
Report on Dublin District Heating Scheme

1 Project Overview

DDHS is an important project which will contribute to the reduction of carbon emissions in Dublin City and ultimately to Ireland's Climate and Energy targets by delivering on Government policy at a European, National and local level. See link to Project website for further information:

<https://www.dublincity.ie/residential/environment/dublin-district-heating-system>

1.1 National policy

Ireland's use of district heating as a share of its heating market is one of the lowest shares in Europe being at less than 1 per cent of the heat market (in comparison to the European average of 10 per cent of the heating market). In 2018, the Irish Government launched the National Development Plan 2018-2027 (the "NDP") which included as a key objective the "Transition to a Low Carbon and Climate Resilient Society". The NDP supports the future development of District Heating schemes in Ireland including DDHS. The Irish Government's Climate Action Plan (2021-2023) supports the development of district heating and in particular the development of DDHS. In 2022, the Commission for Regulation of Utilities (CRU) was appointed as Regulator of District Heat Networks and will be responsible for development of appropriate regulation of the sector.

1.2 National Regulatory Framework

The Department of Environment, Climate and Communication formed a District Heating Steering Group under the Climate Action Plan 2021. The Steering Group was tasked with setting out the steps to be taken to ensure district heating is developed in a structured way, which included outlining actions to be taken to support the expansion of district heating and the development of an appropriate legislative basis.

The first report from the Steering Group was approved by Cabinet on the 11th of July, outlining the following key recommendations:

1.2.1 Legislative underpinning

Legislation is needed as a priority to support the development and expansion of DH networks and to attract investment. The legislation should as a minimum mandate that:

- a. Public sector buildings connect to available DH networks (where technically & economically feasible).
- b. Industrial facilities supply waste heat to DH where total rated energy input is greater than 1MW.

1.2.2 Long Term Structure

The Steering Group considers that, in the long-term, that DH should develop nationally as a sector under central direction of a single State entity or a utility overseeing the development and expansion of networks.

1.2.3 National District Heating Centre of Excellence

Until a decision is made on establishing a single entity to oversee the sector, a national District Heating Centre of Excellence should be established, which would:

Support project sponsors to accelerate delivery of existing and planned district heating projects.

Support DECC in developing a longer-term strategy to expand the sector.

1.2.4 Contractual/Financial supports

The Centre of excellence will also explore, the appropriate contractual and financial arrangements for optimal delivery of DH nationally in Ireland, including:

- a. examining how existing funds can be utilized to support the capital costs of projects,
- b. Adapting existing decarbonised heating grants to include DH connection costs/heat exchangers,
- c. examining the establishment of a DH fund to provide DH project sponsors with Capex supports for technical and financial expertise.

1.3 Dublin District Heating Scheme

DCC are leading the development of the DDHS project which in phase 1 aims to capture waste heat from industrial facilities on the Poolbeg peninsula, and pipe it into homes and businesses in the Poolbeg, Ringsend and Docklands areas of Dublin city. Primarily, heat will be generated from the conversion of non-recyclable waste at the Dublin Waste to Energy ("DWtE") facility into a heat source. The DWtE facility has the potential to generate up to 90MW of heat and the boilers at the DWtE facility have been designed to operate in CHP mode.

It is currently envisaged that phase 1 of DDHS will transfer thermal energy in the form of hot water through a network of highly insulated pipelines (flow and return) laid throughout the phase 1 project catchment area of North Lotts and Grand Canal Dock planning scheme 2014 Strategic Development Zone (commonly called the "Docklands SDZ") and Poolbeg West Strategic Development Zone ("PWSDZ"). The heat from the district heating network would be transferred via a Heat Interface Unit ("HIU") at each building to the building's own internal water-based heating system, providing both space heating and domestic hot water. It should be noted that in order to meet the planning conditions of the Docklands SDZ and PWSDZ all buildings are required to be "*district heating enabled*"¹.

The Project will initially be structured based on the requirement to deliver phase 1 of the network in the PWSDZ and Docklands SDZ, but the commercial structure will accommodate the future expansion of the district heating network, including both the build out of the network via expansion of the phase

¹ https://www.dublincity.ie/sites/default/files/media/file-uploads/2018-08/20180216_Technical_Information_Pack_for_Developers_DCC_002_.pdf

1 network and the management/operation of nodes developed in other areas of the city, either by the joint venture company mentioned at 2 below or developer lead nodal infrastructure. The expansion will also include the development of new low carbon heat sources to operate the network.

