



Report to the Joint Overview and Scrutiny Sub-Committee

23 February 2022

TITLE:	Mid Wales Energy Strategy – Overview and Progress Update
AUTHOR:	Thomas Yeo, Business Change Officer. thomas.yeo@powys.gov.uk

1 Purpose of the Report

1.1. To provide Members of the Joint Overview and Scrutiny Sub Committee with an overview and update on progress of the Mid Wales Energy Strategy

2. Decision(s) Sought

2.1. To note progress to date.

3 Background

- 3.1 Welsh Government commissioned energy strategies to be developed for each of the Welsh regions including Mid Wales (Powys & Ceredigion). The Mid Wales Energy Strategy was developed with support by private, public, and third sector organisation across the Mid Wales region and the Welsh Government Energy Service.
- 3.2 The strategy and action plan will play an integral role for the region with the emphasis placed on working collaboratively with shared ownership to support the region in making the essential step change required to meet the net zero targets by 2050. The strategy sets a clear blueprint to both growing and maximising the potential of our economy whilst undertaking our social and environmental responsibilities, responding to the threat of climate change for future generations.
- 3.3 Engagement within the region over the course of the strategy development led to the creation of our vision which is underpinned by 6 priority areas. The vision and priority areas will form the basis of our focus for developing strategic actions to address challenges and maximise opportunities for the region.
- 3.4 The strategy sets the vision for mid Wales ***“To achieve a net 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.”***
- 3.5 The strategy sets out 6 Key Priorities to tackle energy issues in the region:

Key Priority 1: Drive forward the decarbonisation of the region's housing and building stock

Key Priority 2: Work proactively to ensure that electricity and gas grids in the region are suitable for a 100% decarbonised future

Key Priority 3: Boost the use of renewable energy through new generation and storage

Key Priority 4: Accelerate the shift to zero carbon transport and improve connectivity

Key Priority 5: Develop and harness the potential of agriculture to contribute to zero carbon goals

Key Priority 6: Harness innovation to support decarbonisation and clean growth



3.6 The strategy will seek to deliver the following benefits to the economic region of mid Wales:

- Raise the level of ambition regionally on energy
- Secure cross-sector stakeholder support for a shared place-based energy system vision for the region
- Provide the evidence needed to demonstrate the economic benefit of investment in local energy systems
- Develop a regional pipeline of deliverable projects and programmes that will achieve the vision

3.7 Appendix 2 provides the high-level overview of the Mid Wales Energy Strategy, extracting the key details from the strategy document into a digestible set of bilingual slides. The full strategy document with supporting technical energy and economic modelling annexes can be found on the Welsh Government website following this link [Regional energy strategy: mid Wales | GOV.WALES](#)

4 Mid Wales Energy Strategy Progress to Date

4.1 The strategy has undergone a breadth of work since Welsh Governments commitment to work with Welsh regions to develop regional energy strategies. A summary of activity to date has been outlined for members information.

- The Mid Wales region held its initial Energy planning workshop as part of early growth deal development. The first workshop focused on developing a vision for the future energy system, which would form the basis for the strategy document moving forward.
- Using the workshop input, a vision statement was developed for the region. The vision statement was commented on by regional officers, and it was decided additional stakeholder feedback was needed.

- An Online survey was released for stakeholder consultation on the draft energy vision and strategy priorities, we also undertook a call for projects for the energy strategy. Using the survey feedback, we updated the vision statement accordingly.
- Energy modelling was undertaken to understand the level of effort required to achieve a zero-emission energy system by 2050 compared with a business-as-usual pathway.
- The second Energy workshop was held with a focus on developing an action plan. During this workshop we presented and received feedback on the vision statement, energy modelling results, intervention evaluation criteria, and undertook activities to get project ideas for the action plan.
- The Welsh Government Energy Service shared the Initial strategy and action plan with the region and Welsh Government
- An economic assessment was undertaken for the Mid Wales region, this looks at the economic impact in terms of jobs, GVA, and investment required to meet the energy system vision pathway defined in the energy modelling.
- Strategy was reviewed and updated to reflect considerations relating to Covid 19 impact with a section added at the head of the report.
- A new draft of the strategy including the economic assessment was produced. We consulted regional stakeholders and officers, comments were considered, and amendments made by Welsh Government Energy Service where appropriate
- The region held a Senior officer workshop, bringing together key officers across services in Powys and Ceredigion Local Authorities and Welsh Government Energy Division, regional team, and Welsh Government Energy Service.
- Mid Wales Energy Strategy signed off by Powys and Ceredigion Cabinets
- Press release [Ceredigion County Council](#)
- Mid Wales Energy Strategy Advisory group formed
- Strategy energy and economic modelling technical annexes produced
- A draft skeleton action plan framework was produced and agreed as an agreeable format by the advisory group

