

LOW CARBON OXFORD NORTH

Go Solar for Cooler Homes

SolarPV + Batteries + Heat Pumps

Tuesday 13 October 2026 · 7pm

Woodstock Road Baptist Church

Guy Hargreaves, Chair Low Carbon Oxford North

GOALS

Can we control summer home overheating?

1

**A cooler home
during heat waves**

Air-Source Heat Pump

Your existing/new air-water ASHP can both heat and cool water; your air-air ASHP can heat and cool air!

2

**Minimise additional
summer home energy cost**

Add solarPV

Configuring your ASHP to cool in summer will add £ to your electricity bill. SolarPV is the perfect offset to higher summer energy demand!

3

**Optimise your solarPV and
time-of-use electricity tariffs**

Add home battery

Home overheating doesn't always stop at sunset. A home battery can shift excess SolarPV generation into the evening for cooling.

A BIT OF JARGON

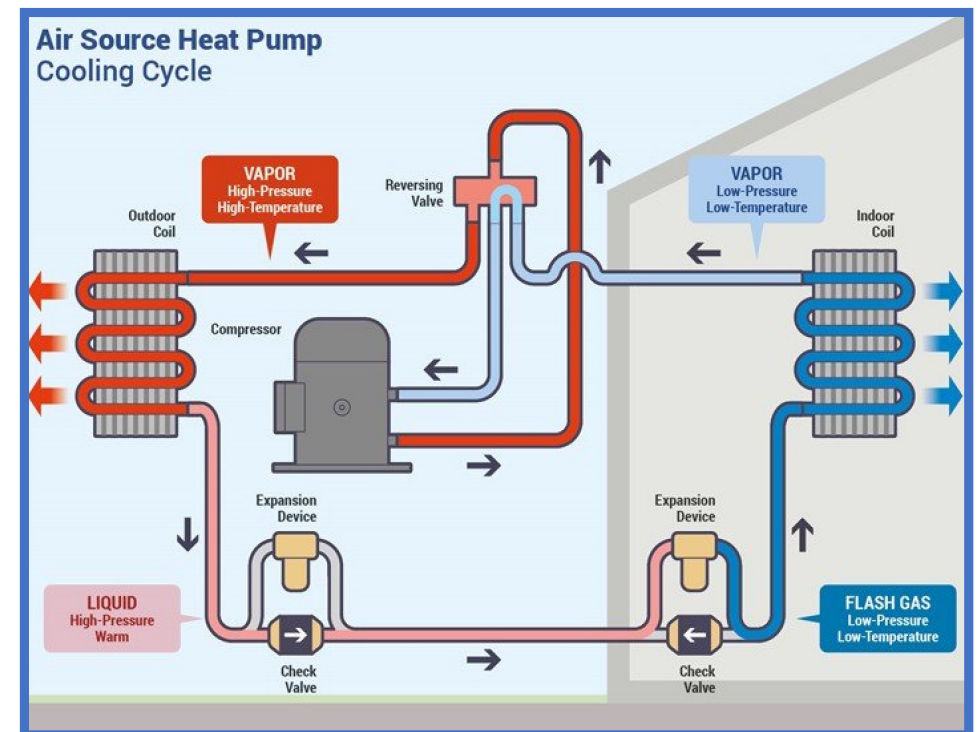
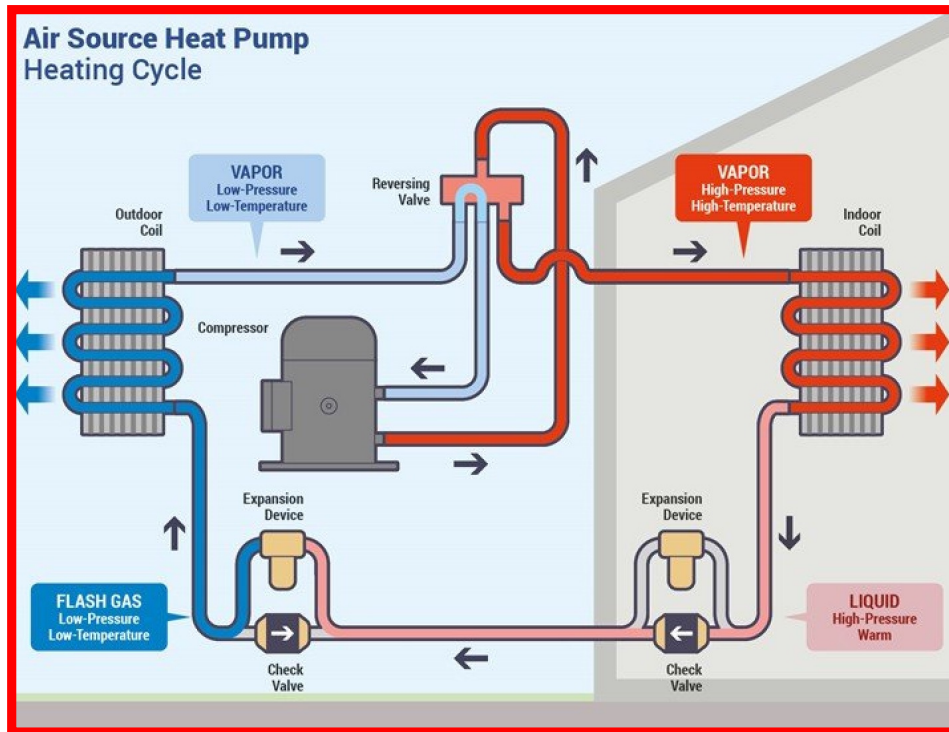
A/C, air-water, air-air, ASHP,.. OMG!

