

Project ID	DIP014		
Long Title	Coupling Renewable, Storage and ICTs, for Low carbon Intelligent Energy management at district level		
Short Title	RESILIENT		
Keywords	Site; Town; Non-domestic; Electricity; Heat; Solar PV; Bioenergy; CHP; Thermal Storage; Smart Grids; Microgrids; District Heating; Social Impacts;		
Location (Town, Region, Country)	Ebbw Vale	Blaenau Gwent	Wales
Latitude and Longitude	51.78N	3.20W	
OSGB code	SO 170 093		
Status	Complete		
Start Date	2012		
End Date	2016		
Description	<p>The RESILIENT project aims to design, develop, install and assess the energy and environmental benefits of a new integrated concept of interconnectivity between buildings, DER, grids and other networks at a district level. The RESILIENT approach will combine different innovative technologies including smart ICT components, optimized energy generation and storage technologies, also for RES, integrated to provide real time accounts of energy demand and supply at a district level and assist in decision-making process.</p> <p>The project strategy relies on a comprehensive R&D and demonstration approach. The proposed integrated concept will be first modelled and simulated for different typologies of buildings and different climates and then installed, monitored and evaluated in three pilot projects (including residential and non residential buildings) in the UK, Belgium and Italy. These demonstrators will be used to assess the energy and environmental benefits of the new integrated concept and also to validate models and technologies in order for the concept to be easily replicable throughout different climatic areas.</p> <p>The Ebbw Vale site (UK), known as “The Works” combines multiple newly constructed buildings that operate within varying sectors (education, commercial and leisure) on a 78-hectare site that was formerly occupied by a steelworks, which closed in 1982. Demolition and remediation work subsequently enabled the site to be suitable for development, with buildings attached to the District CHP network coming on stream in 2012. Since the beginning of RESILIENT, two 490kW biomass boilers and two 17,500l thermal storage tanks have been installed with a total maximum heat output of Energy Centre to 7780kW. Installation of Solar Photovoltaic modules has been also carried out at EbbW Vale Pilot site in the Learning zone. A new Building Energy Management Strategy was also introduced, including new hardware and software, which were installed to monitor</p>		

	real time losses resulting in closer to 100% of generated heat being retained.
Sectors	Non-domestic
Funding Sources	FP7 Energy
Budget £	€1.17 million (UK element)
Partners	Cardiff University, BRE, Blaenau Gwent County Borough Council
Energy vectors	Electricity, Heat
Scale (lab/site/ small/community/region/national)	Site
Technologies demonstrated	Smart controls, thermal storage, solar PV, microgrids, CHP, biomass boiler, building management system
Economic models demonstrated	Private wire microgrid
Other concepts demonstrated	
Industry engagement	
Consumer engagement	
Project Reports (incl. links)	https://cordis.europa.eu/result/rcn/192602_en.html
Datasets (incl. links)	
Website/social media	Broken link to project website.
Information sources	https://cordis.europa.eu/project/rcn/104392_en.html