Heat Pumps, Solar, and Battery Storage for home and business – The basics

14/11/2024

In partnership with

Herefordshire, Ludlow & North Shropshire College

What we're going to cover

- Investing in tech – where to start
- Solar panels – are they right for me?
- Solar panels – installation and beyond
- Battery storage – considerations and making the most
- Heat pumps –key considerations, getting ready for a heat pump

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Gareth Ellis

Sustainability and Climate Change Officer -
Herefordshire Council

Where to start - Get energy savvy

- What do you use electricity and gas for?
- Know your electricity and gas costs and know your tariff
- Understand how much energy you need
  - Day/week/year
  - Winter and summer

The cheapest hour of energy is the energy you don't use

Where to start – Your space and stuff

Are you using energy efficiently?

- Lighting
  - LEDs and sensor controls
- Appliances
  - Modern, high efficiency, control
- Heating
  - Insulation, draughts, controls

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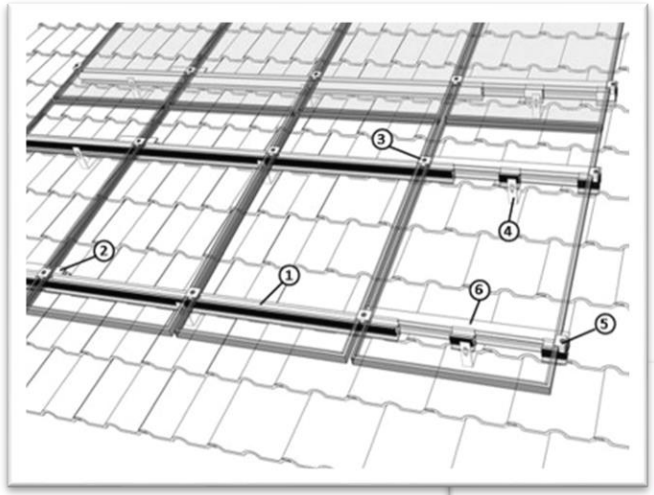
Phil Kitchener

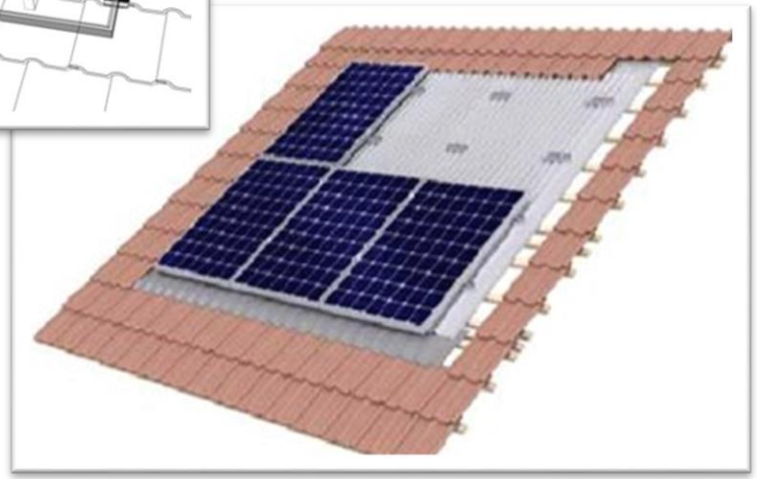
Training coordinator -
Low Carbon Technology
Training Centre

Herefordshire, Ludlow & North Shropshire College

Solar panels
Are they right for my home / business?

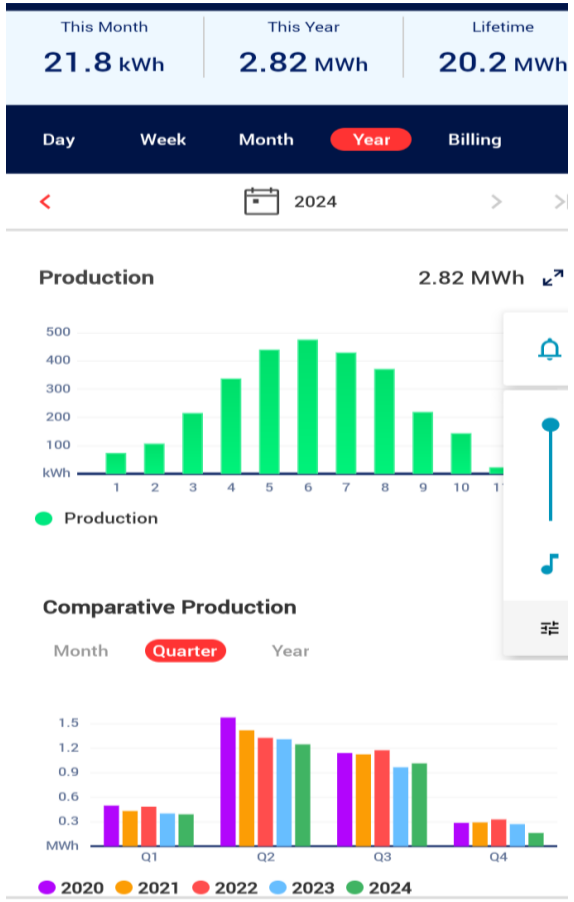
- What do we mean?
- Orientation and angle implications
- Your roof - strength, covering and conditions, shading
- Maintenance requirements?





