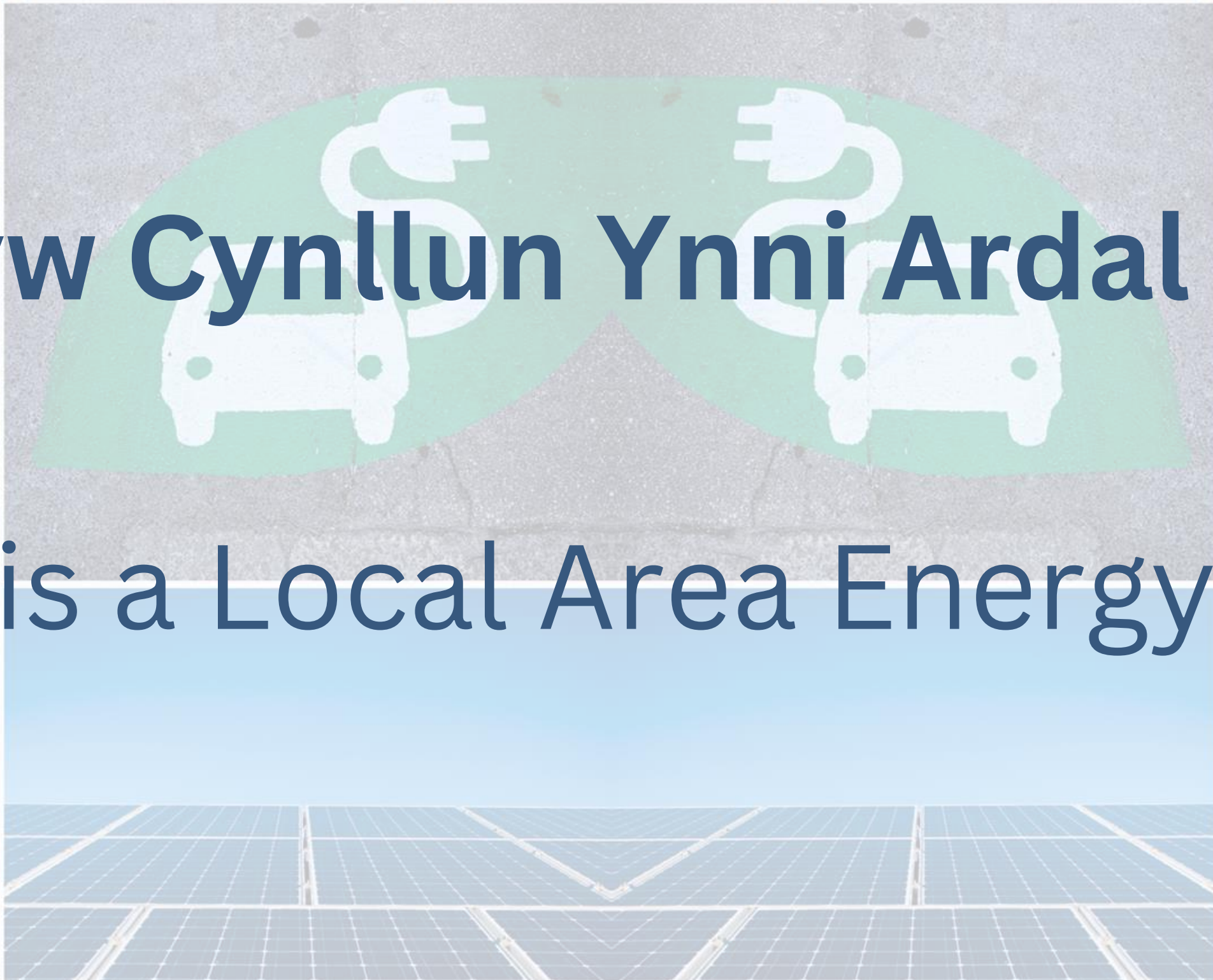




Tyfu
Canolbarth Cymru
Growing
Mid Wales

Beth yw Cynllun Ynni Ardal Lleol ?

What is a Local Area Energy Plan?



Mae'r Cynllun Ynni Ardal Lleol (CYALI) yn adroddiad sy'n nodi'r ffordd fwyaf cost-effeithiol i ardal leol ddatgarboneiddio ei system ynni.

Mae rhanddeiliaid amrywiol wedi bod yn rhan o'r broses, o gynllunwyr cyngor, gweithredwyr rhwydwaith i grwpiau cymunedol.



The Local Area Energy Plan (LAEP) is a report that identifies the most cost-effective way for a local area to decarbonise its energy system.

