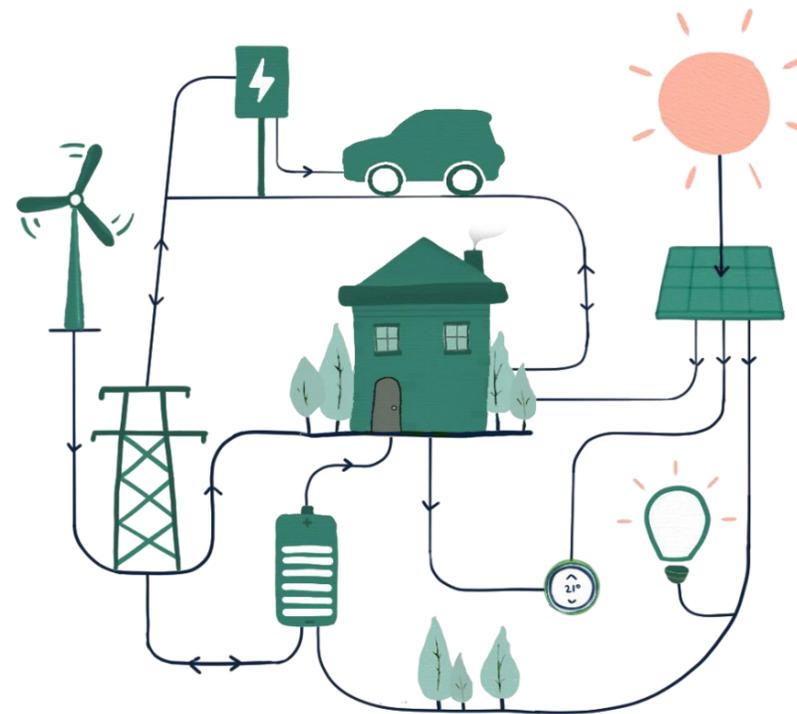


Optimised Retrofit

Recruit, Train and Equip Welsh Construction

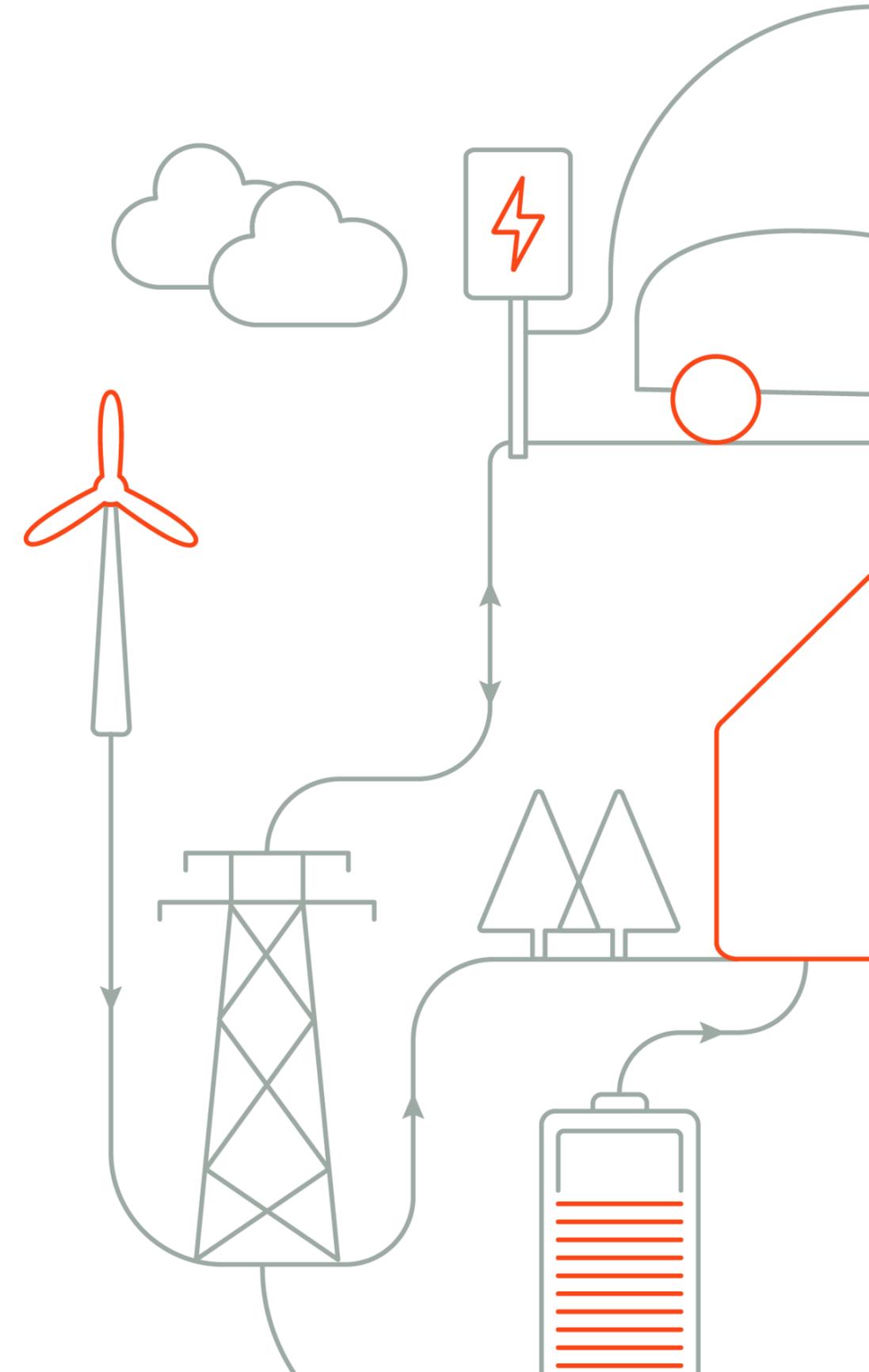
8th June 2021



The Welsh Government Optimised Retrofit Programme

Alun Watkins

Tuesday 8th June 2021



The burning questions...

What is a climate emergency?

Government acceptance that climate change resulting from human activity (such as emitting carbon dioxide through burning fossil fuels) exists and *that previous measures to limit it are insufficient.*