- ✓ A/C or air conditioning is simply heating or cooling the air in your home for comfort
- ✓ Air-water refers to an ASHP that heats or cools water that can be used in under floor, radiators, hot water for washing, cleaning etc
- ✓ Air-air refers to an ASHP that heats or cools air able to be fanned into your home for comfort
- 👉 All of these devices are based on air-source heat pumps



THE TECHNICALS

Does my ASHP really cool? – Yes!



CHOOSING YOUR SETUP

So how might I cool my home?



Whole home, or some rooms?

Design scheme for your budget and life



Go all electric, or not?

Air-water -> probably go all electric
Air-air -> add to existing gas heating?



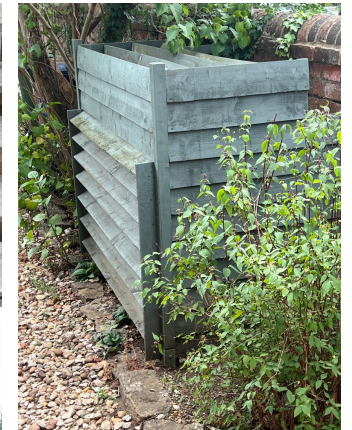
How to deliver cooling?

Underfloor, radiators (fan), MVHR?
Air-air wall units?



Get advice on performance, risks:

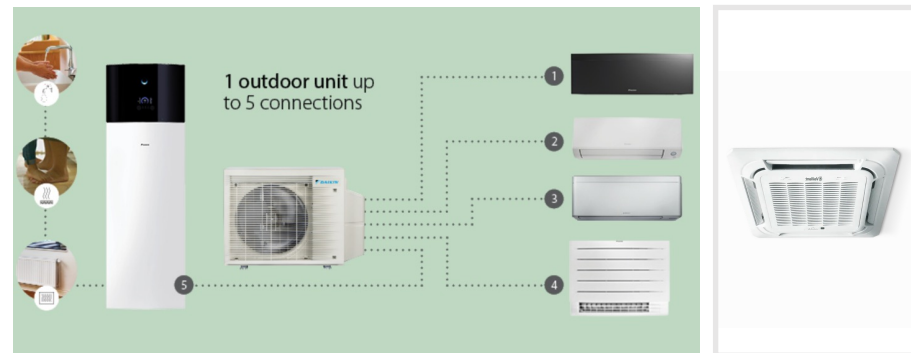
Mitigate condensation risks – important!
Will your cooling be effective?



INNOVATION

Combination product offerings on the rise:*

- ✓ Daikin X Series (released July 2026)
- ✓ Combines air-water for radiators and hot water, and air-air for heating / cooling
- ✓ Run one hot water cylinder and four air-air devices off one outdoor unit

