zenergi

30 April 2024

Energy solutions to protect your budget and accelerate your Net Zero journey

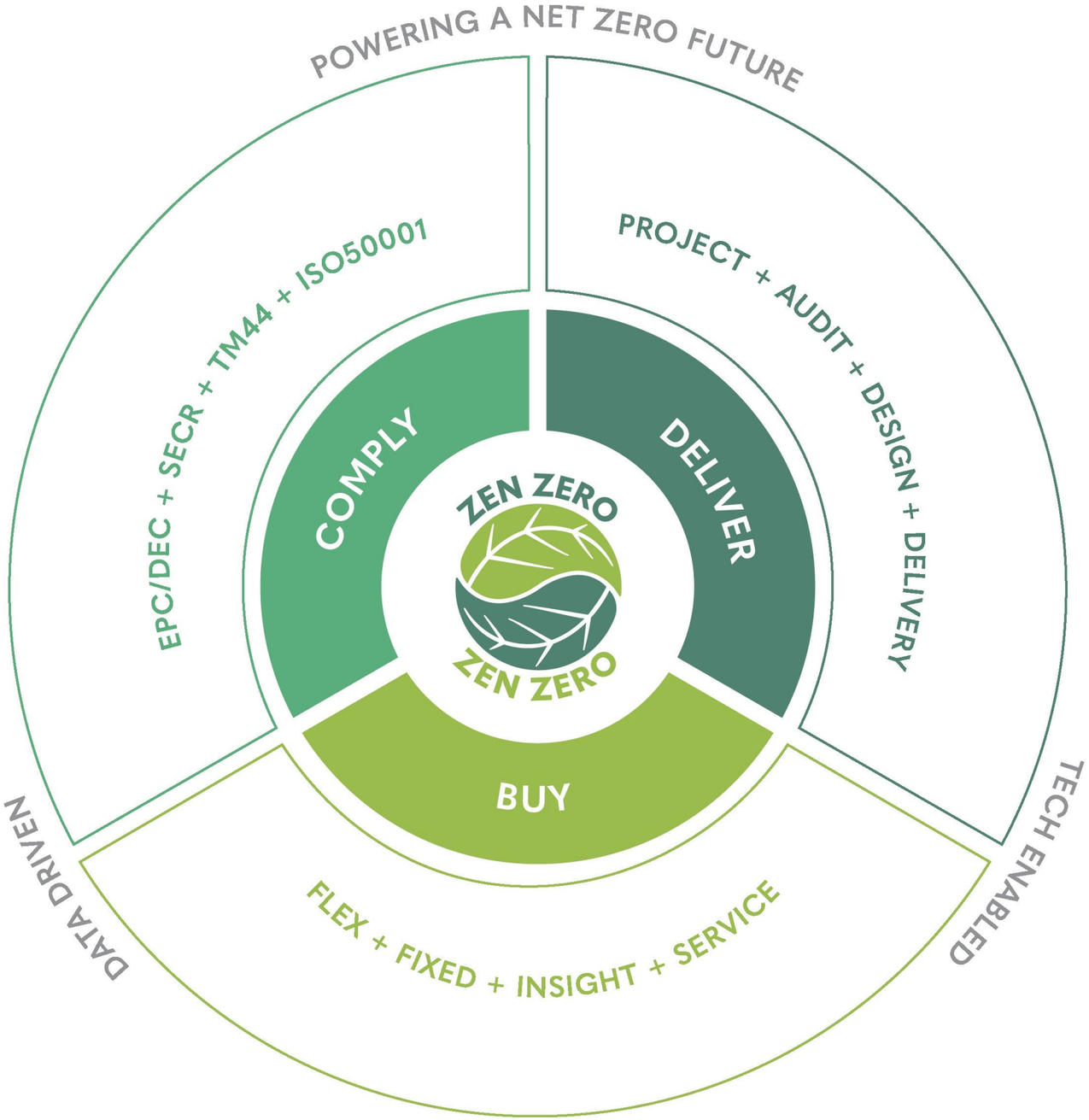
COMPLY
DELIVER
BUY
NET ZERO

About us

Zenergi supports and empowers your journey to net zero. With a unique range of services, we tailor sustainable solutions for our customers.

We drive major reductions in costs, energy consumption and carbon emissions with our market-leading procurement service; informed advice, and unrivalled engineering expertise.

Let us simplify and accelerate your journey to a more sustainable future, we’re here to guide you every step of the way.



Our services

Comply

Fulfil your regulatory obligations and safeguard your future operations.

