

KIRKLEES COUNCIL CASE STUDY

Civic Centre 3 Case Study

Energy from the Sun and the Wind



PROJECT SUMMARY

This case study provides an overview of a project which installed solar photovoltaic panels, solar energy collectors and two 6kW wind turbines onto the roof of Civic Centre 3, a Council office building in Huddersfield town centre.

Civic Centre 3 is in a busy area of Huddersfield town centre and is nearby a ring road, a shopping area and public buildings. Each week more than 1,350 people visit the building, including planning and architectural professionals, council officials and the general public. This project is intended to be a clear corporate statement by Kirklees Council showing how it is taking action to address climate change.

Providing all the electrical power needs for Civic Centre 3 creates 188 tonnes of carbon dioxide each year – the renewable energy installations will save 23.96 tonnes of carbon dioxide every year.

The project was part of a European-funded project called 'ZEN' (Zero Emissions Neighbourhoods), with partners in the UK (Kirklees, Sutton and Southwark), Italy and Greece.



PROJECT AIMS

The project aimed to:

- Raise awareness of climate change and renewable energy technology within the Kirklees community and beyond.
- Supply the building with power from renewable energy sources, which will contribute to reaching a target of meeting 20% of the Kirklees district's energy demand from renewable sources by 2020.
- Increase capacity in the Council and the Kirklees district to deliver large scale renewable energy initiatives and show the Council's leadership role with regard to installing renewable energy.
- Make a significant reduction in climate change emissions (over 23 tonnes of carbon dioxide per year).
- Reduce the consumption of electricity from the grid and promote more efficient use of energy in the building. The solar and wind installations will provide around 10.7% of electricity needs and 50-60% of the building's hot water needs.
- Inform the delivery of a new corporate renewable energy policy which aims to install 30% renewable generation on all new buildings and large-scale extensions by 2010/11 that the Council procures, by acting as a demonstration of the combination and variety of renewable energy technologies which can be employed in one building.

FINANCE

This project has brought a significant amount of money (more than £80,000) into the Kirklees community, from the European Commission and UK Government ClearSkies programme. The funding breakdown is as follows:

COSTS	Solar PV	Solar Thermal	Wind
Equipment	68	27	53
Installation	15	13	21
Project Management	15	-	13
Other – Part L roofing works	-	-	14
£/kW	8,500	-	5,600
Total cost (£,000s)	98	40	101
FUNDING SOURCES			
EU ZEN programme	35	14	
Yorkshire Forward/DTI ClearSkies Programme			31
KMC Renewable Energy Fund	63	26	70



Two 6kW wind turbines installed in May 2006



17.6kWp Solar PV installed in February 2005

RENEWABLE ENERGY INSTALLED



48m² solar thermal systems installed in February 2005

BUILDING TYPE

Civic Centre 3 is a three storey municipal office building (5,433m² floor area) constructed in 1976. The Centre's main fuel sources are gas which is utilised for space heating and electricity for lighting, IT equipment and heating and ventilation plant. There are around 420 occupants, who use the building around 249 hours per month.

Annual energy demand Civic Centre 3 building (based on the 03/04 annual energy report):

Electricity	437,505 kWh
Gas	664,777 kWh
Water	3250 m ³

Several energy efficiency measures have been installed including automatic lighting controls to offices, kitchen areas & meeting rooms. These measures were funded through the Council's CWI (Energy & Water Conservation) Fund.

MEASURING SUCCESS

- **Environmental:** the project will save more than 23 tonnes of carbon dioxide every year. It has led to strengthened policies regarding renewable energy both in corporate policy and the Local Development Framework.
- **Technical:** the systems' performance is being monitored via a digital display read-out located in Civic 3 foyer.
- **Sharing experience:** the project has provided many opportunities for Kirklees to develop and refine their understanding of project management issues relating to renewable energy capital projects through providing staff training on renewable energy to sharing the lessons learned with colleagues through regional and national networks.

CONSULTATION AND RAISING AWARENESS

In addition to consultation undertaken for the Planning process, a comprehensive community consultation and awareness raising programme was undertaken which included:

- **Building Users:** Presentations about the project were given to the Civic 3 Building Users Group and their feedback was obtained on issues and concerns. A drop-in information day was then held for all Building Users at which information was made available about the project on posters,

information leaflets and face to face discussion.

- **Local Residents and Community Groups:** The surrounding communities were informed about the project through a letter drop and posters in shops and local buildings.
- **Wider Kirklees community:** The building receives many visitors from a diverse range of backgrounds every day. The wind turbines are in a visible location, thus inspiring discussions around climate change and renewable energy across a wide cross section of the community. The display in the reception area of the building and external displays will continue to raise awareness in the wider community into the future.

LESSONS LEARNED

- The current situation regarding the sale of surplus electricity and obtaining Renewable Obligation Certificates (UK) for the electricity generated is complicated. Kirklees is working at national level towards a simplified approach to enable Councils to obtain money for the renewable electricity generated.
- The project communication plan, which addressed risks and building user concerns, was helpful in generating positive perceptions about wind turbines.
- It is important to ensure all parties are committed to grant timeframe deadlines. This is particularly important when managing multiple funds.
- Maintenance - it is helpful for the installers to train relevant Council staff (such as caretakers) on how to undertake operation checks and maintenance whilst on site for the installation.
- Rateable value – wind turbines can increase the rateable value of a building.

ACHIEVEMENTS

- The wind turbines are the first wind turbines installed on a local authority building in the UK.
- This project has inspired a new corporate policy of 30% of energy for Council's new buildings to be generated from onsite renewable energy systems, by 2010/11.
- The project has benefited from strong Councillor support, which has assisted greatly in obtaining funding and Council approval.
- Local jobs have been created and local skills increased. This includes training local wind turbine installers and increasing skills within the Council.
- More than £80,000 in external funds has been brought into the Kirklees budget.
- The project has attracted national attention as a result of a visit from Elliot Morley (former Minister for the Environment and Climate Change) as part of a tour of best practice sustainable development initiatives in West Yorkshire.
- This project has built capacity in the Council in project management in other areas of Council (such as Education and Housing) likely to implement renewables projects in future. This has been done through involving staff in meetings, training sessions, site visits and discussions so that the 'know-how' for renewables project management is spread across the Council.

PROJECT MANAGEMENT

This initiative was led by Kirklees Council's Environment Unit, who obtained funding for the project and ensured overall project delivery.

The technical project management, including supervision of the installations was undertaken by Design & Property Services.

CONTACT DETAILS

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