



Welsh Government Energy Service

Annual Report 2020-21



Gwasanaeth Ynni
Energy Service

Cefnogi ymdrech Cymru i greu economi sero net llwyddiannus
Supporting Wales' drive to a successful net zero economy

Welsh Government Energy Service

Our impact

The Welsh Government has ambitious targets for reducing greenhouse gas emissions and generating locally owned, renewable energy.

The Welsh Government Energy Service supports the public sector and community groups to work towards these targets.

We continued to operate successfully throughout the COVID-19 pandemic in 2020-21 and helped to accelerate carbon reduction projects during this time, by providing expert support to public sector organisations and local communities across Wales.

Overall impact* July 2018 – March 2021

By March 2021, we passed a significant milestone, working with community groups and public bodies to secure investment of £102 million for energy efficiency, renewable energy and ultra-low emission vehicles



Saving 432,000 tonnes of CO₂

That's the same amount of CO₂ as **800 km² of trees absorb** in a year, an area larger than Ynys Môn



Generating £212 million of local income and savings



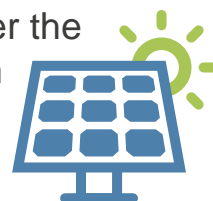
Committing to 32.6MW

of new renewable energy capacity in Wales



That's enough electricity to power **9,400 Welsh homes...**

...or enough solar panels to cover the Principality Stadium pitch **56 times**



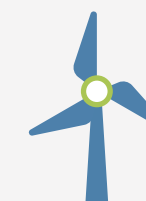
We have supported:

408 projects

22 local authorities



Solar power
156 projects



Wind power
30 projects



Energy efficiency
148 projects



Heat networks & renewable heat
25 projects



Hydro power
12 projects



Efficient street lighting
37 projects

Our achievements in 2020-21

We continued to work at pace and despite the challenges created by COVID-19:

£35 million worth of energy efficiency and renewable energy projects were installed

including 9.1MW of renewable energy.

Where possible, these projects used local contractors and installers to complete the work, continuing to support the Welsh economy during COVID-19.



See what our installed projects look like

in this short video we made for Wales Climate Week**.



**Project information correct as of November 2020.

A total investment of £43 million into energy efficiency, renewable energy and fleet projects supporting:



8
local authorities

13
community groups and
community councils

3
health boards

1
university



£23 million

in interest-free finance from the
Wales Funding Programme for:

LED street
lighting



Energy efficiency
for buildings



Renewable
energy



49
new energy efficiency projects

51
new renewable energy projects



These installations are expected to provide £79 million in savings and income for the public sector and community groups over their lifetime

The projects we supported will

save 172,500 tonnes of



That's the **same amount of CO₂** as **210,000**
domestic solar panel systems save every year