- Display Energy Certificates (DECs)
- Energy Performance Certificates (EPCs)
- Energy Savings Opportunity Scheme (ESOS)
- Minimum Energy Efficiency Standards (MEES)
- Streamlined Energy and Carbon Reporting (SECR)
- Supply Chain Carbon Reporting (Scope 3)
- Transport Audits (ESOS & insight)
- Air Conditioning Inspections (TM44)
- Energy Management (ISO 50001)

Deliver

Optimise your utility usage, minimise environmental impact and achieve net zero efficiently.

- Energy Training (Awareness)
- Energy Surveys (ASHREA)
- Heat Decarbonisation Plans (HDP)
- M&E Design (RIBA Stages)
- M&E Condition Surveys
- PPM & Asset Surveys
- Electric Vehicle Charging
- Solar PV (monitor, design)
- Siteworks (Supply Upgrades Elec)
- Building Optimisation (BMS)
- Energy Intensive Industries (EII)
- Water conservation audits

Buy

Make utility management simpler, better, and more efficient.

- Energy Risk Management
- Market Watch (procurement updates)
- Energy Procurement (flex/fixed)
- PPA agreements
- Bill validation Services
- MOP & DC (metering contracts)
- Water Procurement

Net zero

Create a tailored and achievable roadmap to net zero using our unique Zen Zero methodology.

- Energy & Decarbonisation Strategies
- Carbon foot printing
- Science-Based Targets
- Zen Zero (Net Zero pathway)
- Operational Net Zero (Scope1&2)
- Accreditations (submissions)
- PAS 2060 (Net Zero surveys)