5 Developing the Strategy Action Plan

- 5.1** Recent focus since the strategy was signed off by the region has been on the development of a robust action plan which will identify strategic actions to address the key priority areas outlined within the strategy. The region has been working closely with the Welsh Government Energy Service to develop a three-step approach to define the framework for an action plan and the approach to engagement, to engage and hold focussed stakeholder sessions on strategy priority areas, and finally to validate and refine feedback into strategic actions for the Mid Wales region.



5.2 A Mid Wales Energy Strategy Advisory Group was formed as a key governance arrangement acting as a senior regional body to oversee and steer the development of a strategic action plan. The Advisory Group membership includes senior directors and officers from Powys and Ceredigion Local Authorities, UK and Welsh Governments central and regional teams and Welsh Government Energy Service.

5.3 The Welsh Government Energy Service produced a draft skeleton action plan and outlined a forward work programme which was discussed and agreed at the inaugural advisory group.

5.4 Theme champions were identified for themed sessions, we worked closely with the champions to identify key stakeholder session attendees, and to shape the discussion topics and format of the sessions so they pinpointed discussion on the key areas to ensure the best feedback and suggested actions were identified.

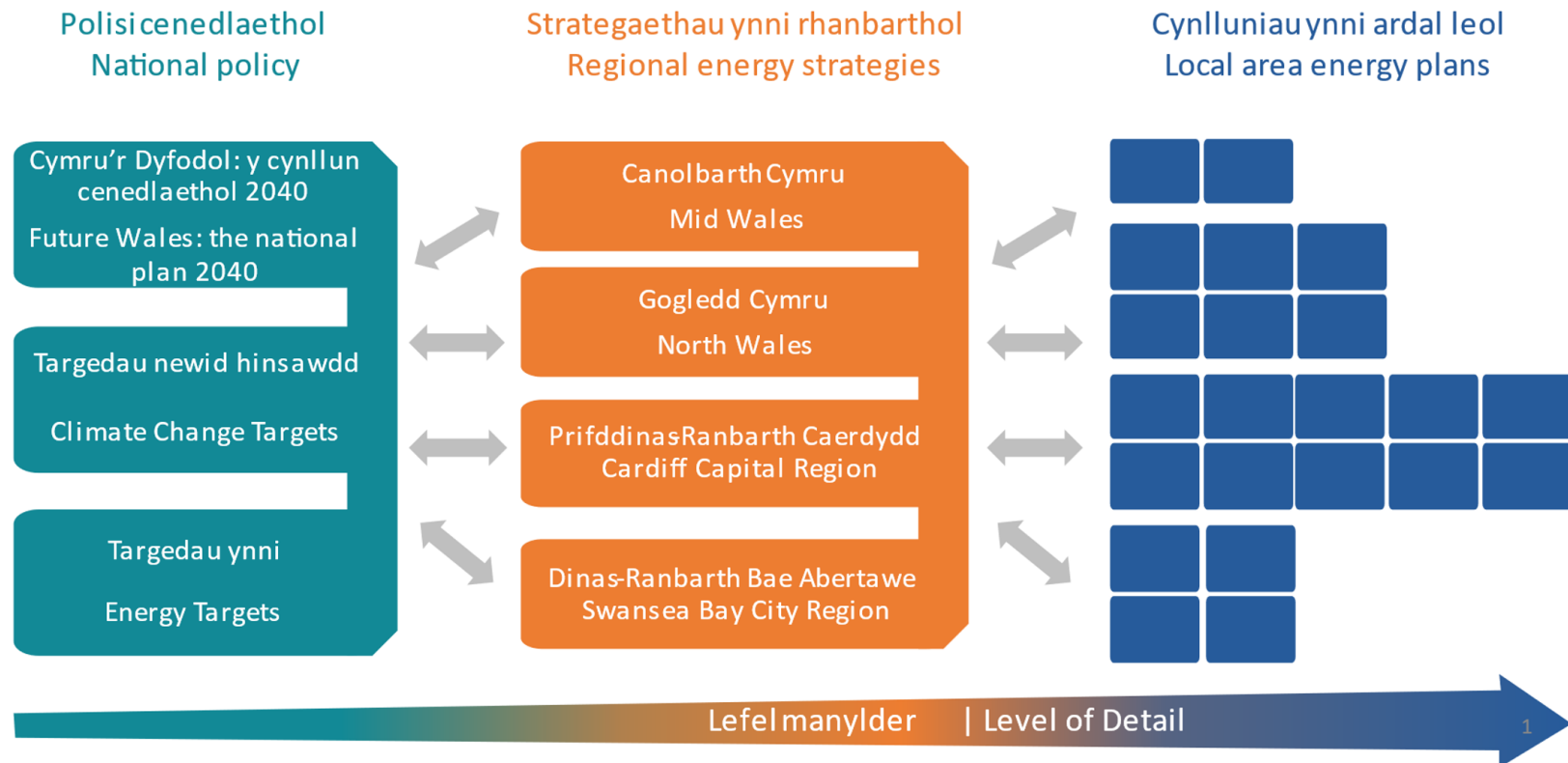
5.5 We held several engagement sessions over November through to January, the findings of which are being collated and refined to create a long list of actions. The engagement sessions held were as follows:

Session	Date
Power and Generation	17/11/2021
Agriculture	02/12/2021
Transport	10/12/2021
Domestic	19/01/2022

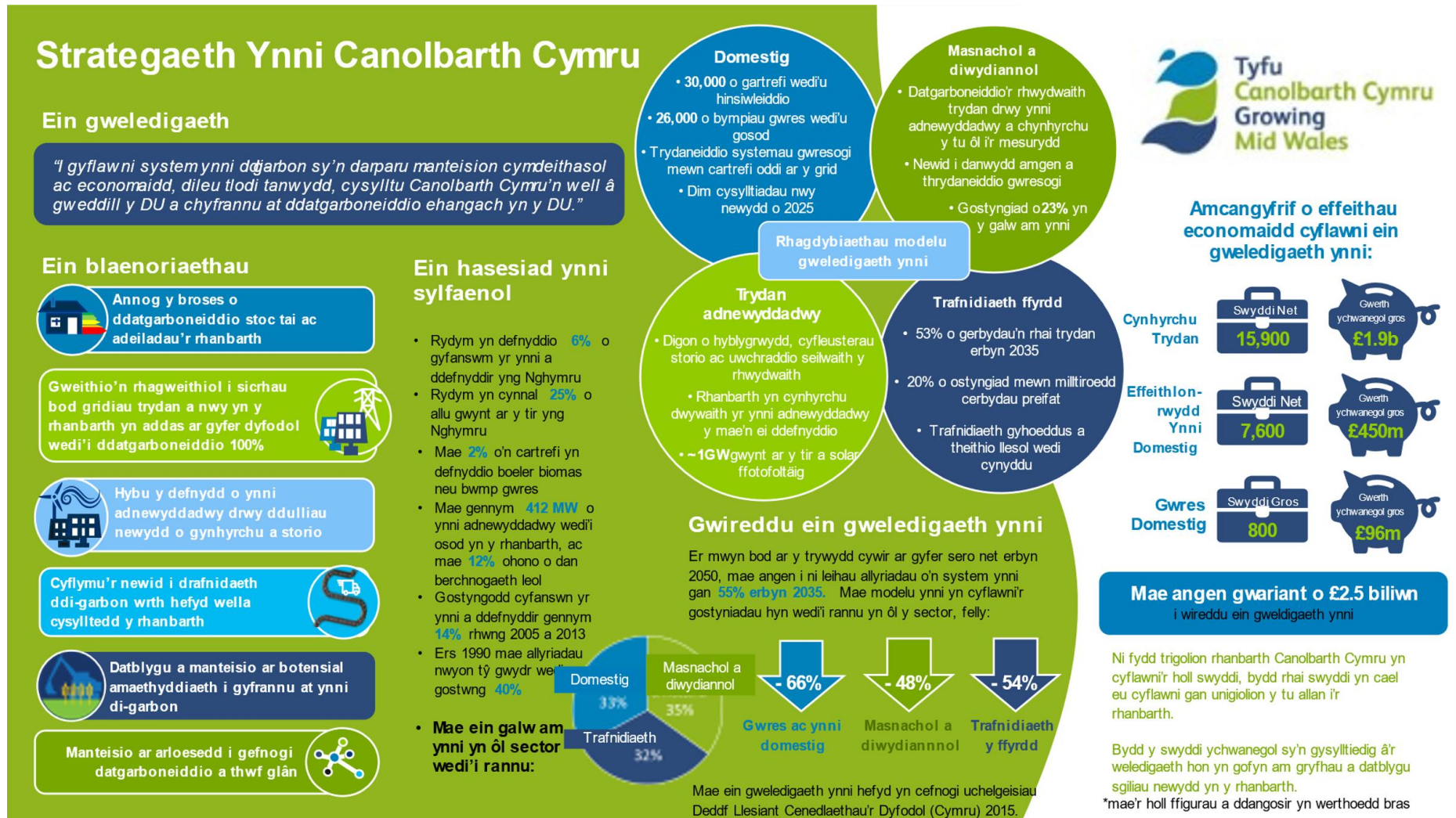
- 5.6** The actions will be reviewed by the champions, refined to a short list of actions by the advisory group then session attendees will have an opportunity to engage and endorse the short-listed actions.
- 5.7** A final action plan will be produced in Spring 2022 and will undergo formal sign off within the region by the advisory group and Local Authority Cabinets and Welsh Government
- 5.8** Throughout the development of the Mid Wales Energy Strategy and Action Plan there has been a conscious effort to ensure there is alignment with the key policy and strategy environment at a national, regional, and local level. Appendix 1 provides a high-level overview of how the regional energy strategies will compliment the national policy direction emerging from Welsh Government and more localised elements such as Local authority climate emergency strategies and action plans, Public Service board decarbonisation plans and emerging Local Area Energy Plans progressing this year in partnership with Welsh Government. The level of detail increases as you move from national to local level moving from strategic policy and strategy to a more place-based approach with a granular evidence base. In conjunction the collective pieces of work will form a blueprint to support the region and Welsh Government to progress towards an integrated low carbon energy system which moves us closer to net zero targets.

