

Biomass District Heating - Tralee

Kerry County Council [Ireland]

Context

Tralee Town Council is the administrative centre for Tralee (with a population of almost 23,000), the capital town of County Kerry and Ireland's 7th largest town. It is a bustling commercial, tourism and educational centre, the seat of local government, and a regional transport hub.

Kerry County Council has been at the forefront of promoting the development of district heating in Ireland, with its Mitchels/Boherbee 1MW biomass heating projects in Tralee playing an important demonstration role. This project was the first community biomass district heating project in the country which supplied heat to new and existing residential and non-residential buildings. Ireland lacks in both political and organizational frameworks for DH: there is no regulation to directly support it and no national or local organization with a mandate and authority to develop it. Notwithstanding these barriers, Kerry brought the project to fruition, and the Council is now examining Phase II of this project, which would extend biomass district heating to 53 of the largest energy users in Tralee.

Description and Main Objectives

Kerry County Council developed a strategy to establish Tralee as an energy efficient self-sustaining region. Smart district heating has been identified as a central element to the county's transition to 100% renewable energy supply. The concept of a biomass district heating system is a simple one - the centralized production of heat through a network of insulated pipes, usually underground. Fuelled by locally grown and harvested wood fuels, community biomass district heating systems are commonplace across Europe. The aim of the project was to transform the local economy through job creation, to achieve a high living standard and excellent quality of life, and build a green economy in Kerry. Efforts in the area of DH development must be focused toward the delivery of systems utilizing locally sourced renewable fuel supplies, thus serving to stimulate local employment (directly, indirectly and induced). It is expected to display imported fuel and reduce CO₂, save € 1920.70 and 21000 kWh in Thermal and 2000 kWh in Electric energy.



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Implementation Strategy

The District Heating project was implemented as part of a community regeneration project in the Mitchels/Boherbee area of Tralee. In 2007, Tralee Town Council appointed the National Building Agency (NBA) to design and manage the project. The NBS design focus was on energy efficiency and designed SEAI “House of Tomorrow” standards. This national pilot project was designed and constructed as a sustainable energy zone which acts as a live laboratory for the phase two development of a sustainable energy community. The connections of new and existing buildings to the district heating plant was implemented in a phased implementation approach:

- 2008 - 42 apartments (new build)
- 2010 - 6 apartments (new build)
- 2011 - library, Old Convent building and 8 apartments, local primary school (existing buildings)
- 2012 - 17 Carbon Neutral houses, (new build)
- 2012 - 42 houses built in the 1930’s (existing buildings)
- 2014 - Integrated Services Building (offices and community building) (new build)
- 2016 - planned connection to 12 existing houses and 3 new houses
- 2017 - planned connection to 15 new houses
- 2018 – planned connection to a new community building and 18 new housing association apartments
- 2019 – connection of 20 new and 22 existing apartments for housing association
- 2020- connection to new secondary school

Budget

The project costs € 2 M. It was funded by a combination of:

- Block grant for heating system for new construction;
- Grant for energy efficiency upgrades to existing buildings and houses addressing fuel poverty.

Time frame

Start date: 2008 - to date (The phased implementation process is ongoing with the main DH line being extended with new connection this year).

Contacts & Links

Sandy McSwiney –
sandy.mcswiney@kerrycoco.ie
Telephone: +353 66 7191300
Tim McSwiney –
tim.mcswiney@kerrycoco.ie
Telephone: +353 66 7191300

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