insulation and any planned insulation,
- The installation of heat emitters such as radiators or underfloor heating (if they are not already in place) and their respective size.

## 10. Standards and Consumer Protection

10.1. In order for a DHS connection to be an eligible measure, it must have appropriate consumer protection in place such as registration with Heat Trust or demonstrate the measure complies with equivalent standards provided by Heat Trust (please see section titled “DHS Consumer Protection Standards” of the [ECO3 Guidance: Delivery](#)).

## Tenure and Eligibility

### 11. Eligibility

- 11.1. All owner occupied premises are eligible for new DHS connections, DHS upgrades and installation of heat meters if the customer meets the eligibility criteria of ECO3.
- 11.2. PRS properties with an EPC rating of A-E are eligible for new DHS connections, DHS upgrades and installation of heat meters. PRS properties with an EPC rating of F-G (or no EPC) may receive a new DHS connection or upgrade measure provided it is a renewable heating measure.
- 11.3. Social housing properties with an EPC rating of E, F or G may receive a new DHS connection, provided the property meets the criteria for first time heating systems (please see the [ECO3 Measures table](#) for all information on tenure eligibility) and one of the two pre-conditions in section 12.
- 11.4. For social housing properties which have Electric Storage Heaters (ESH) as the pre-main heating source, an Electric Storage Heater Checklist (ESHCL) must be completed alongside DHS measures to demonstrate that the first time heating system criteria are met.

### 12. How to satisfy pre-conditions 1 and 2

- 12.1. For social housing properties with an EPC rating of E, F or G, DHS measures are only eligible where the premises meet one of two insulation pre-conditions.
- 12.2. The insulation pre-condition that the premises must meet depends on the type of building the premises are located in. There are two pre-conditions:

**Pre-condition 1:** This pre-condition applies to all premises, except those located in a multi-storey building that do not include the top floor of the multi-storey building. To meet precondition 1, premises must have either roof insulation or wall insulation in place. We will consider that the pre-condition is met if:

- i. the total roof area or exterior-facing wall area of the premises is insulated;
- or
- ii. if part of the total roof area or exterior-facing wall area (not exceeding 50%) cannot be insulated then the remaining part is insulated.

**Pre-condition 2:** This pre-condition applies to premises, located in a multi-storey building, that do not include the top floor of the multi-storey building. We will judge that premises meet pre-condition 2 if all exterior facing walls of the multi-storey building in which the premises are located are insulated, except for walls which have:

- iii. one or more parts of solid wall construction, or
- iv. a cavity which cannot be insulated.

Further detail on these requirements can be found in the [ECO3 Guidance: Delivery](#).

- 12.3. Information about how a DHS measure meets the pre-conditions should be included in this section of the SoP form. This information should include:
  - i) Insulation *already present* at the premises and which pre-condition this meets
  - ii) Insulation *to be installed* at the premises and which pre-condition this meets
  - iii) If applicable (pre-condition 1 only), if part of the total roof area or exterior-facing wall area (not exceeding 50%) *cannot be insulated*, then confirmation that the remaining part is insulated.
- 12.4. Suppliers must ensure that adequate insulation will be in place at the time that DHS measures are notified to us. This information should be provided in this section of the SoP.

## Calculating savings for DHS

### 13. Lifetime of new system (See ECO3 Measures Table)

- 13.1. The lifetime applicable to DHS measures will depend on the type of DHS measure (e.g. upgrade, connection or heat meters) and potentially in the case of an upgrade, the type of heat generator installed. Lifetimes for each measure type can be found in the [ECO3 Measures Table](#).
- 13.2. The lifetime to be claimed against a DHS measure should be included in the SoP form. We can then ensure that the correct lifetime has been considered.
- 13.3. Savings for measures installed under ECO3 should be calculated in accordance with guidelines published in the [ECO3 Guidance: Delivery](#). Savings for DHS measures are usually calculated using Standard Assessment Procedure (SAP) or Reduced Standard Assessment Procedure (RdSAP).
- 13.4. When being installed as part of a DHS upgrade or new connection, heating controls should be scored within SAP/RdSAP as part of the overall cost savings for the DHS measure.
- 13.5. Heat meters should be scored with SAP/RdSAP as an individual measure if a DHS upgrade or new connection measure is not being installed.
- 13.6. If you would like to notify a DHS upgrade measure using a generator type other than CHP and no suitable [alternative methodology](#) has been approved, please contact us to discuss an application.

### 14. Has any methodology, either a common values approach or sampling, been used for the multiple productions of SAP/RdSAP scores? Please provide details.

- 14.1. There are techniques for the multiple productions of EPCs which may mean that ECO scores for DHS could be based on estimated, modelled or sampled data, similar to the production of cloned EPCs on larger social housing developments.
- 14.2. DHS often heat a large number of premises and each of these premises must be notified individually with separate savings. Methodologies used for the production of multiple EPCs could be used when calculating the savings for DHS measures, however, suppliers should note that savings notified should be accurate for the respective premises (please see section titled "Scoring using Energy Performance Certificates" of the [ECO3 Guidance: Delivery](#)).