Various stakeholders have been involved in the process, from council planners, network operators to community groups.

Pam mae angen Cynllun Ynni Ardal Leol?

Mae'r DU wedi ymrwymo i leihau allyriadau nwyon tŷ gwydr sero net erbyn 2050. Er mwyn cyflawni hyn, bydd angen i ni weld newid trawsnewidiol i ein system ynni.

Rydym eisoes wedi cymryd camau cadarnhaol i ddatgarboneiddio ein system drydan ond mae angen gwneud llawer mwy.



Why do we need a Local Area Energy Plan?

The UK is committed to reducing its greenhouse gas emissions to net zero by 2050. To achieve this, we will need to see transformative change to our energy system.

We've already made positive steps to decarbonise our electricity system but much more needs to be done.

Beth yw manteision Cynllun Ynni Ardal Leol?

Nid yw'n ymwneud â lleihau ein hallyriadau yn unig. Mae manteision eraill yn cynnwys:

- Lleihau tlodi tanwydd
- Gwella iechyd pobl
- Creu swyddi
- Gwelliannau ansawdd aer

What are the benefits of a Local Area Energy Plan?

It's not just about reducing our emissions. Other benefits include:

- Reducing fuel poverty
- Improving people's health
- Job creation
- Air quality improvements



Mae'r sleidiau nesaf yn dangos yr allbynnau allweddol o Gynlluniau Ynni Ardal Leol Ceredigion a Powys a chanlyniadau arolwg ymgysylltu â'r cyhoedd CYALL, a ddyluniwyd i asesu canfyddiad y newidiadau sydd eu hangen ar gyfer y trawsnewidiad ynni, yr ymatebodd dros 500 o drigolion iddynt yn gynharach eleni.

The next few slides show the key outputs from Ceredigion and Powys' Local Area Energy Plans and the results from a LAEP public engagement survey, designed to assess the perception of the changes needed for the energy transition, which over 500 residents responded to earlier this year.



Effeithlonrwydd ynni

Energy efficiency



Mae'r CYALL yn dangos y gallai 58% o gartrefi yng Nghanolbarth Cymru elwa o uwchraddio'u hadeiladwaith, e.e. inswleiddio'r atig a waliau ceudod, tra gallai 25% elwa o baneli solar ar y to.

The LAEPs show how around 58% of homes in Mid Wales could benefit from fabric upgrades, such as loft and cavity wall insulation, whereas 25% could benefit from rooftop solar panels.