What is the Welsh Government's view?

WG officially declared a Climate Emergency in 2019. This built upon previous legislation such as the Wellbeing of Future Generations (Wales) Act 2015. In recent months WG has committed to reaching "Net Zero" by 2050 but with aspirations to reach that target sooner. Significant funding will be committed to achieve this.

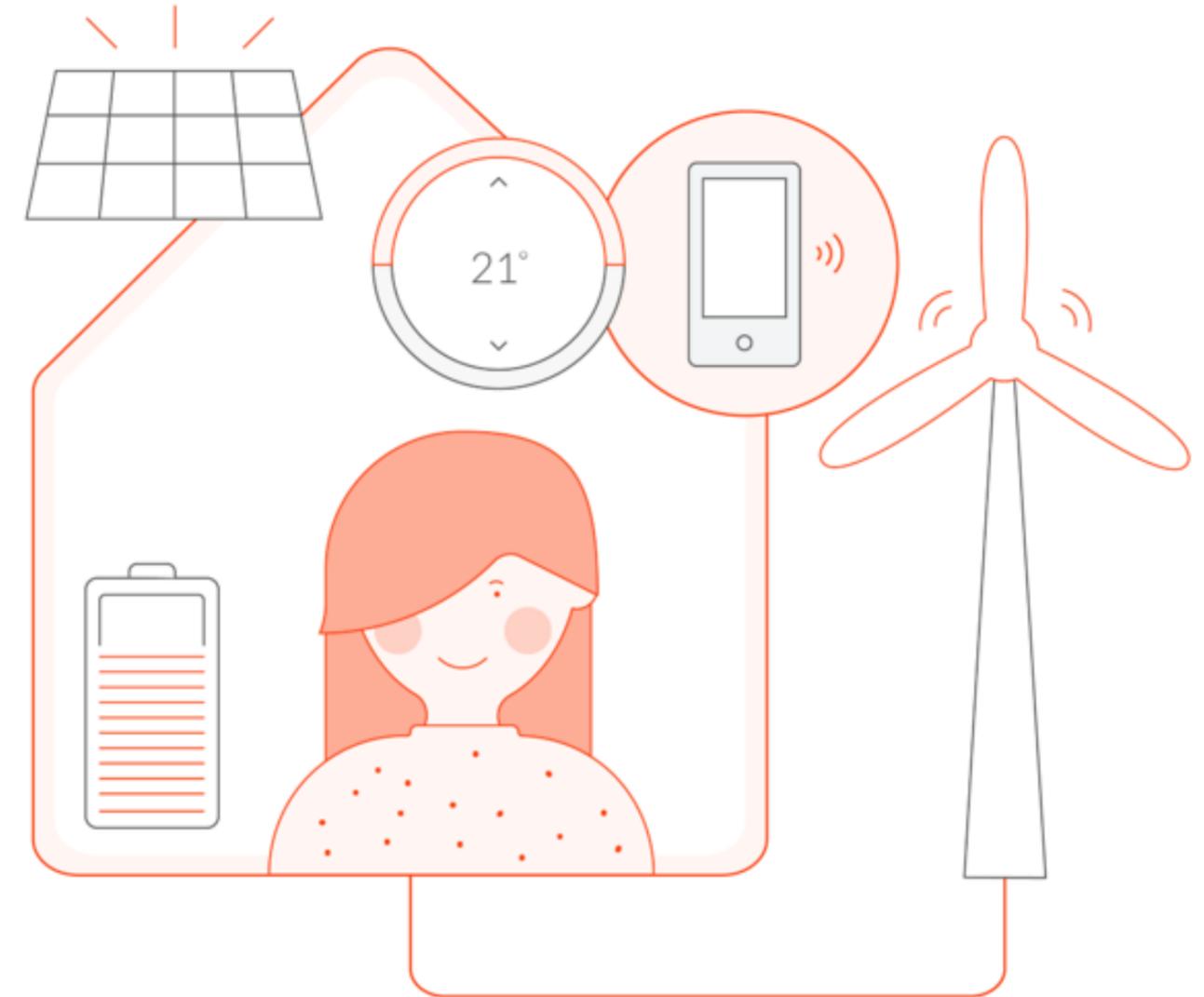
What is Net Zero Carbon?