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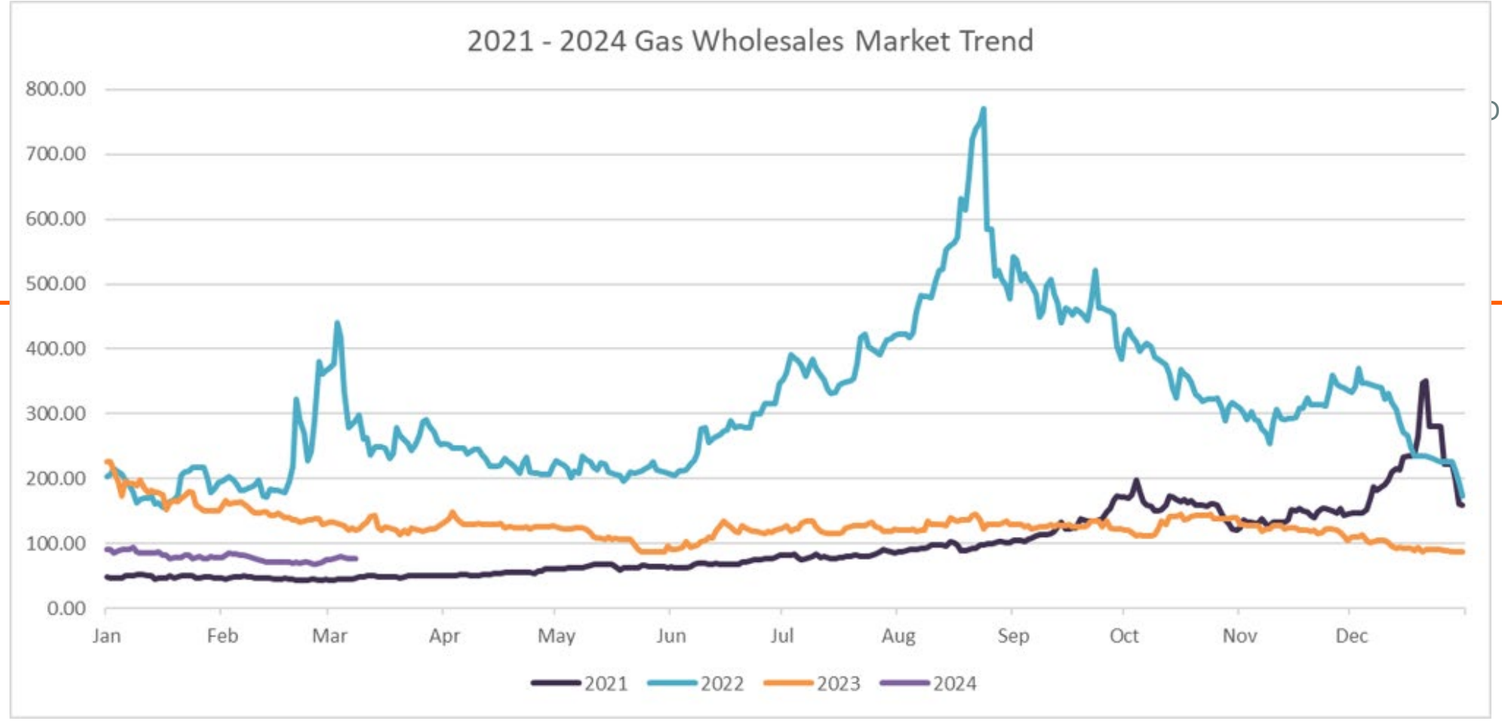
2021 - 2024 Gas Wholesales Market Trend
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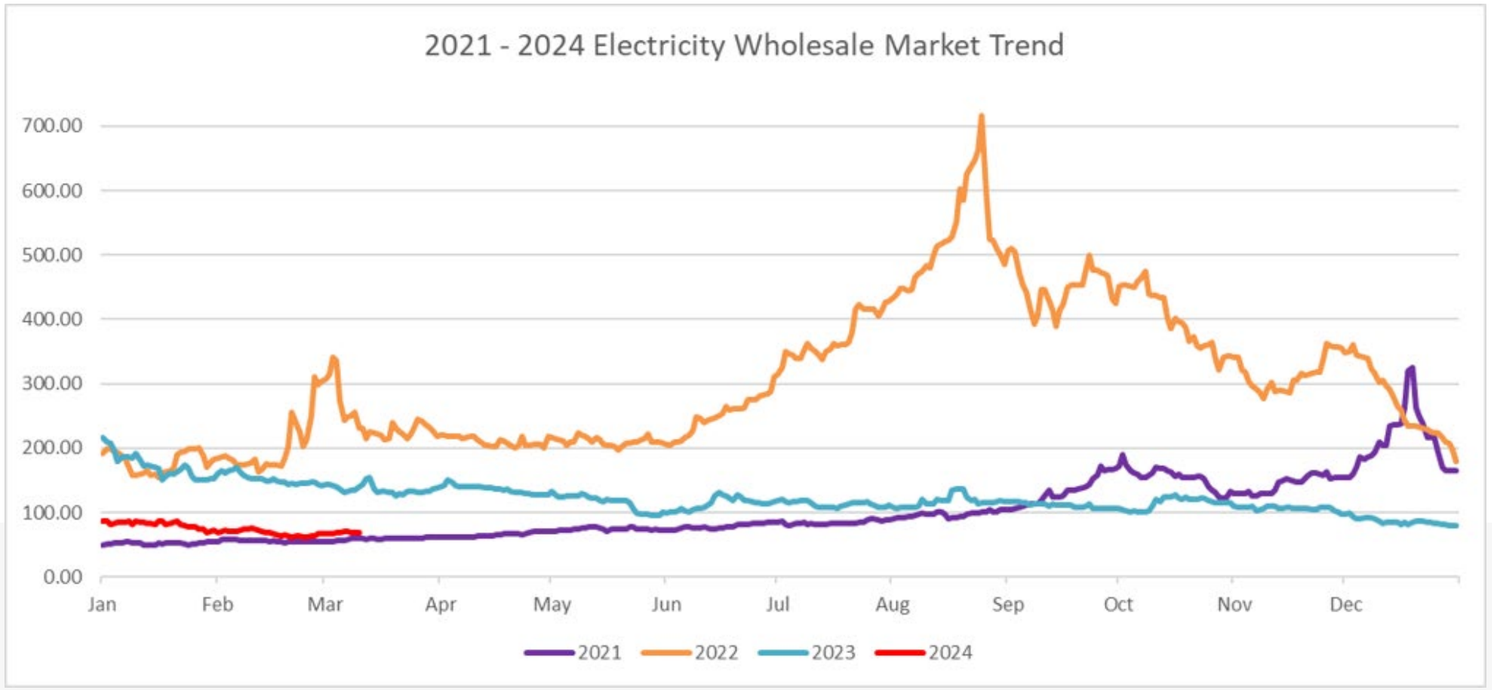
2021 - 2024 Electricity Wholesale Market Trend
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Market Watch

