

TURNING UP LOW CARBON HEAT IN SOUTH DUBLIN

South Dublin County Council has established Ireland's first publicly-owned, not-for-profit energy company to provide low carbon heat to local community buildings, and it is believed that the scheme has the potential to become a template for other districts across Ireland over the coming years.

Ireland's first large-scale district heating scheme will initially involve a number of South Dublin County Council's buildings and the Tallaght campus of the Technological University Dublin (TU Dublin). And it will connect other public, private and residential customers in the Tallaght area to the network over subsequent phases.

The Tallaght District Heating Scheme is being led by South Dublin County Council in collaboration with Amazon Web Services (AWS) and Finnish energy supplier Fortum eNext, with support from Codema (the energy agency for Dublin's four local authorities).

Trading as Heatworks, the company will operate as Ireland's first not-for-profit utility and will make a significant contribution to reducing carbon emissions

in the area, saving almost 1,500 tonnes of CO₂ each year. It will establish the Tallaght District Heating Network as a leader in innovation in the area of climate change.

PROVISION OF RECYCLED HEAT

The network will use excess heat from a customisation to Amazon Web Services' (AWS) recently-completed data centre to provide low carbon heat to public sector, residential and commercial customers.

AWS will provide recycled heat free of charge to the scheme as part of its broader sustainability activities, and its continued assistance to Ireland in meeting its EU 2030 national heating and carbon-reduction targets.

The district-heating company has contracted Fortum, a large Finnish energy supplier with extensive district-heating

experience throughout Scandinavia and Eastern Europe, to carry out the design, installation and operation of the Tallaght network.

The system will initially heat 47,000 m² of public sector buildings, 3,000m² of commercial space, and 135 affordable rental apartments. The supply of low-cost, low-carbon heat is expected to increase commercial competitiveness and attract more innovative businesses and development to Tallaght town centre.

It also aims to facilitate educational programmes and start-up opportunities in renewable energy solutions, as well as helping to mitigate fuel poverty as the heat network expands over time.

TEMPLATE FOR OTHER DISTRICTS

Daniel McLoughlin, SDCC's Chief Executive, said, "Tallaght District Heating Network shows how public-private collaboration, using well-established district-heating technology, can construct a system to recycle heat from an Amazon Web Services data centre to meaningfully contribute to helping Ireland achieve its 2030 sustainability targets.

"We believe the work we have done with Fortum eNext and Amazon Web Services to create this scheme can become a template for other districts across Ireland. We look forward to future collaborations as South Dublin County moves towards a low-carbon future."

Codema's CEO Donna Gartland said: "This is a landmark for Ireland's low-carbon heating sector. We are highly reliant on fossil fuels for heat, but we have the solutions to change this. For example, in Dublin we have enough waste heat and renewable heat sources to heat the equivalent of over one million homes.

"This highlights the huge potential to roll out low-carbon district heating



Mike Beary, Amazon Web Services (AWS) country manager, pictured with SDCC's chief executive Daniel McLoughlin and county architect Eddie Conroy.



Mike Beary, country manager with Amazon Web Services, pictured with Daniel McLoughlin, SDCC Chief Executive.

schemes across the region and I would like to congratulate South Dublin County Council and all parties involved on delivering the first of what will hopefully be many district heating projects to be delivered in the years to come.”

A LOW-CARBON FUTURE

The collaboration between SDCC, AWS engineering teams, Fortum eNext Ireland Ltd and Codema (the City of Dublin Energy Management Agency) has resulted in a low-carbon solution. This will optimise the potential of recyclable heat combined with additional heat-pump technology – the first example of its kind in Ireland.

Once the first phase of the network is completed, the project will be supplying

heat by the end of the year firstly to SDCC’s County Hall and Tallaght County Library, and the Tallaght campus of the Technological University Dublin (TU Dublin), followed by the Rua Red community arts-hub and the Civic Theatre.

By 2024, the heat will also be supplied to nearby developments recently approved with planning permission, including affordable housing units, residential properties and student accommodation.

2030 RENEWABLE ENERGY TARGETS

Mike Beary, country manager for Amazon Web Services (AWS) Ireland, said they were thrilled to support Ireland’s first district heating scheme, which will see the excess heat from Amazon’s data centre being used

to reduce carbon emissions in Tallaght over time.

“Our support for the district heating scheme demonstrates our continued commitment to building a more sustainable future for Ireland. We are pleased to participate in this unique project that will help the country meet its 2030 renewable energy targets,” he added.

“We are extremely proud that we were chosen to provide this low-carbon heat solution as part of an innovative project in a strongly competitive market,” according to Kari Lahti, Fortum eNext’s general manager.

“Our know-how has been developed and tested during our 25-year-long presence in Ireland and the UK, where we have delivered power plants and long-term operation and maintenance services for different kinds of power plants and customers.”

South Dublin County Council (SDCC) will receive funding of almost €4.5m for the Tallaght District Heating Scheme through the Government’s Project Ireland 2040 Climate Action Fund, as well as support from the EU’s Interreg North-West Europe HeatNet NWE project and the Sustainable Energy Authority of Ireland.

TALLAGHT DISTRICT HEATING SCHEME

The Tallaght District Heating Scheme will deliver a high level of innovation, as waste heat from the nearby Amazon data centre will supply the heat to the network. During normal operation, heat demand will be 100% covered from the data centre waste heat.

- This is the first large-scale district heating network of its kind in Ireland.
- The scheme will operate under the name ‘Heat Works’ as the country’s first not-for-profit energy utility, owned by South Dublin County Council.
- Carbon emissions in the area will be reduced by almost 1,500 tonnes of CO₂ each year.
- It is the first scheme in Ireland and UK to use waste heat from a data centre.
- It will provide a 100% fossil-free solution.