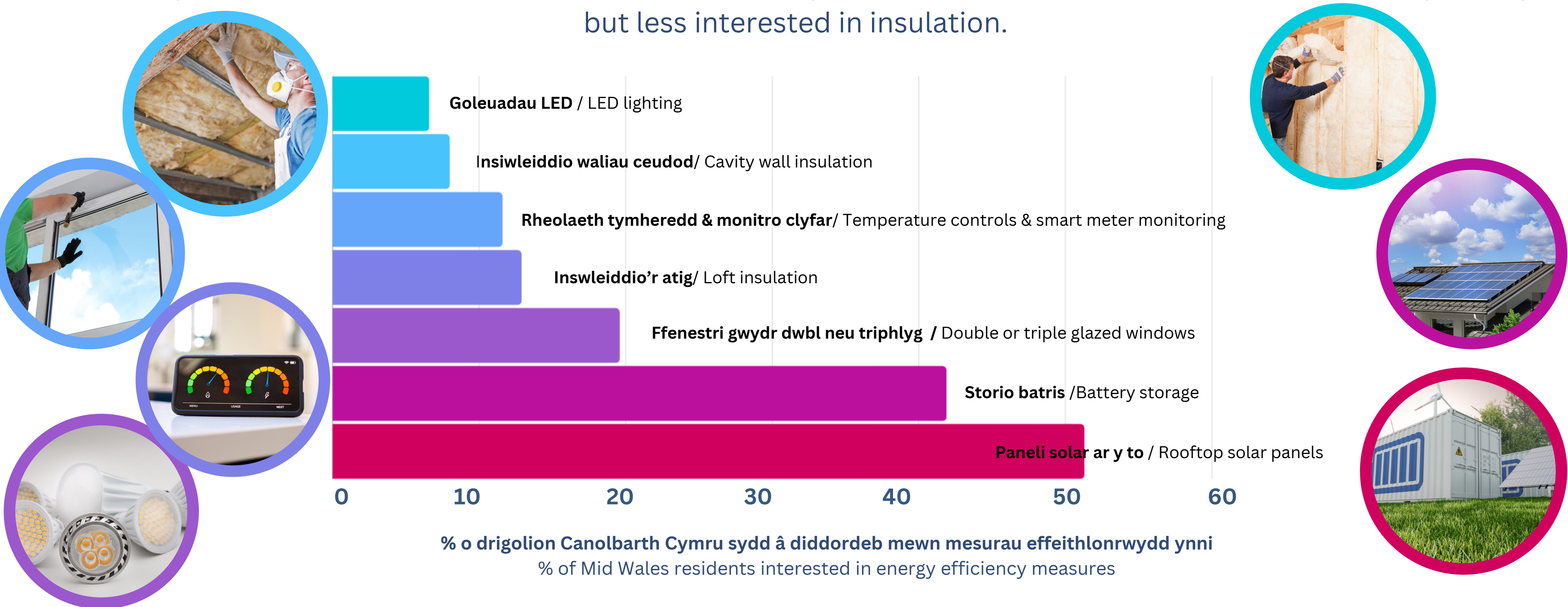


Byddai'r mesurau hyn yn helpu i leihau biliau ynni a gwella iechyd trigolion.

These energy efficiency measures would help to reduce energy bills and improve residents' health.

Yn ôl ein harolwg, mae gan drigolion Canolbarth Cymru ddiddordeb arbennig mewn cael paneli solar ar doeau a storio trydan mewn batris ond llai o ddiddordeb mewn inswleiddio.

Our survey shows how Mid Wales residents are particularly interested in rooftop solar panels and battery storage but less interested in insulation.