Restoring the balance between the carbon emitted into the atmosphere and that removed from it by natural processes such as photosynthesis.



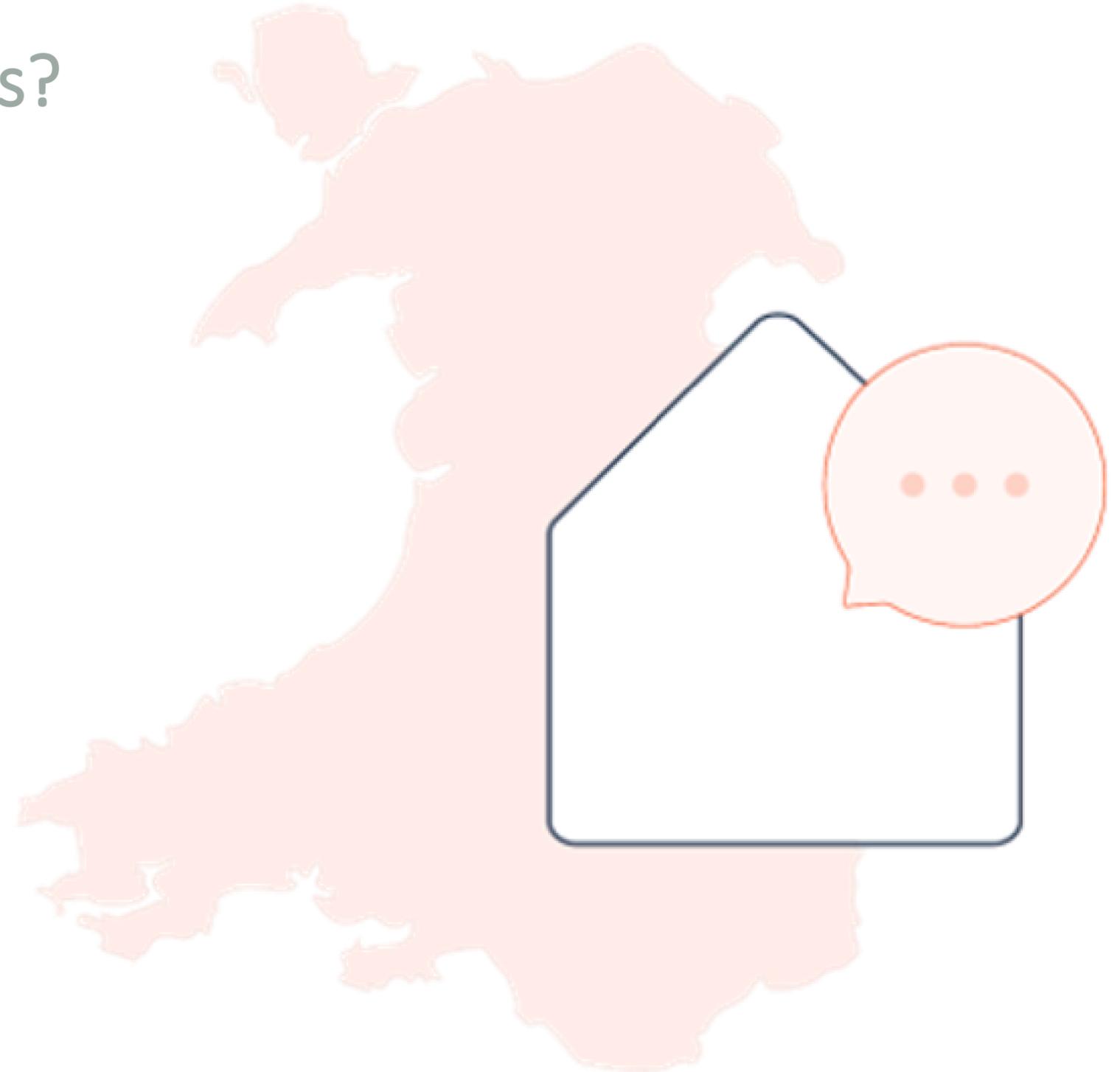
Why 'Retrofit' homes?

