LOW CARBON HUB BOARD

Date: 2 March 2018
Subject: NEDO Project Wins CIBSE Award
Report of: Mark Atherton, Assistant Director Environment

PURPOSE OF REPORT

To advise the Board that the GM Smart Communities (NEDO) Project won the national CIBSE Award for best collaborative project on Tuesday 6 February 2018. It is particularly pleasing that this award comes from the construction and building industry.

RECOMMENDATION:

That the report be noted.

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1.0 BACKGROUND

1.1 Members will recall that the, three year, GM Smart Communities Project, largely funded by the Japanese New Energy and Industrial Technology Development Organisation (NEDO) arm of the Japanese Government, came to an end in November 2017. The project installed energy efficient air-source heat pump and smart demand side response technology in 550 social homes across Manchester, Wigan and Bury. A summary of the project is provided at Annex 01.

2.0 UPDATE

2.1 The GM Smart Communities (NEDO) Project won the national CIBSE Award for best collaborative project on Tuesday 6 February 2018. In making the award, the CIBSE judges said the NEDO project “had a lot of impressive user results despite many stakeholders that would have been difficult to engage with. This project really showcases what can be done in housing and if the project was replicated it could have a serious impact on stock and change how we operate in this market”.

2.2 The award application was submitted by NPS on behalf of the GM Smart Communities (NEDO) Project partnership. The CIBSE award is testament both to the innovation of the project, but also the cohesive collaboration that delivered it.

3.0 NEXT STEPS

3.1 We are continuing to work with BEIS and Energy Systems Catapult to assess how the learning from the NEDO project can be taken forward through the Smart Systems and Heat Programme.
COLLABORATIVE WORKING PARTNERSHIP

Recognising examples of collaborative working that have delivered outstanding outcomes on one or more new build or refurbishment projects.

WINNER:
The NEDO (New Energy & Industrial Technology Development Organization) Project - NPS North West

The NEDO Project – also known as the ‘Smart Community Demonstration Project’ – is an enterprise heat pump demonstration project with several stakeholders, developed by the Greater Manchester Combined Authority (GMCA) and Japan’s New Energy and Industrial Technology Development Organization (NEDO).

NEDO aims to address energy problems and raise the level of industrial technology through integrated management of technology development from the discovery of technology needs to the promotion of mid- to long-term projects and support for practical applications.

The three-year Smart Communities Project began in March 2014 with an extensive team of project partners and delivered a successful pilot project within the social housing sector. It trialled the implementation and use of all source heat pumps (ASHPs) at scale and tested the effectiveness of demand response (DR) in the social housing sector.

The project stood out to the judges for the level of collaborative engagement between this wide group of participants and for its active engagement with the occupiers of the homes being upgraded. There was a major undertaking to ensure that those receiving the upgrades were made fully aware of the nature of the work to be undertaken and supported in using the new systems. Aspects of the project were revisited and modified as a direct result of engagement with the end users.

The pilot demonstrates replacing old heating systems in over 550 social housing properties across Wigan, Bury and Manchester with cutting-edge electrical and hybrid ASHPs, and developing an energy aggregation system and ICT platforms to control and co-ordinate the electricity usage of the ASHPs.

Hitachi and Daikin Industries supplied ASHPs and Hitachi provided the DR monitoring equipment and a computer tablet for each tenant to monitor and control their new heating systems.

A procurement management company (Procure Plus) worked with the ALMOs and NEDO to produce a competitive tender package to find a main contractor to carry out the installations, and managed a thorough evaluation process by the client partner to ensure that the selected partner would deliver the required engagement with the tenants and users.

The NEDO project could be a national exemplar, showing the way for similar retrofit programmes in more homes across the region.

JUDGES’ COMMENTS

"NEDO had a lot of impressive user results despite many stakeholders that would have been difficult to engage with. This project really showcases what can be done in housing and if the project was replicated it could have a serious impact on stock and change how we operate in this market."

PROJECT ADDRESS: Greater Manchester (550 individual domestic dwellings)

PROJECT TEAM:
Building Services Engineer:
NPS North West

Building Owners: Wigan & Leigh Homes / Sixtown Housing / Northwards Housing / (ALMO’s)

Building Occupiers: Social Housing Tenants

Project Managers: Green Blue Skies / NPS North West

Quantity Surveyor: Procure Plus

Brief Consultant: Hitachi / Daikin Industries / Mizuho R&D

Manchester Council

Mechanical/Electrical Engineer: NPS North West

Contractor: Warner Energy Services (WES)

Investment/Property Companies:
NEDO / Mizuho Corporate Bank

Developer: Greater Manchester Combined Authority (GMCA)

Facilities Managers: Wigan & Leigh Homes / Sixtown Housing / Northwards Housing

Other: Azimuth Acoustics / Electricity Northwest

FINALISTS:

- 5 Broadgate London Real Estate Programme – UBS
- David Attenborough Building – BuroHappold Engineering
- Energy Monitoring Platform with Intelligent Apportioning – Next Control Systems

Royal Academy of Arts Heating Refurbishment – Remeha / Arup / CBRE

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