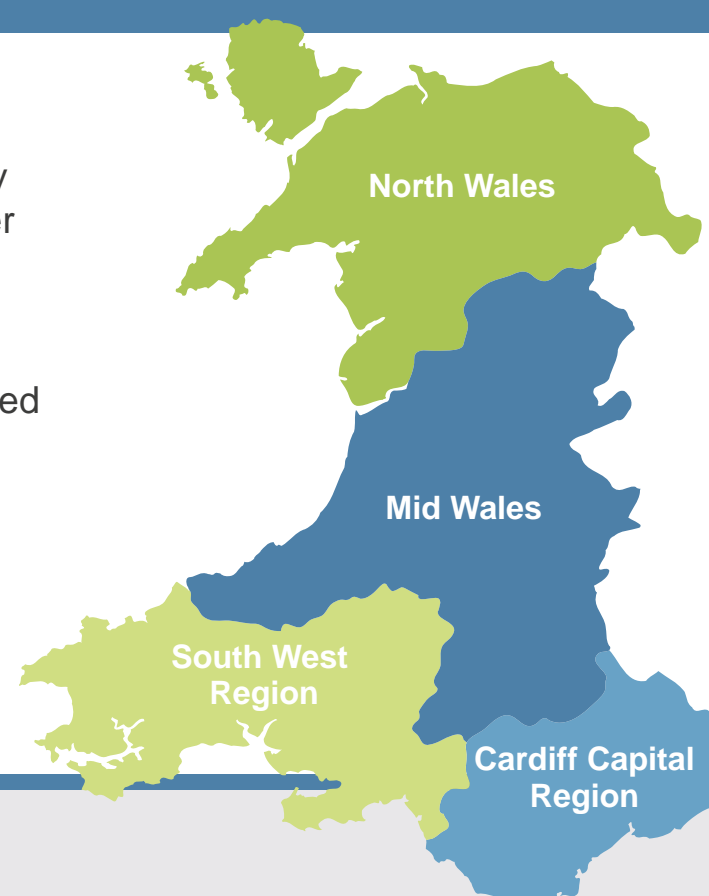
Regional energy planning

Understanding our future energy needs

We have collaborated with Cardiff Capital Region, Mid Wales and North Wales to finalise three regional energy strategies, working with hundreds of people across the public, private and community sectors.

We have been supporting South West Wales to develop their regional energy strategy, due for completion in summer 2021. These energy strategies set out pathways towards a net zero carbon regional energy system – covering power, heat and transport. We assessed the potential economic impacts this transition will have compared to 'business as usual' in each region.

Here are the extracts from the Mid Wales strategy.



Vision



To achieve a zero-carbon energy system that delivers social and economic benefits, eliminates fuel poverty, better connects Mid Wales to the rest of the UK, and contributes to wider UK decarbonisation.



£2.5 billion spend required to achieve the energy vision for Mid Wales

Priorities for Mid Wales



Drive forward the decarbonisation of the region's housing and building stock



Work proactively to ensure that electricity and gas grids in the region are suitable for a 100% decarbonised future



Boost the use of renewable energy through new generation and storage



Accelerate the shift to zero carbon transport whilst also improving the region's connectivity



Develop and harness the potential of agriculture to contribute to zero carbon energy



Harness innovation to support decarbonisation and clean growth

Estimated economic impacts of achieving the energy vision***

Electricity generation

Domestic energy efficiency

Domestic heat

Gross jobs

direct jobs related to a specific project or intervention

Net jobs

reflect the net impact of the job gains alongside the job losses associated with transitioning from one technology to another

Gross Value Add (GVA)

the amount that individual businesses, industries or sectors contribute to the economy



15,900



£1.9b



7,600



£450m



800



£96m



Delivering this vision will require significant effort across all levels of Government, Industry and communities – but we are well-placed to lead on several initiatives in Mid Wales. We will be looking to establish new engagement structures and dedicated capacity to take this work forward in earnest in the coming months.



Rosemarie Harris and Ellen ap Gwynn
Powys Council



Supporting the public sector towards net zero

Energy efficiency projects installed in 2020-21

Investment of £29 million in insulation, control systems, lighting, ventilation, low carbon heating, building integrated renewables and roof mounted solar projects

Finance for LED street lighting replacements across **15** organisations



Re:fit Cymru

Providing guaranteed energy and cost savings for public buildings and assets



COVID-19 stimulus

As part of the Welsh Government's COVID-19 green recovery, we provided extra support to accelerate **energy efficiency** and **vehicle fleet projects** in the public sector.

17 organisations supported

including:

- Local authorities
- Health boards and emergency services
- Colleges and universities



Blaenau Gwent County Borough Council

CASE STUDY

- Energy efficiency upgrades across 20 sites including Willowtown Primary School and Ebbw Vale Sports Centre
- £4 million investment from Wales Funding Programme for lighting, heating, controls and building integrated renewables
- Reducing the council's energy bills by £9 million over the project's lifetime
- Saving 26,500 tonnes of CO₂, the equivalent of flying from Cardiff to Sydney 8,000 times

Hywel Dda University Health Board

CASE STUDY

Securing finance for:

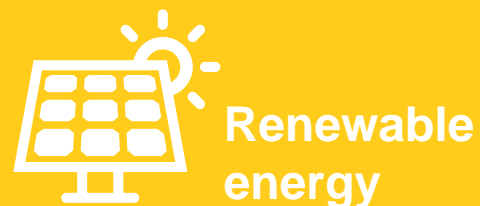
- Rooftop solar PV on 9 community health care buildings
- Heat pump projects at Cardigan and District Community Hospital
- LED lighting across several hospitals and health sites
- A solar car park connected to South Pembrokeshire hospital
- Further low carbon heat and energy efficiency projects in development