- ⚡ 40% of Carbon Emissions are from buildings, half of which occur during construction
- ⚡ The other half are caused by producing power for the way we occupy buildings – heating, hot water, cooking, lighting, plug-in appliances
- ⚡ Heating is the biggest issue, followed by hot water
- ⚡ Electrification - Gas will be phased out from homes as it involves Carbon Emissions at the point of use
- ⚡ Electricity production is gradually being "decarbonised" expanding use of renewables in place of coal and gas
- ⚡ New build regulations are being tightened and 'Net Zero' innovations are ongoing
- ⚡ However, 80% of the buildings which we will be occupying in 2050 are already built

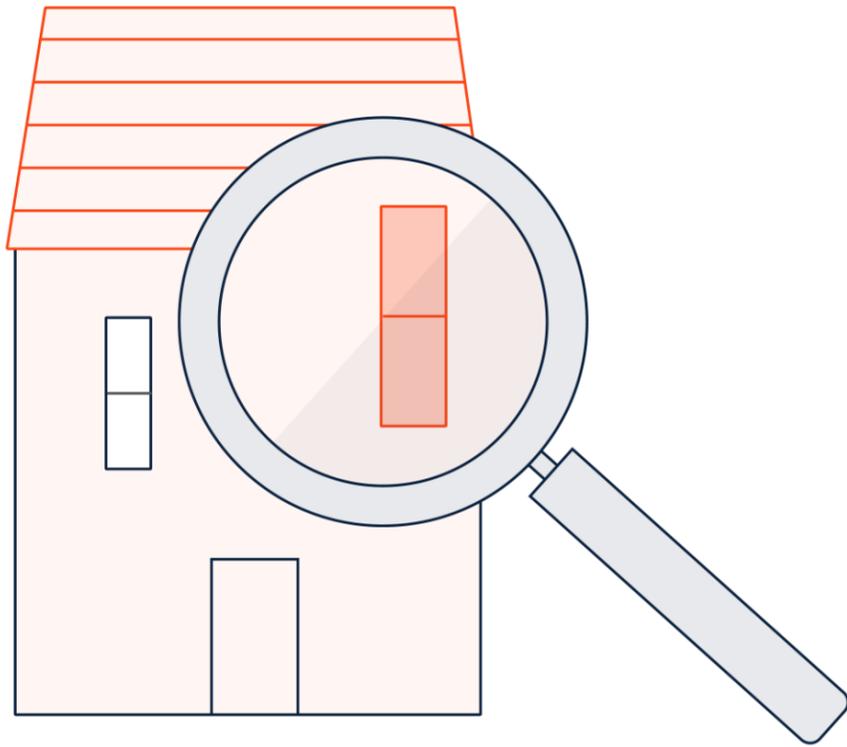


What does this mean for homes in Wales?

- The Optimised Retrofit Programme is part of the Welsh Government's response to the Climate Emergency.
- 'Optimised' refers to the fact that potential improvements for each home are different but each will need to be upgraded in the best possible way
- 2021: Retrofit of first 1,724 social homes with £16.5 million of Welsh Government funding plus further funds committed by 27 Housing Associations
- Future: Retrofit of 1,430,000 homes across Wales, including privately rented and privately owned homes, will all be able to access funding through government and private initiatives