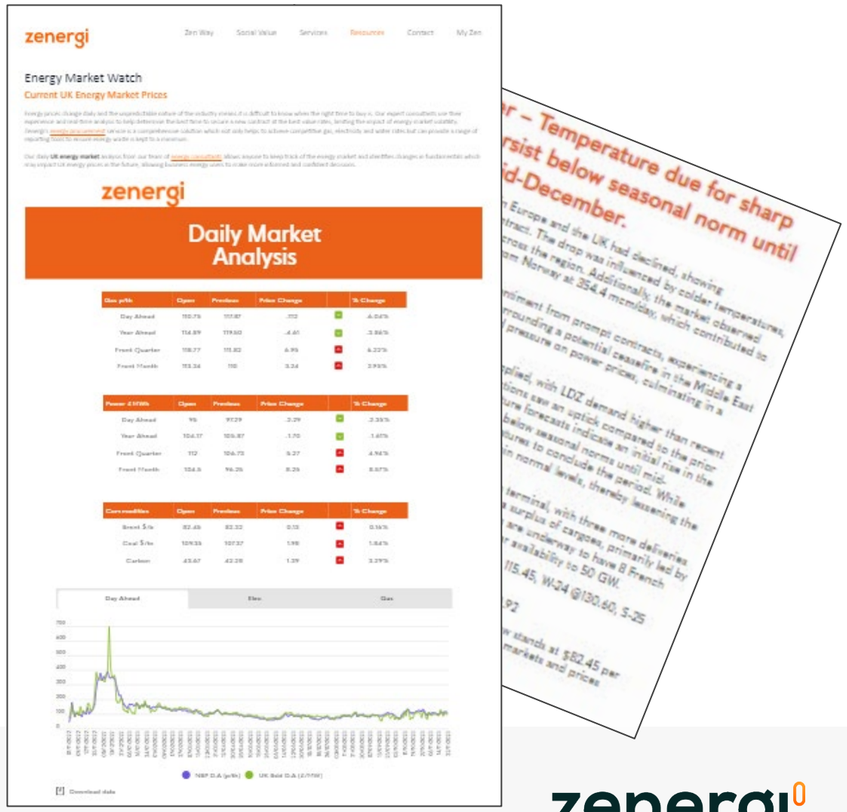
Keep up with the latest trends, news, and forecasts in the UK energy market and understand what's affecting your prices

Our daily UK energy market analysis identifies changes in fundamentals which may impact energy prices.

For customers on a flexible supply contract, we use this market insight to develop robust purchasing strategies ensuring you purchase what you need at the right time.

Benefits

+ Make more informed and confident decisions.
+ Determine the best time to secure a new contract at the best value rates.
+ Limit the impact of energy market volatility.
+ Understand the latest market changes and updated energy prices
+ Subscribe to receive the energy insights delivered straight to your inbox: https://zenergi.co.uk/market-watch/



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Tools, Techniques & Technologies for Net Zero Success

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Sustainability obligations for schools are growing…

By 2025…

+ Every education setting will have a nominated sustainability lead
+ Sustainability leads will receive carbon literacy training and be responsible for implementing Climate Action Plans
+ Schools will eradicate single-use plastic
+ A natural history GCSE will be introduced

What does your net zero plan look like?
Develop a robust roadmap

Observe, troubleshoot, audit, reduce usage

- BMS times
- Centralise printing
- Auto-switch off PCs
- Fit time switches to high usage appliances, such as hot water boilers

Invest in quick wins for energy and carbon reduction

- Insulate
- Improve boiler / ventilation controls
- Fit occupancy sensors to lighting