“ Welsh Government Energy Service has provided excellent support and invaluable expertise to the Health Board over the last year to deliver a number of PV projects as well as securing grant funding for a range of energy efficiency projects. This ongoing support will be important if we are to scope and deliver further schemes to meet our decarbonisation reduction aspirations. **”**

Rob Elliot

Director of Estates, Facilities and Capital Management, Hywel Dda University Health Board



Harnessing our natural resources

Dedicated support for renewable electricity projects across Wales
Accelerating projects from concept to completion

Our successes

New renewable energy projects in 2020-21

Secured investment of £13 million

To create **13.6MW** of new renewable electricity projects

Saving 57,000 tonnes of **CO₂** over their lifetime

The equivalent of **riding a motorbike**
from **Llandudno to Swansea 1,400,000 times**



Local income/benefits
over the project lifetime of **£33 million**



Flintshire County Council

CASE STUDY

We worked with Flintshire County Council to turn an old landfill and two brownfield sites into solar farms.

- 9,000 solar panels installed
- Generating 3.5MWh of electricity every year, enough to power 900 Welsh homes.

“Flintshire County Council are grateful for the ongoing support provided through the Welsh Government Energy Service in identifying suitable sites for renewable energy development and developing the business case for such projects.”

Andy Farrow

Chief Officer, Planning, Environment and Economy, Flintshire County Council



Egni Co-op

CASE STUDY

We have continued to work with Egni Co-op and Newport City Council to complete the largest rooftop solar array in Wales on the Geraint Thomas National Velodrome of Wales.

- 1,726 solar panels will supply 63% of the building's annual electricity demand in a normal year.
- Efficient LED floodlights were also fitted on the velodrome track, to professional racing standard.
- Awarded the Alan Clark award for local/community energy at Solar & Storage Live 2020.

“This has been an amazing partnership project. Newport was the first Council to work with us, and that early commitment, along with grant funding and support from the Welsh Government Energy Service, has since enabled us to expand across Wales.”

Dan McCallum

Co-director of Egni Co-op, a growing Wales-based co-operative with over 1000 members



Vehicle
fleet

On the road to low carbon travel

- Working with 18 public bodies across Wales
- Accelerating the transition to an ultra-low emission vehicle fleet
- Collecting fuel and mileage data to recommend which vehicles to replace with ultra-low emissions alternatives, cutting greenhouse gas emissions and energy use
- Creating a net-zero vehicle fleet by 2030
- Advice on infrastructure for an electric vehicle fleet, supporting investment decisions

Find out more in this short video



Our successes

156 electric vehicles

purchased across Wales, worth over £5 million

Grants of over £1 million provided towards the cost of buying electric vehicles

Helped allocate £7 million of Welsh Government funding for **electric vehicle charging infrastructure** to local authorities and health boards



Monmouthshire County Council

CASE STUDY

“ The Welsh Government Energy Service supported Monmouthshire with procurement guidance and partial funding for four electric vehicles. Two will be used for delivery of freshly prepared school meals to schools in Monmouthshire and a low floor minibus will operate a ‘Grass roots service’. Providing much needed transport for vulnerable and senior residents. These replaced old diesel vehicles and will help improve air quality, lower carbon emissions and reduce energy costs. ”

Debbie Jackson

Fleet Manager, Monmouthshire County Council



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Supporting Wales' drive to a successful net zero economy

Find out more about how the Welsh Government Energy Service can help your community or public sector organisation:

Website [Click here](#)

Email enquiries@energyservice.wales



[@_energyservice](#)



[welsh-government-energy-service](#)

*A small proportion (~8%) of the projects that secured investment in this period did not go on to be built.

Of the £102M worth of projects we have supported, ~£7.7M worth of projects have been discontinued after securing finance, for various reasons.

For projects that had secured finance from the Wales Funding Programme, these released funds have been used to finance other decarbonisation projects.

The savings and benefits of the projects have been estimated over their expected lifetime.

***It is not possible to specify exactly where the various types of jobs will be located, geographically. Some jobs - such as manufacturing solar panels - are currently likely to be located outside the region - and others - such as installation and maintenance jobs are more likely to be locally based. Significant effort will be required to ensure that as many jobs as possible are located within the region.