Decarbonising the UK's current housing stock

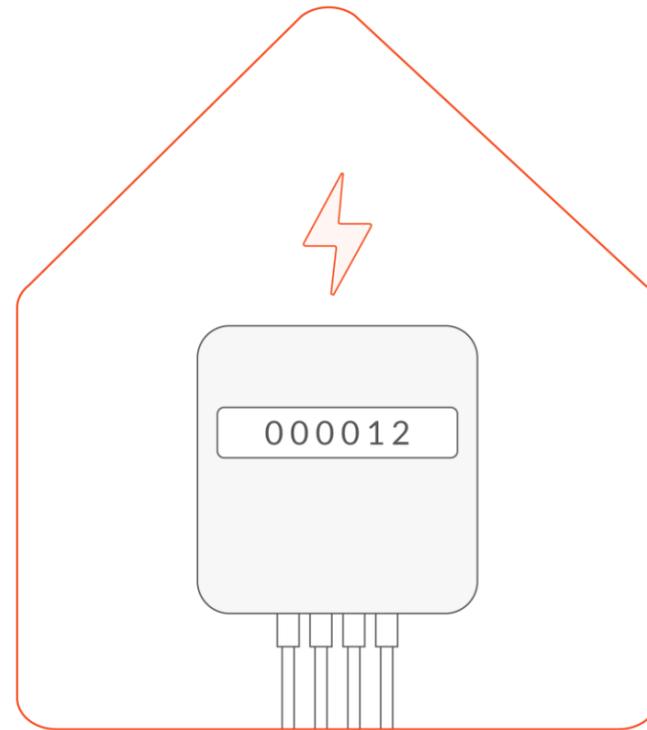


1. Reduce

"Whole Home Survey" and "Pathway to Zero" for every home using government funded apps

Enables best decarbonisation measures to be specified for each individual home

The first aim is to reduce the energy requirements of each home by upgrading the fabric *at the optimal time*

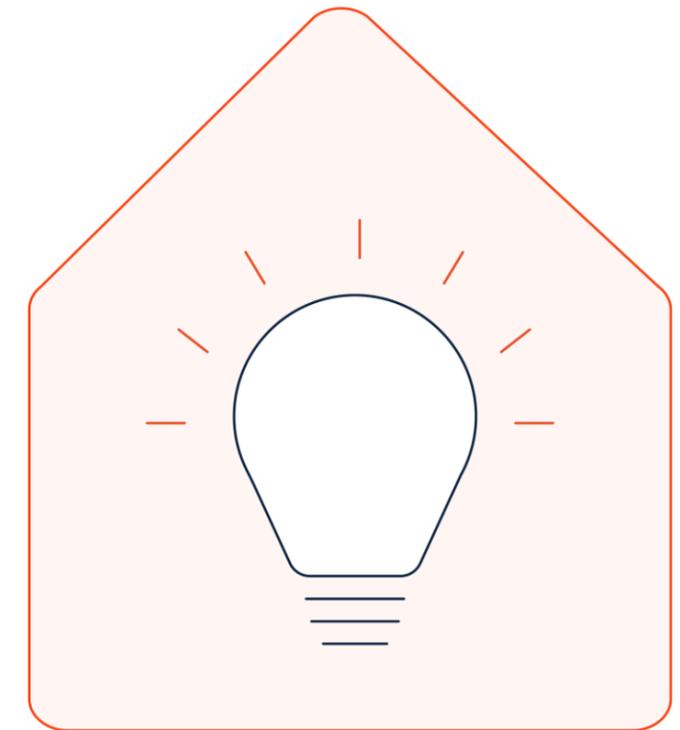


2. Balance

Smart meters enable energy demand to be monitored in real time not estimated, so the National Grid provides power exactly when needed

Intelligent Energy System (IES) in each home for efficient control of heating and hot water

Battery storage and hot water tanks allow wind and solar energy to be stored for later use