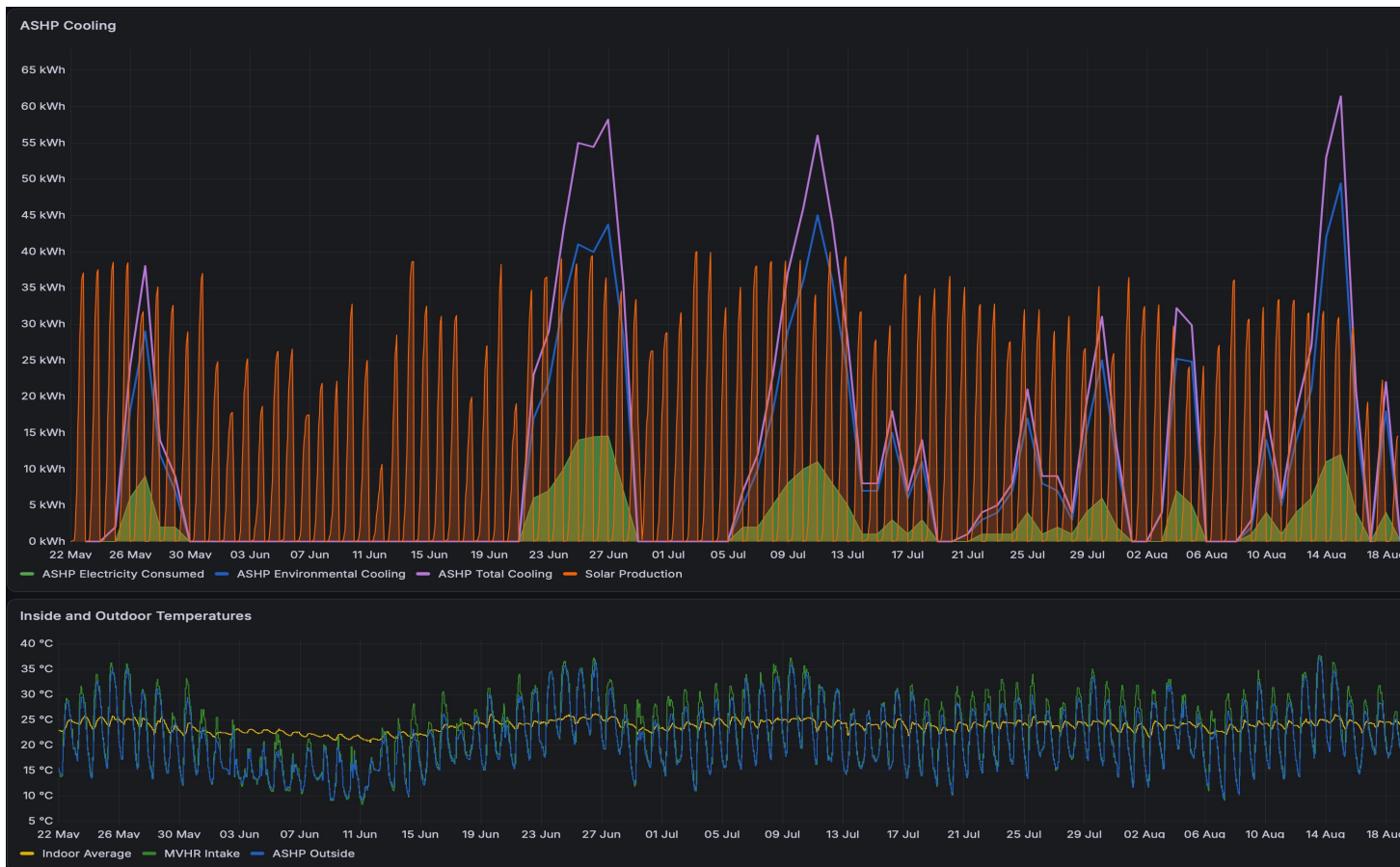


- ✓ Vaillant aroTHERM +
- ✓ Air-water for hot water
- ✓ Air-water to a variety of aroVAIR units for heating / cooling



* LCON does not make specific product or brand recommendations. The products listed in this slide are simply examples of innovations in the current market.

Cooling demand meets solarPV supply



My ASHP Cooling 2026:

Green: Electricity used to run ASHP kWh

Blue: Environmental heat energy pumped out kWh

Purple: Total cooling kWh

Orange: SolarPV kWh

Temperatures:

Yellow: Average indoor °C

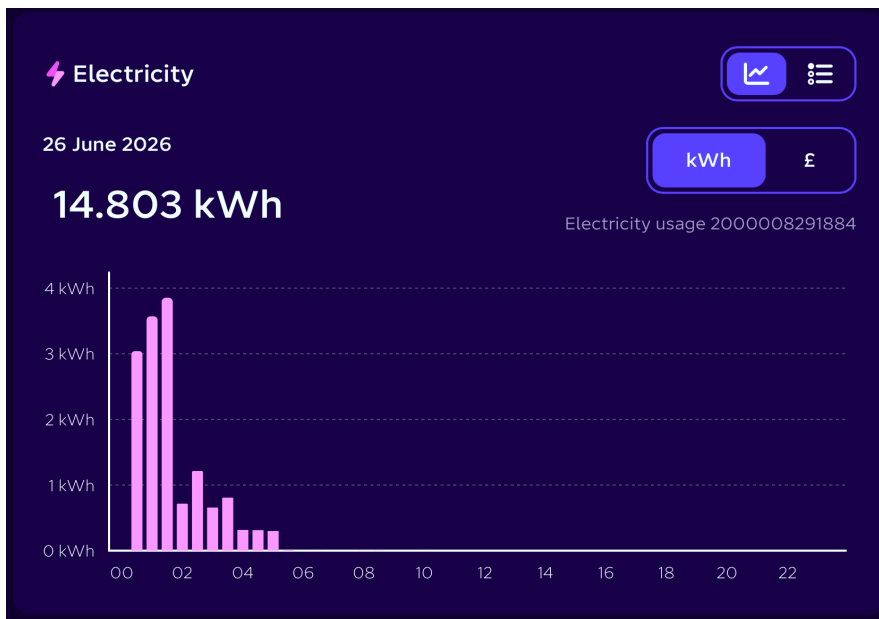
Blue: Outdoor °C

Green: MVHR °C

BATTERY TIME-SHIFTING

Batteries keep peak tariffs away!

- ✓ Our battery kept us away from peak rate tariffs on the hottest day of the year
- ✓ ASHP cooling all day *and* exports remained strong (off-peak ~8p/kWh vs export 15p/kWh)

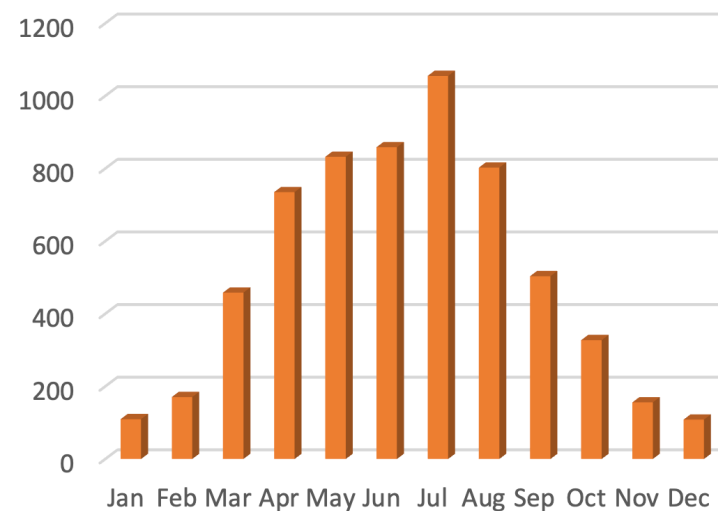


COMPLIMENTARY SEASONALITY

Warming climate ~ increasing solarPV?

- ✓ All homes have heating, but cooling is often an entirely new home energy service
- ✓ Adding cooling **may** require upfront capital expense, but it **will** increase summer electricity bills
- ✓ SolarPV **will** generate more energy in summer – providing ideal seasonal complementarity to your energy expense mix
- ✓ Increasing demand for summer cooling seems likely to accelerate home electrification

SolarPV Generation
kWh / month



NOW LEGAL IN THE UK

Plug-in solarPV & battery update

Effective 27 August 2026: plug-in solarPV ("balcony solar") became legal; plug-in batteries not (yet)



800 Watts

maximum per home



13 Amps

plugs into a normal socket



£800–£1,200

typical solarPV + battery kit



G98

notify DNO (SSEN)

Best for

Renters, flats, balconies, anywhere rooftop solar is not possible.

Not a replacement for

A proper rooftop install. 800 W is small. No Smart Export Guarantee → no grid export.

Questions?

Thank you for coming!

Low Carbon Oxford North · 13 October 2026

IMPORTANT

This presentation provides indicative estimates for general information only. It is **NOT** financial, investment, tax or procurement advice, and must not be relied upon as such. All figures are modelled from assumptions, involve simplifications, and are neither a quote nor a guarantee — your actual costs, savings, repayment time and returns will differ, possibly materially. Tariffs, prices, battery performance and regulations change over time. Obtain written quotes and consult a suitably qualified independent adviser before making any purchase or investment decision.