

Project ID	DIP119		
Long Title	Zero-Plus		
Short Title			
Keywords	Small-scale; Town; Domestic; Electricity; Heat; Solar PV; Wind; Direct Electric Storage; Microgrids;		
Location (Town, Region, Country)	York	Yorkshire	England
Latitude and Longitude	53.96N	1.04W	
OSGB code	SE 629 520		
Status	Ongoing		
Start Date	2015		
End Date	2019		
Description	<p>In ZERO-PLUS, a comprehensive, cost-effective system for Net Zero Energy (NZE) settlements will be developed and implemented. The system will be composed of innovative solutions for the building envelope, for building energy generation and management, and for energy management at the settlement level. A reduction of operational energy usage to an average of 0-20 kWh/m<sup>2</sup> per year (compared with the current average of 70-230 kWh/m<sup>2</sup>) will be achieved through a transition from single NZE buildings to NZE settlements, in which the energy loads and resources are optimally managed.</p> <p>The UK case study is Derwenthorpe, located on the edge of the city of York. For the ZERO-PLUS project, a total of three properties will be built to meet the project targets. The ZERO-PLUS dwellings are representative of typical UK homes. In addition to the three dwellings that are part of the project, other parts of the settlement will be used to support the renewable energy targets of the project.</p> <p>For energy reduction in the dwellings, standard UK- produced external insulation will be used in lieu of ZERO-PLUS partner insulation product due to UK certification requirements. For energy generation at the settlement level the ZERO-PLUS partner renewable system, Wind Rail<sup>®</sup>, will be installed, as it is the only ZERO-PLUS partner system compatible to the arrangement of the settlement, the needs of the wellings and the UK climate. In addition, to meet the energy generation requirements of the ZERO-PLUS project, a large PV array will be mounted on the roof of the energy centre at the Derwenthorpe development. The energy centre is where the district heating base is located for the development; therefore, it is strategically positioned to support energy generation technology for the development.</p>		
Sectors	Domestic		
Funding Sources	Horizon 2020		
Budget £	€4.2 million		

Partners	Oxford Brookes University, ECO Ltd., Joseph Rowntree Housing Trust
Energy vectors	Electricity, Heat
Scale (lab/small/community/region/national)	Small
Technologies demonstrated	Solar PV, wind, low energy buildings, smart controls, microgrid , battery storage
Economic models demonstrated	
Other concepts demonstrated	
Industry engagement	
Consumer engagement	
Project Reports (incl. links)	<a href="http://www.zeroplus.org/index.php/deliverables">http://www.zeroplus.org/index.php/deliverables</a>
Datasets (incl. links)	
Website/social media	<a href="http://www.zeroplus.org/index.php">http://www.zeroplus.org/index.php</a>
Information sources	<a href="https://cordis.europa.eu/project/rcn/198347_en.html">https://cordis.europa.eu/project/rcn/198347_en.html</a>