3. Generate

Photovoltaic solar panels for individual homes

Ability to share generation throughout neighbourhoods

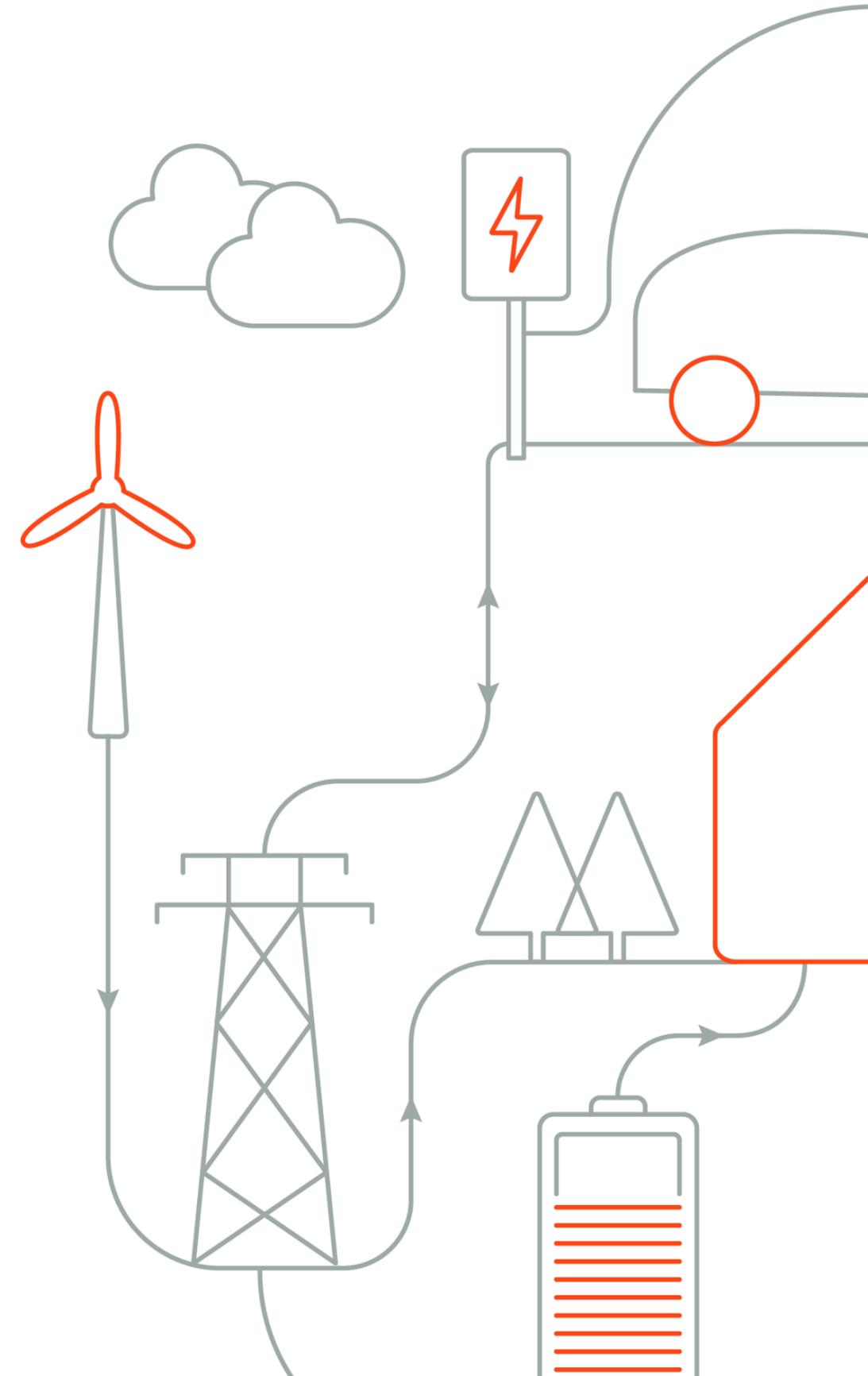
Heat pumps to make generation of heat using electricity affordable

Thank You

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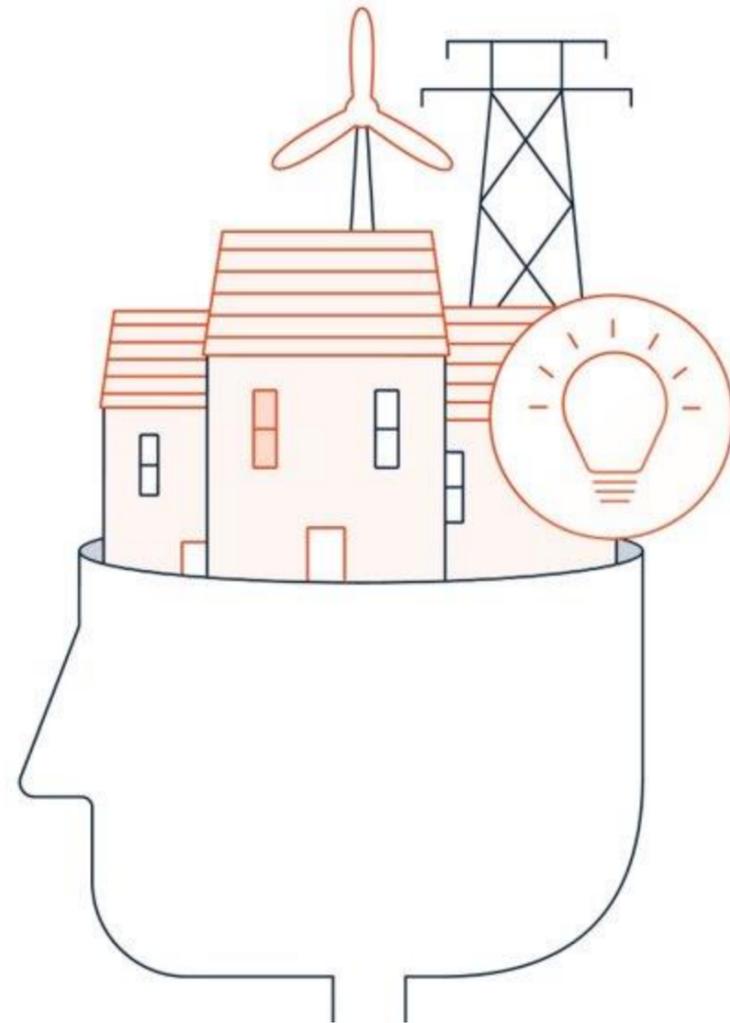
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sero