Appendix 1 – National to Local Energy System Planning

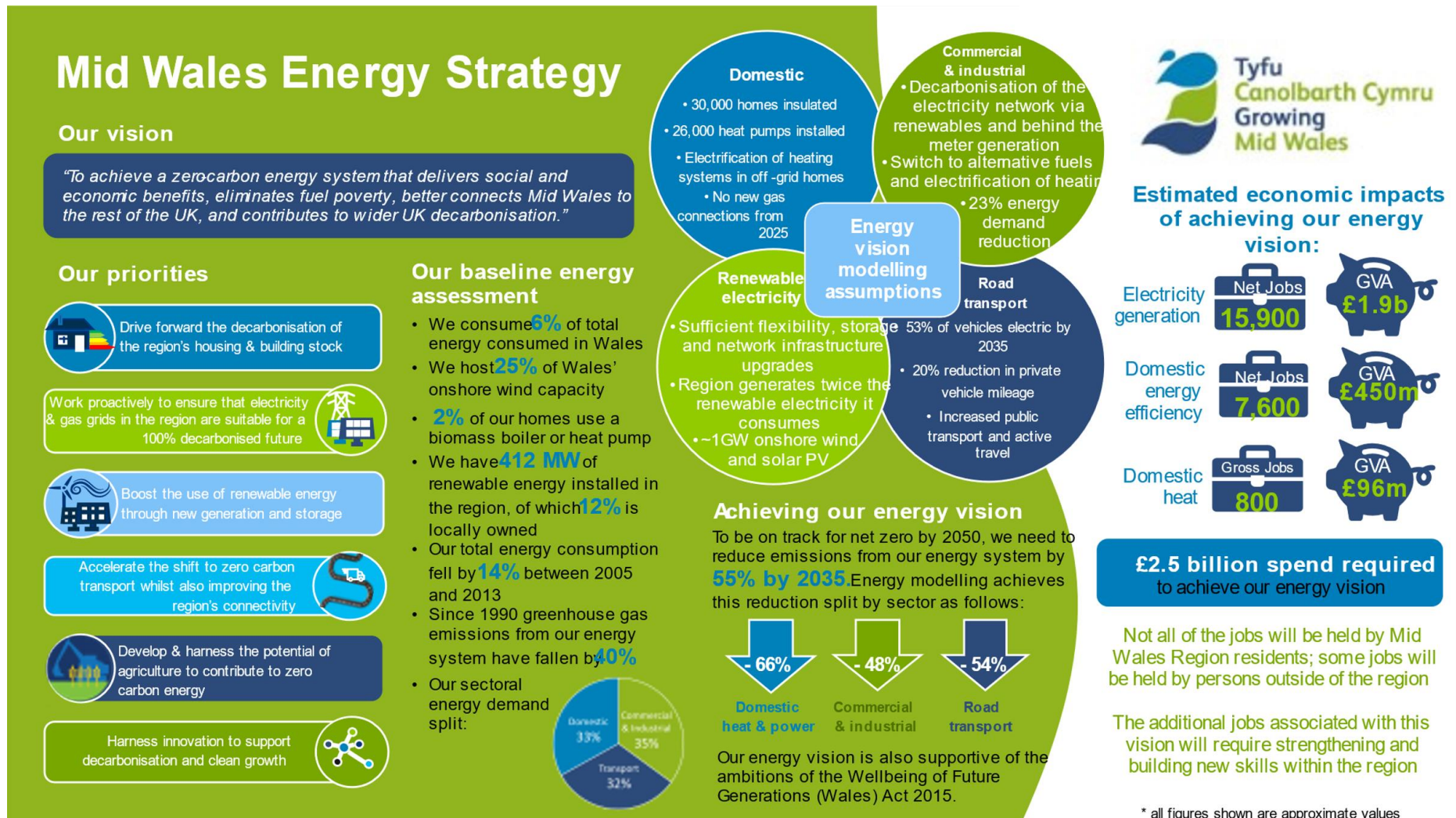
Cynllunio argyfer system ynni carbon iselsy'n fwy integredig Planning for a more integrated low carbon energy system



Appendix 2 – Mid Wales Energy Strategy Overview



Appendix 2 – Mid Wales Energy Strategy Overview



Appendix 2 – Mid Wales Energy Strategy Overview

Strategaeth Ynni Canolbarth Cymru

Ein gweledigaeth

"I gyflawni system ynni ddjarbon sy'n darparu manteision cymdeithasol ac economaidd, dileu tlodi tanwydd, cysylltu Canolbarth Cymru'n well â gweddill y DU a chyfrannu at ddatgarboneiddio ehangach yn y DU."

