Welsh Government Energy Service
Annual Report 2020-21
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

Generating £212 million of local income and savings

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

<table>
<thead>
<tr>
<th>Local authorities</th>
<th>Community groups and community councils</th>
<th>Health boards</th>
<th>University</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>13</td>
<td>3</td>
<td>1</td>
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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 CO₂

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

**Project information correct as of November 2020."
**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."

"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"

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**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

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**Estimated economic impacts of achieving the energy vision***

<table>
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<tr>
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<th>Electricity generation</th>
<th>Domestic energy efficiency</th>
<th>Domestic heat</th>
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<tbody>
<tr>
<td>Gross jobs</td>
<td>800</td>
<td>15,900</td>
<td>7,600</td>
</tr>
<tr>
<td>Net jobs</td>
<td>7,600</td>
<td>15,900</td>
<td>800</td>
</tr>
<tr>
<td>Gross Value Add (GVA)</td>
<td>£1.9b</td>
<td>£450m</td>
<td>£96m</td>
</tr>
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"£2.5 billion spend required to achieve the energy vision for Mid Wales"
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

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

Supporting the public sector towards net zero

Energy efficiency projects installed in 2020-21

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

- 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

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

Finance for LED street lighting replacements across 15 organisations

Re:fit Cymru

Providing guaranteed energy and cost savings for public buildings and assets

Rob Elliot

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

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.
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
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
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
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

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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

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**CASE STUDY**

**Monmouthshire County Council**

*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
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
Twitter  @_energyservice
LinkedIn  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.