Optimised Retrofit

Green Skills Action plan



Optimised Retrofit

Implications for Skills

- Cultural Changes-all jobs will require higher levels of green building awareness, for new entrants to existing workers
- Skills Development-updating existing skills to take account of the increased need for green technology
- Specialist Skills-where there will be significant changes in roles-especially professional-architecture and engineering, as well as new innovations, MMC and digital construction

Optimised Retrofit

Analysis of Demand

- The majority of skills demand, in the majority of skills sets being limited to adaptations rather than new skills areas-research seems to suggest 1 in 5 jobs affected re net zero, with 1 in 10 jobs needing skills updating. Based on Cambridge Policy consultants work in Scotland 2020
- Most of the training need in traditional construction , will be relatively small scale, with a gradual change over time for apprentices and sector entrants
- New Technology and specialist fit out, may require more intensive and specialist training, with possible new jobs emerging

Optimised Retrofit

What are we doing?

- Working with the ORP training and skills group, we are mapping the skills adaption needed in core trades and professions against existing frameworks
- We have three sub groups, working with SMEs, Technology development and Colegau Cymru
- We are also actively involved in the Green Apprenticeship Advisory Panel, on three sub groups, in Energy, Battery Tech/EVs and Carbon Zero Construction
- We also looking to identify the emerging new green jobs and skills sets

Optimised Retrofit

Final Thoughts

- The sector is changing to meet the challenges of green, zero and sustainable building
- We need to build on the skills base, by delivering competence, access to quality training and access to all
- This is evolution and not revolution—you are all needed and we are here to support



WELSH RETROFIT

DYNAMIC PURCHASING SYSTEM (DPS)

Contractor Onboarding

Objectives



Involvement of SMEs' and micro-SMEs' and, through the delivery of decarbonisation work, the potential to grow these businesses from Tier 3 to Tier 2 and Tier 1 status

Materials separate from installers/suppliers

Whole Wales coverage

Aim to grow the market (DeCarb Army)

DPS



Geographical Lots
Range of contract values
Workstreams to meet all needs
Reduced accreditation requirements
Support for companies not yet ready to join

DPS

All procurement activity must be electronic

Bidders can join the DPS at any time during the framework term

The term can be longer than the normal 4 years

Each award under the DPS must be via a mini-competition, but there is significant flexibility around the scope and scale of each project to be subject to a mini-competition.



How will you know

Large promotion

Trade Bodies

Existing knowledge of project members

Meet the buyer events

Want to know more ?

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Paul Gibson





Formed in 1962

We provide energy efficiency, mechanical, electrical, plumbing and gas maintenance and installation services to housing associations, local councils, NHS and Cardiff University. Full in-house design service.



Arbed



Llywodraeth Cymru
Welsh Government

Solar PV
Solar PVT
Solar Thermal
Battery Storage
Thermodynamic Heat Pumps
Electric Vehicle Charge Points
Commercial and Domestic Gas
Air Source and Ground Source Heat Pumps
Flue Gas Heat Recovery Systems
Wind Turbine Installation
External Wall Insulation
Voltage Optimisation
Loft Insulation
CHP