2 Overview of DDH Contract Structure

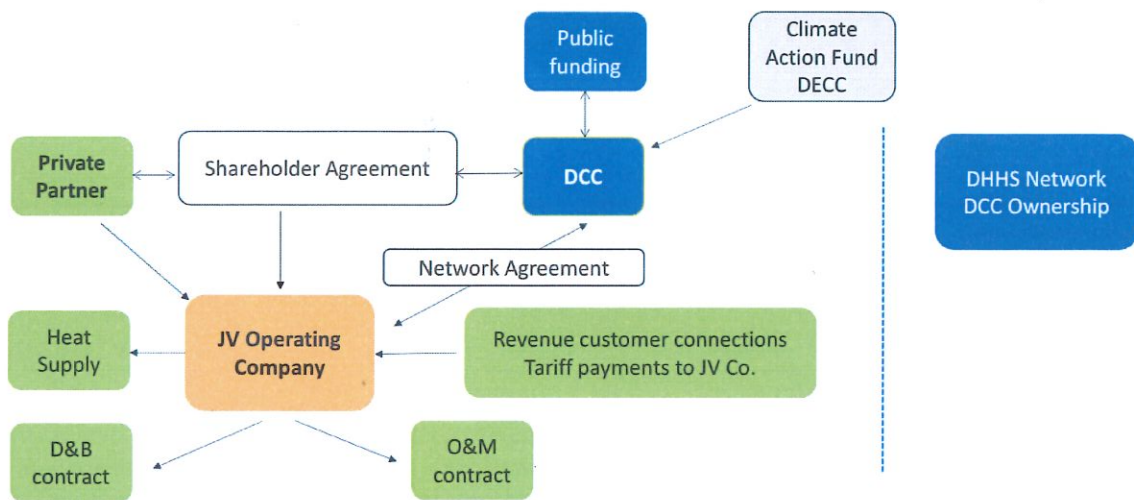
To meet its objectives, DCC is seeking to bring an experienced private partner on board with the relevant district heating expertise, knowledge and capability to participate in a joint venture company ("JV Co") which will develop, operate and retail the Dublin District Heating Scheme within DCC's functional area.

The following is a high-level overview of the proposed contract structure with a structure chart provided in Figure 1.

- JV Co is expected to be a standalone entity jointly owned by DCC and the private partner. It is expected that DCC will retain a 50% shareholding in JV Co with the remaining shares being held by the private partner.
- Ownership of the *district heating network assets* is expected to be retained by DCC and sit outside of JV Co. DCC will grant a right (by way of non-exclusive licence) to JV Co to access and use the assets.
- Project funding is anticipated to be structured as follows:
 - DCC will fund the majority of the Project capital expenditure for the purpose of delivering the network (using, among others, grant funding of €20m from the Climate Action Fund);
 - the balance of the funding of the Project capital expenditure will come from the JVCo, and the investments made in it by its shareholders;
- DCC is considering a payment mechanism that focuses on:
 - the revenues generated from the end users of the network
 - the successful implementation of the business plan as devised by the private partner
 - in addition, Key Performance Indicators (or KPIs) being applied to project aspects including the O&M contract and the Heat Supply contract
 - In respect of the Project, it is anticipated that key payment flows will likely operate as follows:
 - DCC will fund the majority of the Project capital expenditure for the purpose of delivering the network;
 - DCC will receive a payment based on a use of system charge payable by JV Co for access to the district heating network;
 - JV Co (being funded by both DCC and the private partner) will provide the remaining funding to manage, deliver and operate the network and to retail the heat generated;
 - the equity investment and return to shareholders will reflect their respective investment in JVCo, with a 50/50 share of net profit by way of dividend being anticipated;

- The private partner is expected to partake in the establishment of JV Co, including in the appointment of an executive management team (including by way of secondees provided by the partner). JV Co is expected to retain responsibility for:
 - finalisation of planning & detailed design;
 - development, construction, operation and maintenance and retailing of the district heating network under a Network Agreement;
 - manage the drawdown and repayment of funding; and
 - develop business cases and funding strategies (as required) for the expansion of the network.

Figure 1



3 Current Work streams

- Planning Compliance
- Installation of DH Network
- Procurement of JV Partner