



CASE STUDY

Merthyr Tydfil Council

BACKGROUND

Merthyr Tydfil Council are a relatively small local authority in a deprived area of Wales that had a wish to take action early to benefit from the transition to a low carbon economy. This intent was further reinforced through their legislative obligations under the Welsh Government's Future Generations Act. Merthyr Tydfil Council have always been keen to reduce their carbon impacts but their ambitions were restricted due to a lack of internal resources, funding and scale. They chose to work with Egnida because of our proven risk managed approach and ability to deliver results under challenging circumstances.



STRATEGY & FEASIBILITY

The agreed scope of our activities was confined to Merthyr Tydfil Council's own operations and buildings only and to exclude transport initially due to constraints around their ability to change their fleet operations at that time. However, Merthyr Tydfil Council did want to consider future proofing their sites by considering aspects such as electric vehicle charging infrastructure and energy storage.

The portfolio of buildings included their civic centre, offices, depots, schools, leisure centres and care homes.

In summary, our analysis identified no cost and relatively low cost initiatives such as heating system replacements and LED lighting that could be progressed relatively easily by Merthyr Tydfil Council's small in-house team and where investment was required would be viable under Salix funding.

A strategy was suggested to put in place new electricity supply contracts underpinned by certified 100% green energy albeit at a small cost premium. However, this premium could be offset by utilising

carefully sized solar PV installations on most of Merthyr Tydfil Council's buildings.

These solar PV installations were configured to maximise benefits based on the known existing individual site energy loads and designed, where there was suitable roof space, to allow for further expansion of the installations and integration with electric vehicle charging and battery storage in future, as appropriate.

The main challenge with the proposed way forward was a lack of available investment funds from Merthyr Tydfil Council for the solar PV installations and therefore insufficient benefits to off-set the small cost premium for the green energy supply contracts.



FUNDING & INNOVATION

As this was Merthyr Tydfil Council's first experience of considering low carbon technology options and their lack of resources made them very risk averse, they did not want to consider innovative options initially that had not already been well proven. Innovation was still needed but, in this case, to resolve the issue of funding the proposed solar PV installations.

Merthyr Tydfil Council were prepared to consider third party funding of the projects in return for relatively long term contractual arrangements but were not prepared to take any risk. On this basis they did not want a typical inflation linked Power Purchase Agreement (PPA) option as that could mean they would lose out in the event that electricity prices dropped and also they did not want punitive penalties in the event they had to dispose or close any of their sites during the life of the associated solar PV installations installed on their buildings.

The result was a fully outsourced and funded solution where full design, installation, funding and operational responsibilities were transferred to Egnida under a live benefit sharing arrangement with Merthyr Tydfil Council taking a share of the actual upside benefits without having any energy market or operational risks.

IMPLEMENTATION

Egnida provided a fully outsourced solution using our group knowledge and experience comprising full feasibility and design of the projects together with all the associated energy management, monitoring and measurement requirements needed for a successful outcome. This included a fully transparent reporting regime which shows live cost and carbon saving benefits from the installations together with fully evidenced cost sharing calculations.

The contractual arrangements are very simple and require minimal input from Merthyr Tydfil Council and give no risk exposure. They also allow for the installation of additional solar PV capacity, together with battery storage and electric vehicle charging, where appropriate, giving Merthyr Tydfil Council the potential for further cost and carbon savings as they move forward with their low carbon fleet transition strategy which is now under consideration.

INSTALLATION & OPERATIONS

Egnida took responsibility for the installation and operations of the low carbon projects that Merthyr Tydfil Council did not have the resources to manage in-house. The majority of these at this stage have been solar PV with Egnida covering all aspects from feasibility, approvals, design, installation and commissioning through to long term full project life time operational responsibility covering all monitoring, maintenance, repairs, inspections and warranty management.

*"We are delighted that **Egnida** has given us the opportunity to achieve carbon reduction in our authority and would have no hesitation in recommending them to other public sector organisations. We've managed to create a source of income and in the process have the satisfaction that we are doing our bit for the low carbon economy."*

*"Overall the authority is very pleased with the work completed by **Egnida** and hope to continue the partnership into the future on other low carbon projects."*