Accreditations

GAS SAFE Reg No 2413

CONSTRUCTIONLINE GOLD MEMBER Reg No 32243

NICEIC Reg No 501583000

HETAS Reg No 1293

SOLAR PHOTOVOLTAIC MCS Reg No NIC1216

SOLAR THERMAL MCS Reg No NIC1216

HEAT PUMPS MCS Reg No NIC1216

OFTEC Reg No W/28381

IOGE Registration No A/9582

ACOP Asbestos Awareness

BESA Reg No HV010730

CHAS

FGAS Ref 1012196

Optimised Retrofit Programme

Heat pumps

Solar PV with battery storage

Solar Thermal

Car charging points

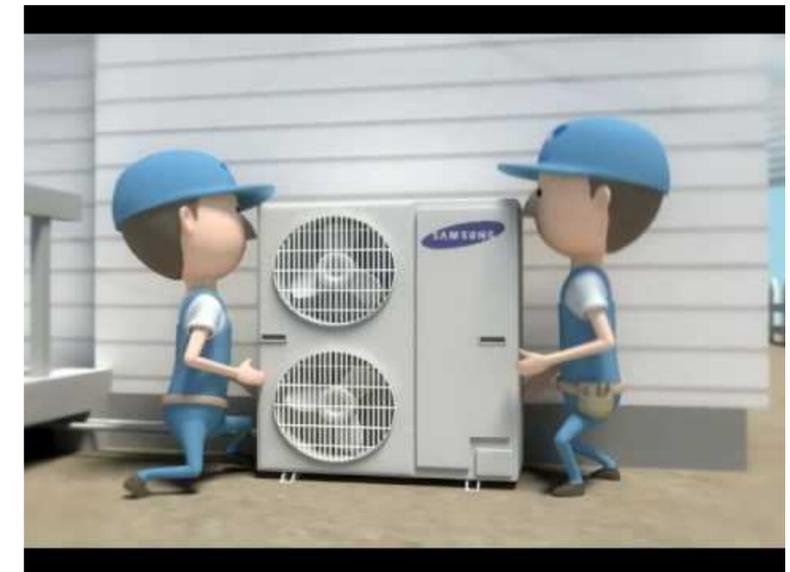
Loft insulation

EWI

District heating



Llywodraeth Cymru
Welsh Government

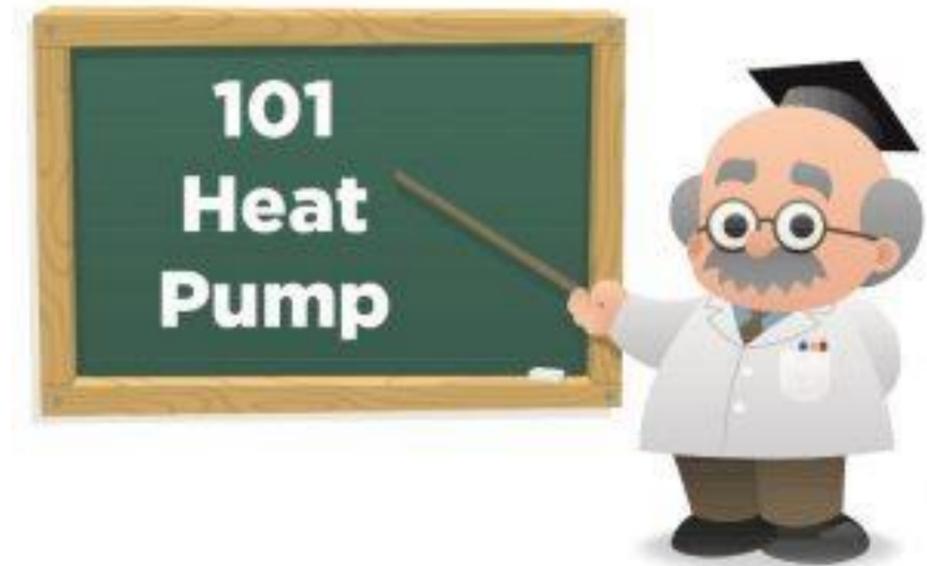


Optimised Retrofit Programme

Skills shortage / Apprentices

Mentoring SMEs / Support

Training / Qualifications

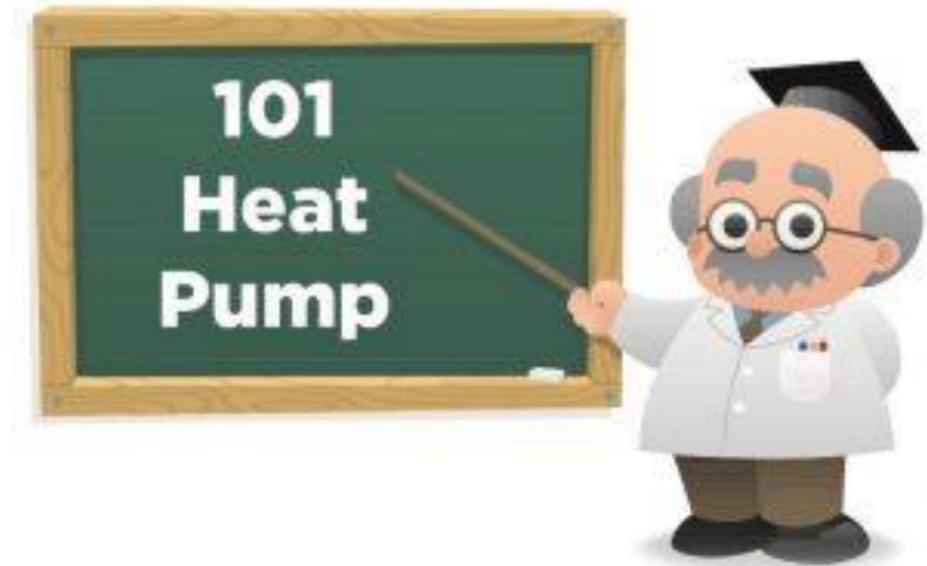


Optimised Retrofit Programme

Skills shortage / Apprentices

Mentoring SMEs / Support

Training / Qualifications



Optimised Retrofit Programme

Why get involved now?



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