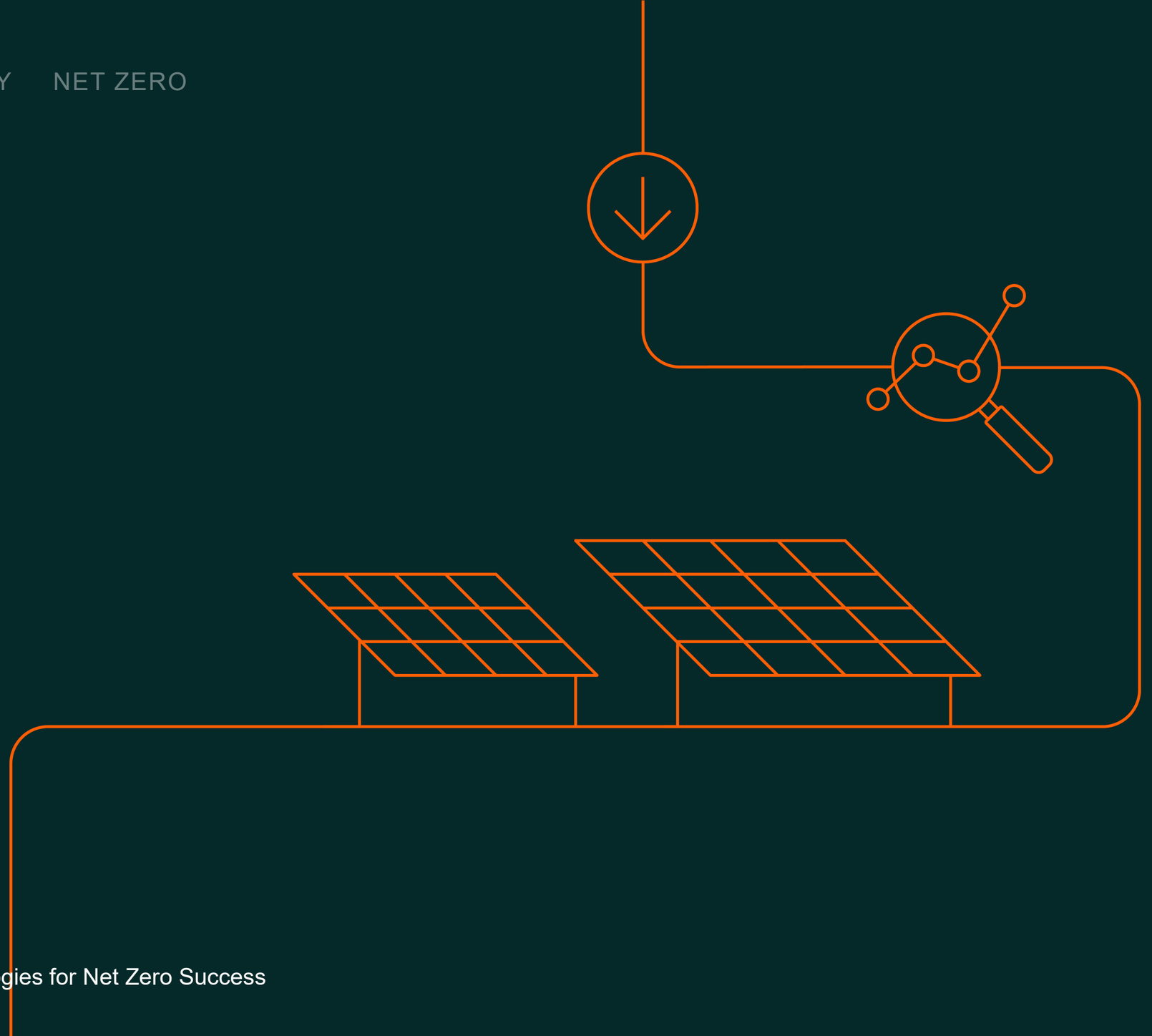
Invest in short to medium-term improvements

- LED lighting and Solar PV can reduce usage by circa 15-25% per technology

Invest in long-term adjustments

- Decarbonisation of heating systems (the above helps allow for simplification of this, freeing up capacity on the electricity supply)

Solar PV



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Solar PV
What makes a feasible location?

- Roof orientation / Angle
- Panels which face east or west can generate around 80% that of a south-facing panel.
- Even panels facing north can generate around 50% that of a south-facing panel.
- Location in the country, North / south differentials in solar irradiance
- Shading factors, from trees, rooflights, other buildings
- System design, specification of equipment and monitoring
- Planning constraints,
- Roof structure, inroof / onroof / flat roof

Solar PV
The costings

	Typical Primary School	Typical Secondary School
Roof Area (m^2):	200	500
Expected PV generation (kWh year):	21,250	56,250
System Size kWp:	25.00	62.5
Predicted average rate of electricity as invoiced p/kWh:	24	24
Site consumption (kWh):	120,000	450,000
Cost of design, equipment, installation, project management and including a contingency:	£24,750	£61,875
Value of annual generation:	£5,100	£13,500
Simple payback time (years):	4.85	4.58

Financing via a Power Purchase Agreement

How a PPA works

The system owner charges a reduced cost for the electricity generated vs. what you would usually import through the meter.

A typical system of 100kWp would generate c80,000 kWh per annum.

Buying the solar generation through this scheme at an example rate of 12p/kWh would equate to a cost of £9,600 per annum.

With electricity over double this price it brings

What makes a viable site?

An electricity supply that consumes more than 300,000 kWh per annum.

A usable roof space of 600m² that faces west, south, or east.

A roof in good condition and of sound construction (if repairs to the roof are required, the contractor can remove the panels for up to 8 weeks on as many as five occasions).

Wider considerations

How will the system be maintained?