Ein blaenoriaethau

- Annog y broses o ddatgarboneiddio stoc tai ac adeiladau'r rhanbarth
- Gweithio'n rhagweithiol i sicrhau bod gridiau trydan a nwy yn y rhanbarth yn addas ar gyfer dyfodol wedi'i ddatgarboneiddio 100%
- Hybu y defnydd o ynni adnewyddadwy drwy ddulliau newydd o gynhyrchu a storio
- Cyflymu'r newid i drafniadaeth ddi-garbon wrth hefyd wella cysylltedd y rhanbarth
- Datblygu a manteisio ar potensial amaethyddiaeth i gyfrannu at ynni di-garbon
- Manteisio ar arloesedd i gefnogi datgarboneiddio a thwf glân

Ein hasesiad ynni sylfaenol

- Rydym yn defnyddio 6% o gyfanswm yr ynni a ddefnyddir yng Nghymru
- Rydym yn cynnal 25% o allu gwynt ar y tir yng Nghymru
- Mae 2% o'n cartrefi yn defnyddio boeler biomas neu bwmp gwres
- Mae gennym 412 MW o ynni adnewyddadwy wedi'i osod yn y rhanbarth, ac mae 12% ohono o dan berchnogaeth leol
- Gostyngodd cyfanswm yr ynni a ddefnyddir gennym 14% rhwng 2005 a 2013
- Ers 1990 mae allyriadau nwyon tŷ gwydr wedi gostwng 40%

Mae ein galw am ynni yn ôl sector wedi'i rannu:

*mae'r holl figurau a ddangosir yn werthoedd bras

Sector	Percentage
Domestic	33%
Commercial & Industrial	35%
Transport	32%



Mid Wales Energy Strategy

Our 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."

Our priorities

- 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 & harness the potential of agriculture to contribute to zero carbon energy
- Harness innovation to support decarbonisation and clean growth

Our baseline energy assessment

- We consume 6% of total energy consumed in Wales
- We host 25% of Wales' onshore wind capacity
- 2% of our homes use a biomass boiler or heat pump
- We have 412 MW of renewable energy installed in the region, of which 12% is locally owned
- Our total energy consumption fell by 14% between 2005 and 2013
- Since 1990 greenhouse gas emissions from our energy system have fallen by 40%


Our sectoral energy demand split:



* all figures shown are approximate values

Appendix 2 – Mid Wales Energy Strategy Overview

Strategaeth Ynni Canolbarth Cymru



Rhagdybiaethau modelu gweledigaeth ynni

Domestig

- 30,000 o gartrefi wedi'u hinswleiddio
- 26,000 o bympiau gwres wedi'u gosod
- Trydaneiddio systemau gwresogi mewn cartrefi oddi ar y grid
- Dim cysylltiadau nwy newydd o 2025

Masnachol a diwydiannol

- Datgarboneiddio'r rhwydwaith trydan drwy ynni adnewyddadwy a chynhyrchu y tu ôl i'r mesurydd
- Newid i danwydd amgen a thrydaneiddio gwresogi
- Gostyngiad o 23% yn y galw am ynni

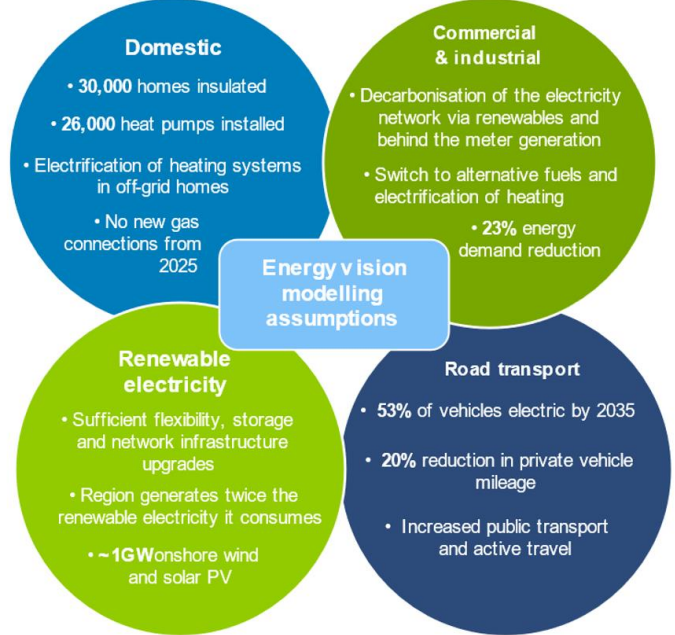
Trydan adnewyddadwy

- Digon o hyblygrwydd, cyfleusterau storio ac uwchraddio seilwaith y rhwydwaith
- Rhanbarth yn cynhyrchu dwywaith yr ynni adnewyddadwy y mae'n ei ddefnyddio
- ~1GW gwynt ar y tir a solar ffotofoltäig