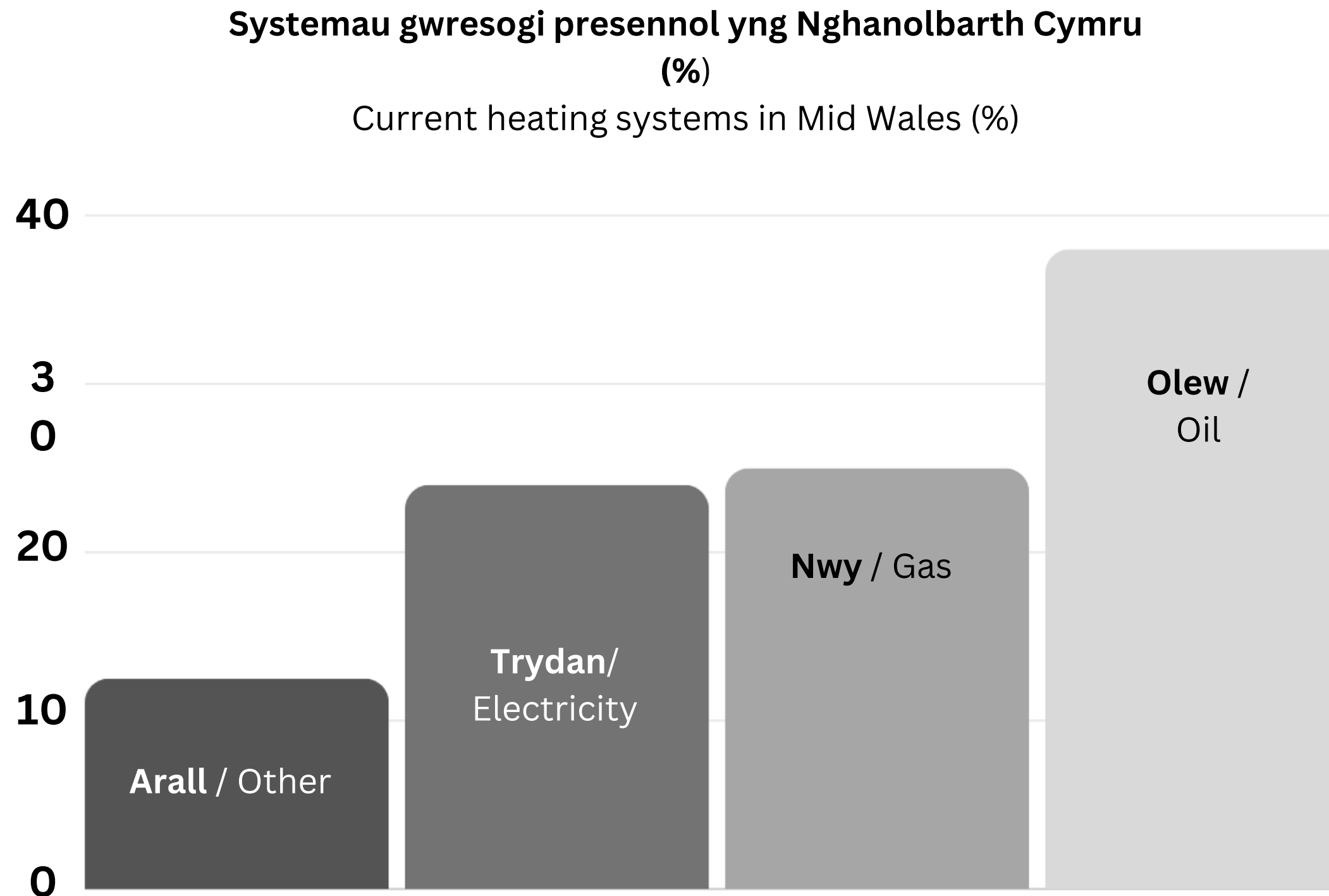


Dywedodd dros 67% mai cost yw'r prif rwystr i ôl-osod, yn enwedig y costau sydd i'w talu ymlaen llaw.

Over 67% said cost is the main barrier to retrofitting their home, with upfront costs being the biggest issue.

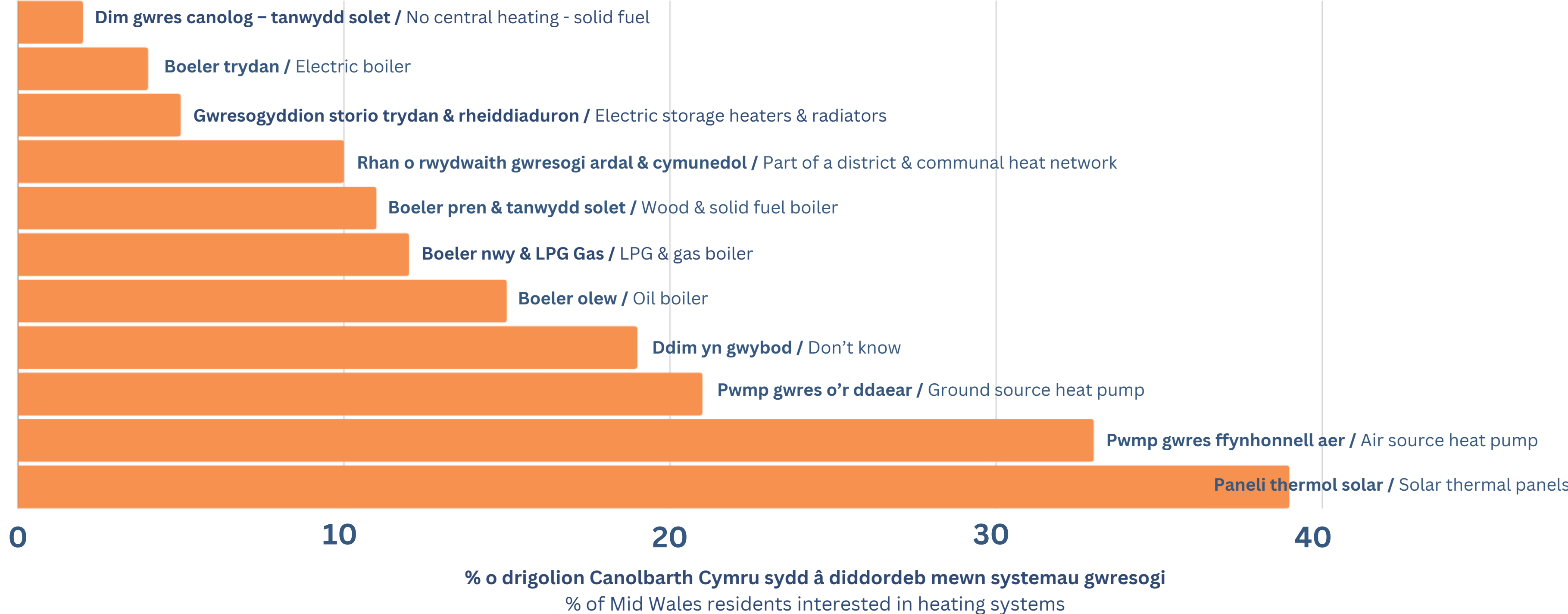
Yn arbennig, mae 35% o gartrefi'r canolbarth yn cael eu gwresogi gan olew. I helpu Cymru i gyrraedd ei thargedau sero net, mae ein modelu'n dangos bod angen i 82% o gartrefi yng Nghanolbarth Cymru newid i bympiau gwres erbyn 2050.