## **15. Which accreditation body has approved this approach, if applicable?**

- 15.1. If sampling has been used when calculating the savings for the relevant DHS project this should be stated in this part of the SoP, also confirming which accreditation body has agreed to any such process.

### **Evidence Compliance and requirements**

Appendix 1, of the [ECO3 Guidance: Delivery](#) lays out the documents or data to be held by a supplier and to be made available to us on request for audit or compliance purposes. Suppliers must satisfy themselves as to the evidence which will be produced on request. Feasibility reports, building surveys, SAP worksheets; survey documentation, commissioning certificates or the manufacturer's documentation may each provide some of the information required here. However, this is a non-exhaustive list and other evidence may be suitable.

DHS measures are not subject to [score monitoring questions](#)<sup>4</sup>, however, the presence of adequate insulation as part of a DHS measure pre-condition will be monitored in the DHS Technical Monitoring Questions tab. This is explained further in section 3 –Technical questions: District Heating Systems of the 'Explanatory notes for monitoring'.

### **Further Information**

If you require any further information or advice regarding District Heating Systems, please contact the ECO team at [ECO@Ofgem.gov.uk](mailto:ECO@Ofgem.gov.uk).

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<sup>4</sup>Consultation:

[https://www.ofgem.gov.uk/system/files/docs/2018/11/eco3\\_technical\\_and\\_score\\_monitoring\\_question\\_set\\_consultation.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/11/eco3_technical_and_score_monitoring_question_set_consultation.pdf)

Consultation decision:

[https://www.ofgem.gov.uk/system/files/docs/2019/01/eco3\\_technical\\_and\\_score\\_monitoring\\_question\\_set\\_consultation\\_decision\\_0.pdf](https://www.ofgem.gov.uk/system/files/docs/2019/01/eco3_technical_and_score_monitoring_question_set_consultation_decision_0.pdf)

Monitoring:

<https://www.ofgem.gov.uk/publications-and-updates/eco3-monitoring>

## Appendix 1 – Summary of Proposal Form

### District Heating Systems – Summary of Proposal

Supplier:	
Project name:	

<b>Measure details</b>	
<b>1.</b>	<b>Overview of project</b>
<b>2.</b>	<b>Number and tenure type of properties being connected to the system and Total Floor Area</b>
<b>3.</b>	<b>Which heat generator(s) are being connected or upgraded (as applicable)?</b>
i)	Biomass
ii)	Gas
iii)	Oil
iv)	CHP
v)	Energy from Waste
vi)	Ground Source Heat Pump
vii)	Air Source Heat Pump
viii)	Where not listed, please provide further details.
ix)	n/a
<b>4.</b>	<b>Is the DHS work to an existing connection, new connection or heat meters?</b>
i)	Upgrade?
ii)	New connection? <sup>5</sup>
iii)	Upgrades and new connections? <sup>6</sup>
iv)	Heat Meters
v)	Further details as relevant
<b>5.</b>	<b>Space Heating Fuel Type</b>
i)	Before
ii)	After
<b>6.</b>	<b>Heating Controls</b>
i)	Before
ii)	After
<b>7.</b>	<b>System efficiencies (For GSHP, please provide co-efficient of performance)</b>
i)	Before
ii)	After

<sup>5</sup> An ESHCL needs to be completed alongside a new DHS connection measure for Social properties with an EPC rating E, F or G and which prior to installation contain ESH.



<b>8.</b>	<b>Energy demand, Installed Capacity (kW)</b>	
i)	Before	
ii)	After	
<b>9.</b>	<b>Explanation of how the installation has been correctly sized?</b>	
<b>10</b>	<b>Standards and Consumer Protection</b>	
i)	Name of consumer protection organisation or equivalent measures are registered with.	
ii)	Installer accreditations (e.g. MCS or equivalent).	
iii)	Install certificates	
iv)	Best practice standards (e.g. accordance with the ADE-CIBSE Code of Practice)	
v)	Consumer protection scheme or arrangements in place following completion of works	
<b><u>DHS Pre-conditions (only applicable to Social E, F and G properties)</u></b>		
<b>11.</b>	<b>How do measures satisfy pre-conditions 1 and 2?</b>	
<b><u>Calculating savings for DHS</u></b>		
<b>12.</b>	<b>Lifetime of new system (see <a href="#">ECO3 Measures Table</a>)</b>	
<b>13.</b>	<b>Cost savings scoring methodology</b>	
<b>14.</b>	<b>Has any methodology, either a common values approach or sampling, been used for the multiple production of SAP/RdSAP scores? Please provide details.</b>	