Speak to installers!

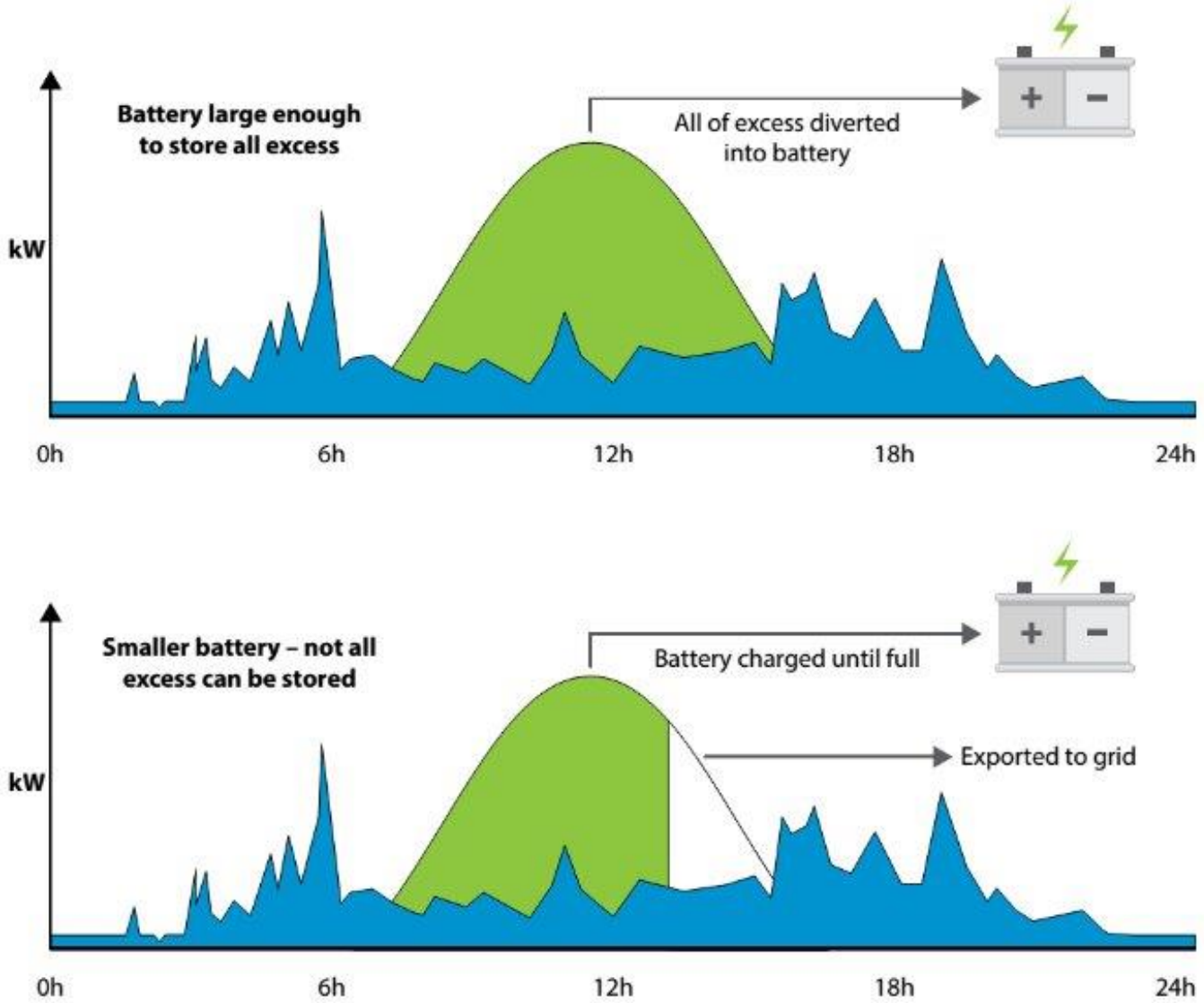
Solar – Installation and beyond



- Measure your generation and know what your using/exporting
- Getting the most out of your system - financial
  - Using
  - Exporting
  - Storing