Notably, 35% of homes in Mid Wales are heated by oil. To help Wales meet its net zero targets, our modelling shows 82% of Mid Wales' homes need to switch to heat pumps by 2050.



Canfu ein harolwg mai newid i bympiau gwres a phaneli solar thermol sydd o'r diddordeb mwyaf i drigolion Canolbarth Cymru.

Our survey found that Mid Wales residents are most interested in switching to heat pumps and solar thermal panels.



Mae tua un o bob tri'n bwriadu newid eu system wresogi bresennol pan fydd yn torri, ond mae'n bosibl y byddai 63% yn newid yn gynt os byddant yn derbyn cymorth ariannol.

About 1/3 of people plan to change their current heating system when it breaks, but 63% might switch sooner if financial support was available to them.

Mae'r CYALL yn amcangyfrif y bydd galw blynyddol Canolbarth Cymru am drydan yn cynyddu 84% erbyn 2050 yn sgil trydaneiddio systemau gwresogi a thrafnidiaeth.

The LAEPs estimate that Mid Wales' annual electricity demand will increase by 84% by 2050 due to the electrification of heating and transport.

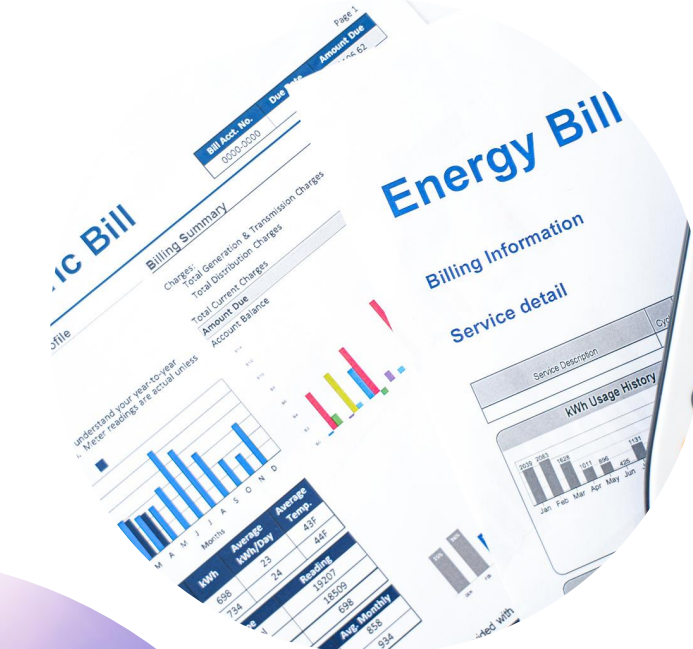


Gellir bodloni'r galw hwn yn lleol, yn bennaf gan gynlluniau ynni adnewyddadwy mawr sy'n bodoli'n barod ac y rhoddwyd caniatâd ar eu cyfer a mwy o baneli solar ar doeau.

This demand can predominantly be met locally by existing and consented large-scale renewables, plus more rooftop solar panels.

Gallai Canolbarth Cymru gynhyrchu mwy o drydan nag y mae'n ei ddefnyddio yn y dyfodol, gan fod potensial mawr ar gyfer cynlluniau solar a gwynt.

Mid Wales could generate more electricity than it uses in the future, as there is significant potential for installing solar and wind.

