



In 2010 Warrington Borough Council began a social housing PV programme aimed at tackling fuel poverty. Since then the scheme has delivered 3.595MWp of solar PV across 3,001 social homes and 3 sheltered housing schemes. Confident in the technology WBC decided in 2014 to look into the potential of larger PV arrays. During 2015 222kWp of PV has been installed on schools, a crematorium,

offices and the local Rugby Stadium and an OJEU compliant framework for large scale installations has been set up. The first two large commercial projects totalling 1.5MWp are now being developed with installation anticipated in the first half of 2016. The non-domestic projects are anticipated to return over £2.3m to the council over the next 20 years and save over 13,000 tonnes of CO₂ emissions.

Here's the low down on what Warrington Borough Council achieved, how they did it and their key pieces of advice 4 years on.

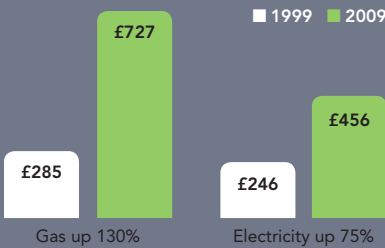
DID YOU KNOW

In order to meet EU targets of 30% of electricity being generated by renewable sources by 2020 it is estimated that **ten million homes**, more than **one third of households**, in the UK would need to have solar panels installed.



Social Housing Increase in Fuel Poverty

ENERGY COSTS OF TYPICAL HOUSEHOLD



About 1 in 6 homes are owned by a housing association or council. The social housing stock contains – on average – the most energy efficient homes.

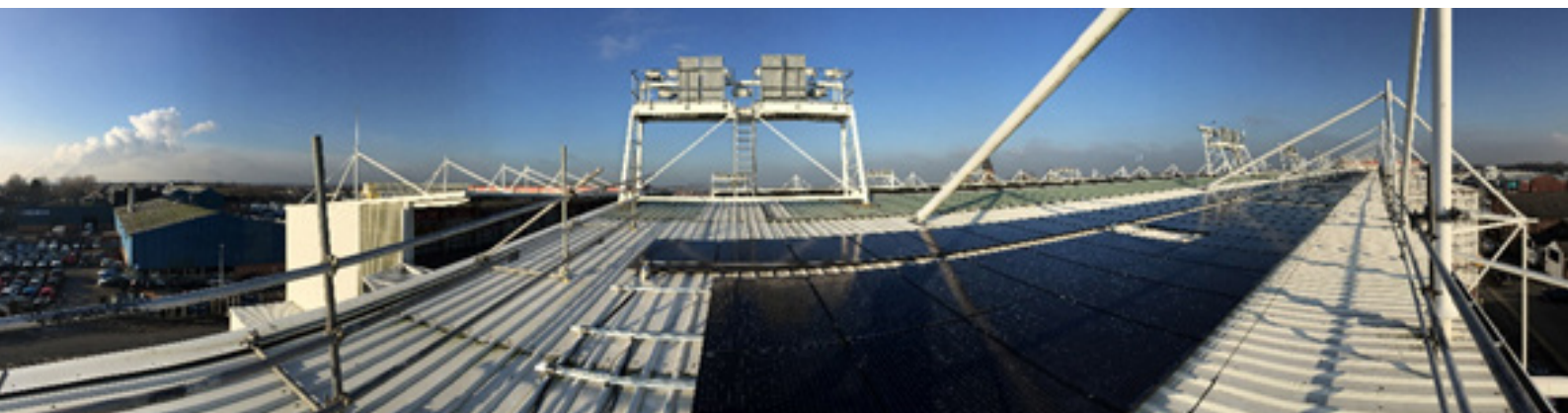
SOLAR HOUSING ACHIEVEMENTS FACTS AND FIGURES

- 3,001 social homes with solar and 3 sheltered housing schemes
- Annual fuel savings of £435,000 for tenants average of £145
- 488 taken out of fuel poverty and 984 energy switches
- CO₂ annual saving of 2,724 tonnes
- 20 local jobs with 4 apprentice electricians



WHY BOTHER AT ALL?

- Affordability – fuel poverty issues
- CO₂ emissions reduction
- Security of energy supply
- Regeneration of target areas
- Revenue generation for the council
- Sustainability credentials



WARRINGTON'S CHECKLIST TO PROJECT SUCCESS

Key items to consider when estimating a project timeframe:

- On commercial projects the lease agreement can take a long time. We'd been informed that legals would cost £10k, even on a £50k project. In the end, on a £90k job we spent about £7.5 on legals so the first estimate wasn't far off. The longest factor was waiting for the company who had a lease on the land (for 150 years) to agree the lease on the roofspace. They had concerns about approving something which they didn't understand and which gave no benefit to them - that bit alone took around 3 months to resolve. To speed up the process we'd recommend the following:
 - Are there different titles? Get a legal advisor to take a look at the title deeds in the first instance and to review any lease the commercial partner holds (either where the land is leased, the building, or where part of the building is sublet or secured against any borrowing)
 - Find out how many parties are mentioned in the title documents as early as possible- all of them will likely have to give their approval.
- What are the decision making processes in your organisation? Internally we had to get the recommendation of the task group which meets every few months and the approval of the executive board for which papers are required almost two months ahead). What are your commercial partner's decision making processes, who is involved and how long will it take?
- What restrictions are there from site operations (for example on one school we could only install during the school holidays as access was across the playground, and on a distribution centre we need to work around their 24/7 site)
- Planning – even though roof mounted PV under 1MWp is 'permitted development' in most circumstances you must still apply for a notice that prior approval is not required and this takes 56 days once submitted. It may take longer if additional information is required or if the information isn't submitted correctly in the first instance. Ask your planning department what they are likely to require.

A number of items may or may not be included in tender prices and these can quickly add up and take time and effort to arrange. To speed up the process you may wish to undertake some of these yourself or for simplicity you may require tenderers to price for them, such as:

- DNO application
- Planning/prior approval application
- Structural reports
- EPC certificate (if required for FiT application)
- Any required upgrade works to either electrical systems, structural improvements or mansafe systems
- A monitoring system that can be remotely accessed. Under 50kWp there is no obligation to monitor export to grid but you won't be able to bill or claim export FiT without it

Information to provide to tenderers to get accurate quotes:

- Drawings of the building, especially the roof plan, in ACad file format if available.
- Electrical schematics and layouts showing location of HV and LV plant rooms
- Electricity HH data for the site
- Information about site operations and any restrictions this may impose on installation
- What work has been undertaken already in terms of DNO and planning applications
- Any structural information available, either for a structural survey or design drawings for new build
- Any warranty information on the roof.

What to include in a good business case to the financial department:

- Overview of the project and any background (council carbon targets/fuel poverty etc)
- Capital cost including legal costs, internal project management time and any enabling works
- Operational costs including insurance, admin time for monitoring and billing, meter operator costs, routine maintenance, replacement of inverters
- List of assumptions for electricity costs throughout the length of the scheme, borrowing costs, RPI, anticipated feed in tariff rate
- Financial benefits - Anticipated returns
- Additional benefits such as carbon savings
- Risk register for the project