Battery storage

- What do we mean?
- Solves mismatch between generation and demand - Matching to PV generation
- Tariffs and time of use
- Maximise the value of energy generated



Battery storage Practical considerations

- Size and location
- Who can install it? Safety?
- What kind of size is suitable for me, home and business?
- Are they really expensive?

Speak to accredited installers

Battery storage – Making the most

- Is there any point if I don’t have solar?
- Combined tariff and storage
- Electric vehicles

Solar and batteries are great at reducing electricity consumption – they don’t affect heating UNLESS you’ve got a heat pump.

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Low Carbon Tutor -
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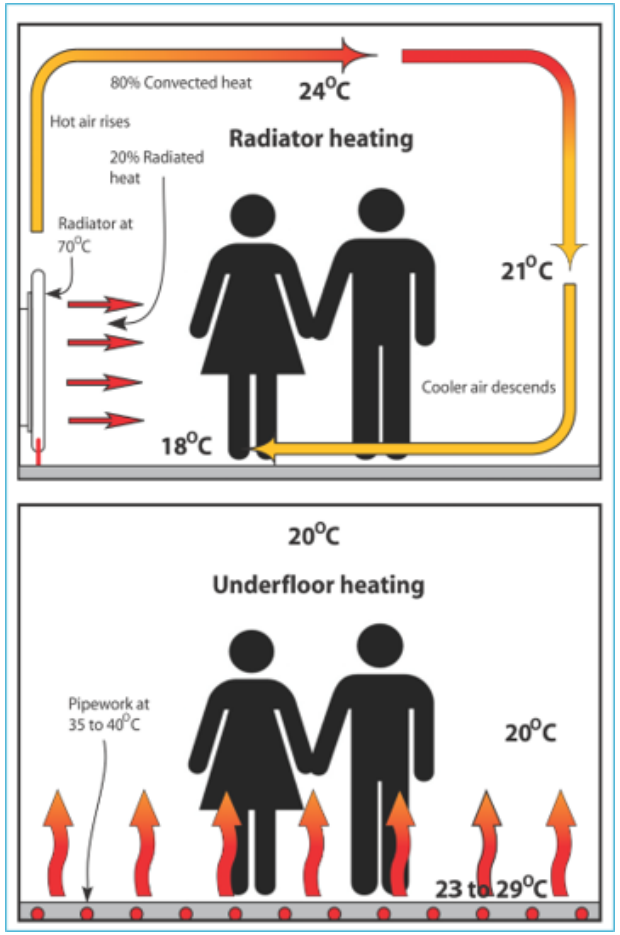
Heat Pumps – What do we mean?

- Differences in Air Source Heat Pump, Ground Source Heat Pump and air to air systems
- How do they work?
- Comparing to your gas/electric system

Heat Pumps – Considerations



- Cost to buy/cost to run
- Placement – Outside/ inside space required
- Capacity/ sizing
- Temperature range
- Radiators

Why would I want one anyway?

Are they really noisy?

Heat Pumps – Getting Ready

- Getting ready for a heat pump – now or in the future
- Building fabric and radiators
- My gas boiler is fine, for now, should I be looking at a heat pump?
- Key points including understanding heat output, correct system sizing

Heat Pumps – Installation and beyond

- Using the system
- Timer, controls etc.
- Maintenance
- Air con and other capabilities

Investigating further

- Find installers
- Check installers accreditations
- Check planning including permitted development

- Get multiple designs and quotes
  - Does your quote include everything?
  - Will your install affect insurance?
  - Quotes vs Estimates

Links to funding and further info

Find out more about the Low Carbon Technology Training Centre and courses
Low Carbon Technology Training Centre (LCTTC) - HLNSC

Find MCS Installers
Find a Contractor - MCS

Marches Energy Grant for businesses
Marches Energy Grant - Marches Growth Hub

Herefordshire Council's Greener Footprints website, including previous webinars:
Home - Herefordshire Zero Carbon and Nature Rich

Thank you for your time

Any questions for our speakers?

Get in touch: climate@Herefordshire.gov.uk