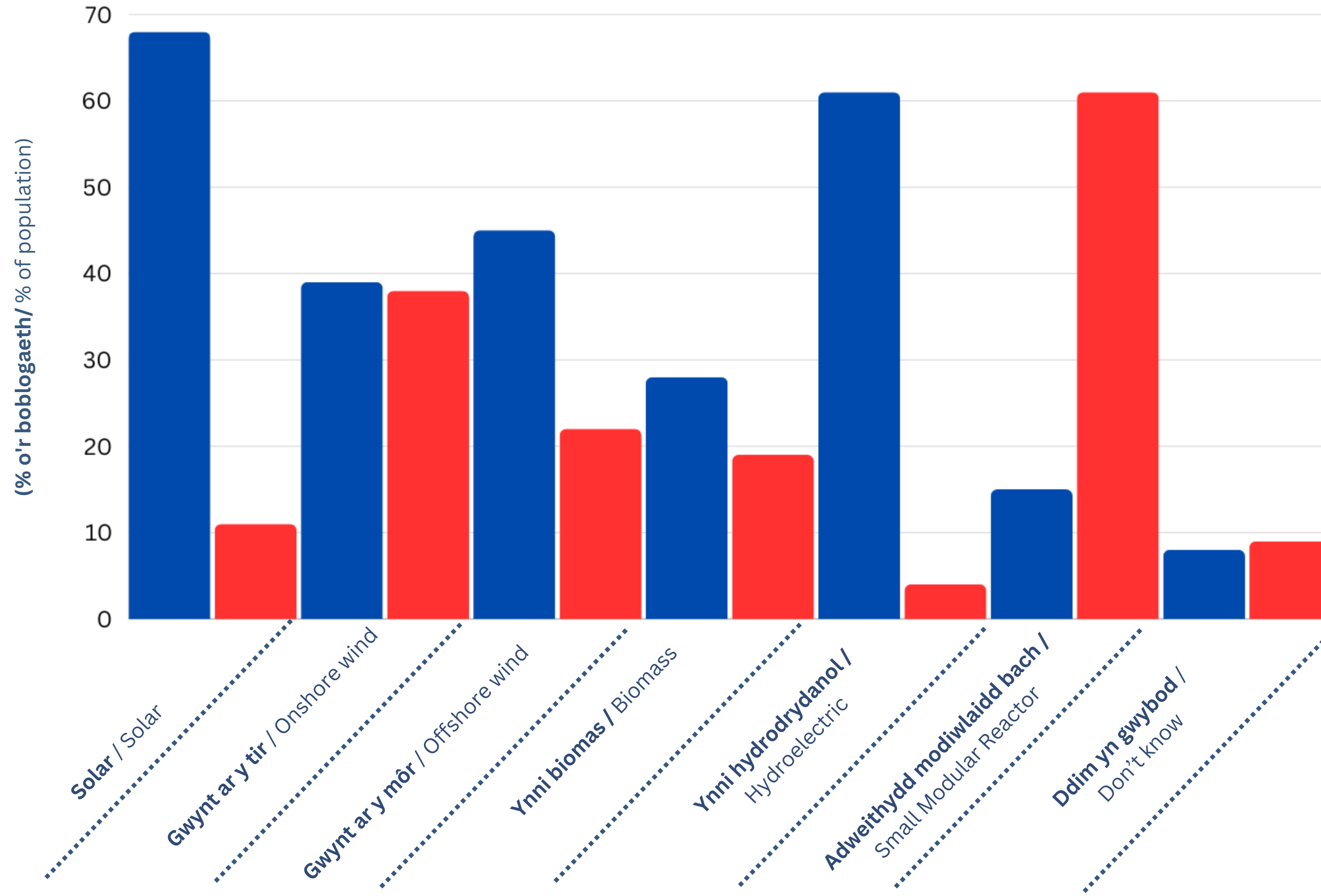


Ond, byddai angen i'r prosiectau ynni hyn fod o fudd i bobl leol trwy berchnogaeth leol/rhanberchnogaeth, biliau is, a chreu swyddi.

However, these renewable energy projects would need to benefit local people through local/shared ownership, lower bills, and job creation.

Mae ein harolwg yn dangos y byddai'n well gan drigolion Canolbarth Cymru weld cynlluniau ynni solar a thrydan dŵr yn cael eu hadeiladu yn eu hardal leol, a bod cynlluniau gwynt ar y tir ac adweithyddion niwclear modiwlaid bach yn llai poblogaidd.

Our survey indicates that Mid Wales residents would prefer solar and hydroelectric power to be built in their local area and that onshore wind and small modular nuclear reactors are less popular.




Hoffwn weld yng Nghanolbarth Cymru
Would like to see in Mid Wales


Ni fyddai'n hoffi gweld yng Nghanolbarth Cymru
Would not like to see in Mid Wales

Nodwyd bod cynhyrchu a defnyddio ynni adnewyddadwy i'r eithaf yn lleol yn flaenoriaeth allweddol i Ganolbarth Cymru.

Maximising the generation and use of renewable energy locally has been identified as a key priority for Mid Wales.

Gall defnyddio technolegau hyblyg fel batris a phwyntiau gwefru clyfar ar gyfer cerbydau trydan lleihau'r angen am waith uwchraddio drud i'n rhwydwaith trydan.

Using flexible technologies like smart electric vehicle chargers and batteries can minimise the need for expensive upgrades to our electricity network.



Mae'r CYALL yn dangos sut y gall cynyddu'r defnydd o drafnidiaeth gyhoeddus, cerdded a beicio leihau allyriadau carbon Canolbarth Cymru.