Trafnidiaeth ffyrdd

- 53% o gerbydau'n rhai trydan erbyn 2035
- 20% o ostyngiad mewn millitiroedd cerbydau preifat
- Trafnidiaeth gyhoeddus a theithio llesol wedi cynyddu

Mid Wales Energy Strategy



Energy vision modelling assumptions

Domestic

- 30,000 homes insulated
- 26,000 heat pumps installed
- Electrification of heating systems in off-grid homes
- No new gas connections from 2025

Commercial & industrial

- Decarbonisation of the electricity network via renewables and behind the meter generation
- Switch to alternative fuels and electrification of heating
- 23% energy demand reduction

Renewable electricity


- Sufficient flexibility, storage and network infrastructure upgrades
- Region generates twice the renewable electricity it consumes
- ~1GW onshore wind and solar PV

Road transport

- 53% of vehicles electric by 2035
- 20% reduction in private vehicle mileage
- Increased public transport and active travel


Gwreiddu ein gweledigaeth ynni

Er mwyn bod ar y trywydd cywir ar gyfer sero net erbyn 2050, mae angen i ni leihau allyriadau o'n system ynni gan **55% erbyn 2035**. Mae modelu ynni yn cyflawni'r gostyngiadau hyn wedi'i rannu yn ôl y sector, felly:




- 66%

Gwres ac ynni domestig



- 48%

Masnachol a diwydiannol



- 54%

Trafnidiaeth y ffyrdd

Mae ein gweledigaeth ynni hefyd yn cefnogi uchelgeisiau Deddf Llesiant Cenedlaethau'r Dyfodol (Cymru) 2015.

Achieving our energy vision

To be on track for net zero by 2050, we need to reduce emissions from our energy system by 55% by 2035. Energy modelling achieves this reduction split by sector as follows:



Our energy vision is also supportive of the ambitions of the Wellbeing of Future Generations (Wales) Act 2015.

Appendix 2 – Mid Wales Energy Strategy Overview

Strategaeth Ynni Canolbarth Cymru



Amcangyfrif o effeithau economaidd cyflawni ein gwledigaeth ynni:

Cynhyrchu Trydan	Swyddi Net 15,900	Gwerth ychwanegol gros £1.9b
Effeithlonrwydd Ynni Domestig	Swyddi Net 7,600	Gwerth ychwanegol gros £450m
Gwres Domestig	Swyddi Gros 800	Gwerth ychwanegol gros £96m

Mae angen gwariant o £2.5 biliwn
i wireddu ein gwledigaeth ynni

Ni fydd trigolion rhanbarth Canolbarth Cymru yn cyflawni'r holl swyddi, bydd rhai swyddi yn cael eu cyflawni gan unigolion y tu allan i'r rhanbarth.

Bydd y swyddi ychwanegol sy'n gysylltiedig â'r weledigaeth hon yn gofyn am gryfhau a datblygu sgiliau newydd yn y rhanbarth.

*mae'r holl ffigurau a ddangosir yn werthoedd bras

Mid Wales Energy Strategy

Estimated economic impacts of achieving our energy vision:

Electricity generation	Net Jobs 15,900	GVA £1.9b
Domestic energy efficiency	Net Jobs 7,600	GVA £450m
Domestic heat	Gross Jobs 800	GVA £96m

£2.5 billion spend required
to achieve our energy vision

Not all of the jobs will be held by Mid Wales Region residents; some jobs will be held by persons outside of the region.

The additional jobs associated with this vision will require strengthening and building new skills within the region.

* all figures shown are approximate values