ELENA Completed Project Factsheet

Bristol Retrofitting – Innovative Technology for Everyone (BRITE)

Location	Bristol, United Kingdom
Beneficiary	Bristol City Council
CoM signatory	Yes
Sector	Energy efficiency in buildings, small renewable energy projects
Total PDS costs	EUR 2 591 366
ELENA contribution	EUR 2 332 229
Project development services financed by ELENA	A team of energy sector officials was established during the programming period to deliver the programme and was complemented by consultants that were appointed for specific pieces of work that could not be delivered in house, including: • **Technical studies**: updated heat maps of Bristol, technical viability of the various district heating, building retrofit and PV schemes; detailed surveys of difficult-to-treat (heritage) buildings, to identify energy efficiency measures; feasibility and outline design for DH network; analyses of the stock condition data of the Council's housing stock and building a housing stock model with the help of GIS mapping; development of a customer focused best practice guide for solid wall insulation. • **Legal and procurement assistance**: detailed procurement strategy for the solar PV programme, legal support for the energy company; • **Financial feasibility studies**: delivery options appraisal including public-private partnership options, solar PV feasibility study, business support for the establishment of the energy company.
Description of ELENA operation	Bristol City Council's ELENA Programme helped mobilising and delivering energy infrastructure projects in the city. For each programme strand, a delivery plan was developed and implemented. In most cases new procurement frameworks had to be put in place and required detailed technical, legal and procurement expertise. As a result of the programme, it has also been possible to build further capacity in other public sector organisations in the city with more projects being increasingly delivered as joint-projects and being financed together. Examples are the joint-work with the two universities, the National Health Service (NHS) and private sector organisations such as First Bus and Bristol City Football and Rugby Club. It has also been possible to set up a municipal energy company (Bristol Energy) which is a first in the UK and has been developed according to German and Scandinavian models.[1] During the implementation of ELENA programme, Bristol won the European Green Capital Award for 2015 as a result of its energy and transport investment plans.
Timeframe	June 2012 – May 2016

[1] https://www.bristol-energy.co.uk/

Basis for investment identification	The specific investments were identified as a result of ELENA team work, market and feasibility studies, sustainable energy master plan, detailed surveys, consultant work and private stakeholders engagement.
Investment programme description	The investment programme consisted of five programme strands: • **District heating**: Development of District Heating has been challenging as there is limited expertise across this industry in the UK. The programme consisted of: connecting core Bristol City Council buildings and adjacent public sector buildings to the district heating network; extending the network to the University of Bristol campus and University Hospitals Bristol NHS Foundation Trust; development of a district heating network on University of the West of England's Frenchay Campus; installation of a 360kW biomass boiler supplying 5 social housing blocks. • **Public sector retrofitting**: installing energy efficiency measures on buildings such as LED with controls, voltage optimisation, insulation of building management systems, installing of biomass boilers. • **Solar PV installations**: 1.4 MWp of new rooftop PV installations generating 1.26 GWh of energy annually. • **Retrofitting works on the Council's housing stock**: typical energy performance of renovated buildings increased by 29%. The measures consisted mainly of the cladding retrofits and insulation. • **Green Deal measures**: energy efficiency measures on private homes; typical energy performance of renovated buildings increased by 25% energy savings. The measures consisted mainly of the cladding retrofits and replacement of inefficient boilers.
Investment in implementation phase	EUR 64m
Results expected to be achieved	• Energy savings: 19 GWh/y • Renewable energy heat and electricity generation: 26 GWh/y • CO_2 reduction: 9,053 tonnes/y
Leverage factor achieved	27
Lessons learnt	Policy changes in particular with regards to the feed-in-tariff (Solar PV programme) and the Green Deal (energy efficiency measures on private housing) meant that the programme team had to adjust delivery according to the financial viability of the each programme strand. The three-year time scale may be challenging for local authorities to deliver energy investment projects and programmes in particular if they are aiming for the relevant business models to continue beyond the three-year time framework. Some of the experiences could easily be transferred to other local authorities via establishing a project management and dissemination approach within one municipality rather than funding separate ELENA programmes across the country.
Further information sources	https://www.bristol.gov.uk/
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