The LAEPs show how increasing the use of public transport, walking, and cycling, can reduce Mid Wales' carbon emissions.

Ond mae realiti bywyd yng nghefn gwlad yn golygu bod pobl yn debygol o barhau i ddibynnu ar eu ceir, felly bydd ceir trydan yn bwysig.

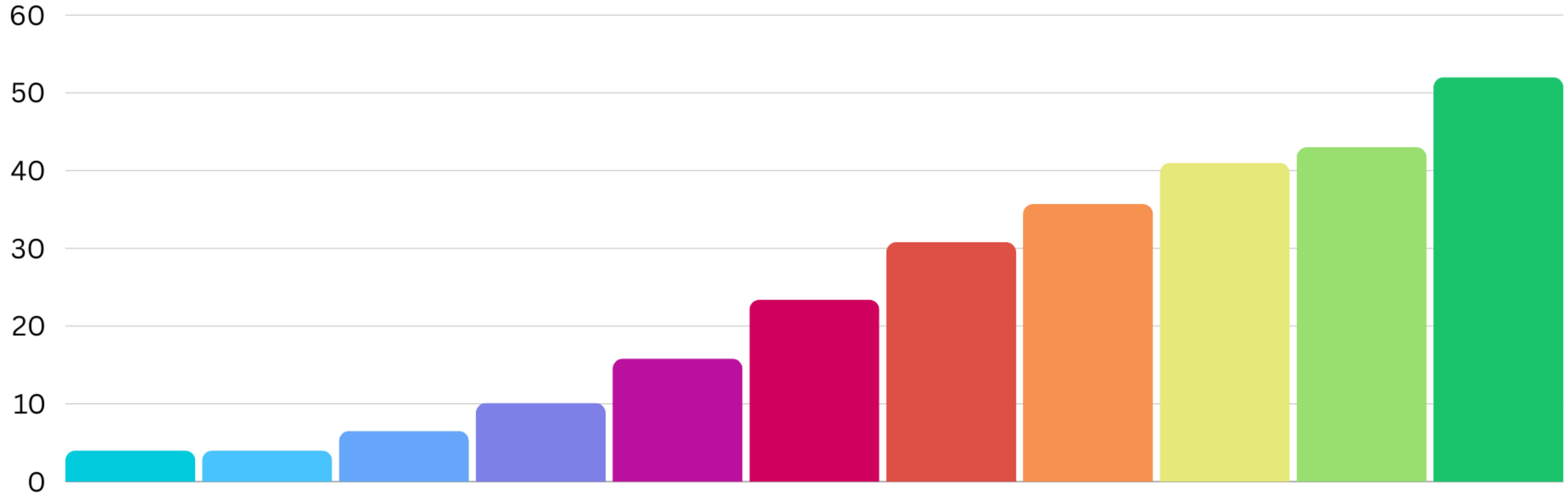
However, the realities of rural life mean that people are likely to remain reliant on their cars therefore electric cars will play a significant role.



Yng Nghanolbarth Cymru, byddai'r rhan fwyaf o bobl a ymatebodd i'n harolwg yn ystyried defnyddio ceir trydan neu hybrid yn y dyfodol, ac roedd cryn ddiddordeb mewn defnyddio bysiau.

In Mid Wales most people surveyed would consider using electric or hybrid cars in the future and there was notable interest in using the bus.

- E-Sgwter / Scooter - Electric
- Sgwter / Scooter
- Beic modur – trydan/ Motorbike - Electric
- Rhannu car/clwb ceir - Car share / car club
- Beic/ Bicycle
- E-Feic/ E-bike
- Trên/ Train
- Cerdded / Walking
- Bws/ Bus
- / Car - Trydan /Car - electric
- Car - Hybrid/ Car - Hybrid



% o drigolion Canolbarth Cymru sydd â diddordeb mewn opsiynau trafnidiaeth
% of Mid Wales residents interested in transport options

Dyma'r 5 prif beth a fyddai'n annog pobl i newid i opsiynau trafnidiaeth carbon isel:

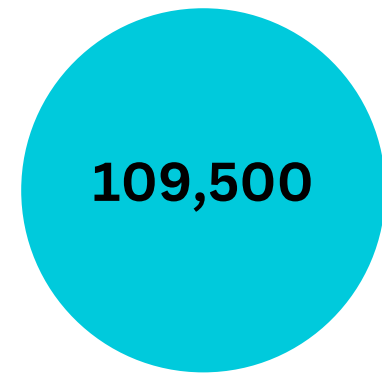
These are the top 5 things that would encourage people to switch to low carbon transport options:

- **Mwy o argaeledd trafnidiaeth gyhoeddus / Increased availability of public transport**
- **Cost is o gerbydau trydan / Reduced cost of electric vehicles**
- **Cost is o drafnidiaeth gyhoeddus / Reduced cost of public transport**
- **Mwy o argaeledd seilwaith gwefru cerbydau trydan cost isel ar lwybrau allweddol / Increased availability of low-cost electric vehicle charging infrastructure on key routes**
- **Gwefru cerbydau trydan yn y cartref / Electric vehicle charging at home**



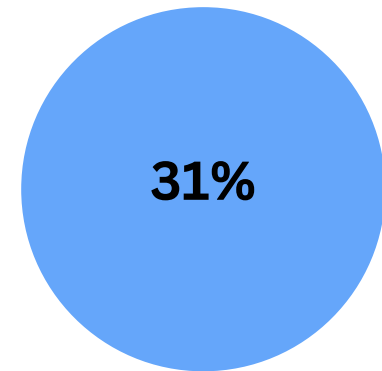
Sut gallai 2050 edrych yng Nghanolbarth Cymru?

What could 2050 look like in Mid Wales?



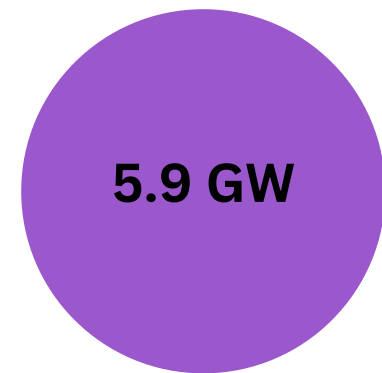
109,500

Cerbydau trydan ar y ffyrdd
Electric vehicles on the roads



31%

Cartrefi gyda phaneli solar ar ben y to
Homes with rooftop solar panels



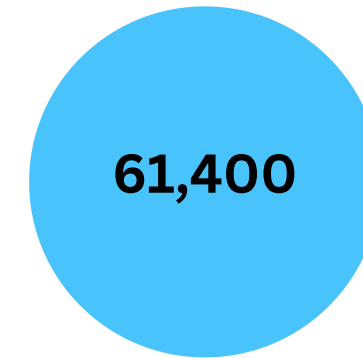
5.9 GW

Ynni adnewyddadwy ar raddfa fawr
Large scale renewable energy



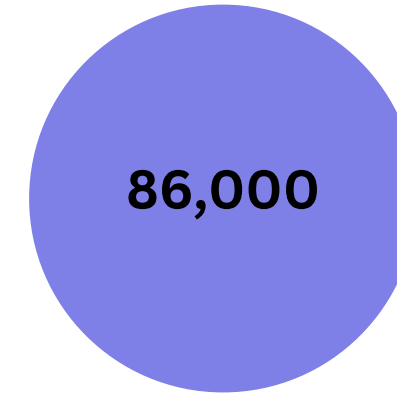
**3.6 Miliwn/
Million m²**

Gofod llawr annomestig wedi'i drawsnewid i pypiau gwres
Non-domestic floor space converted to heat pumps



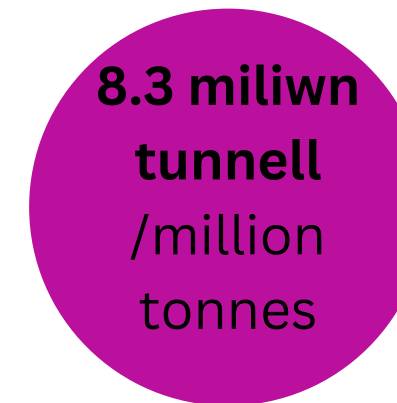
61,400

Cartrefi wedi'u hôl-ffitio ag insiwleiddio llofft neu wal
Homes retrofitted with loft or wall insulation



86,000

Pypiau gwres domestig wedi'u gosod
Domestic heat pumps installed



**8.3 miliwn
tonnell
/million
tonnes**

CO₂e wedi'i arbed
CO₂e saved

Amcangyfrifir bod y newidiadau yn y CYALL yn costio £2 biliwn yn ychwanegol.

The changes in the LAEPs are estimated to cost an additional £2 billion.

**Am ragor o wybodaeth am y CYALL a'r gefnogaeth sydd ar gael i chi,
trowch at: www.tyfucanolbarth.cymru/Ynni+SeroNet**



For more information on the LAEP and
the support that's available to you, visit:
www.growingmidwales.co.uk/Energy+NetZero