- All maintenance costs are borne by the provider. They will typically need access to the systems 1-2 times per annum.

Safeguarding

- The providers are accustomed to accommodating schools' safeguarding policies and will not turn up without notice.

Will this system affect my insurance liability?

- The provider's insurance covers damage to systems and public liability.

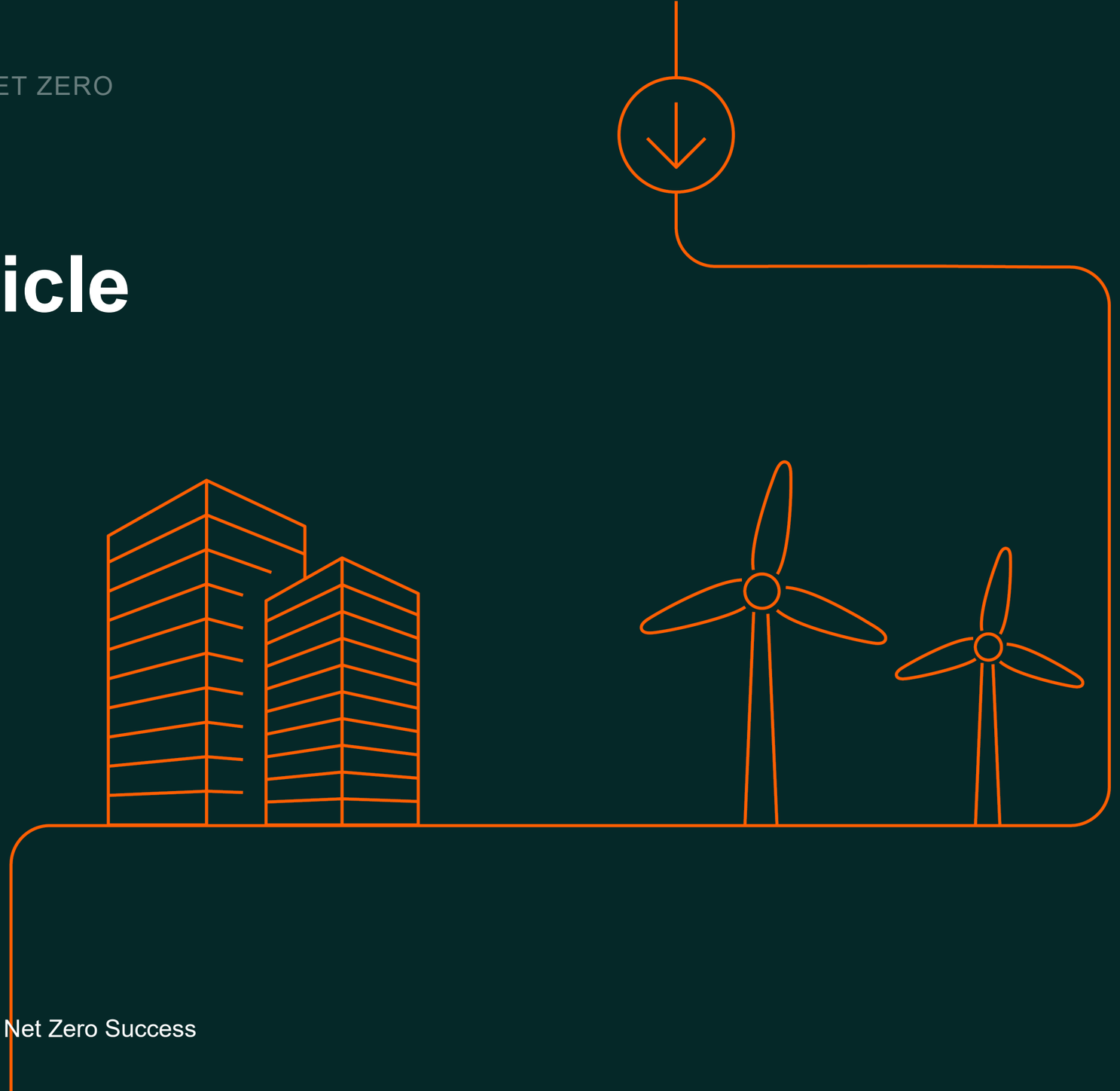
How long does the system take to install?

- Build phase takes 2-4 weeks, depending on the size of the installation. Once contracts are signed, the lead time is typically 4-10 weeks.

What happens if my building needs to be demolished?

- Should a building need to be demolished in the future you would be required to pay a 'break fee' for the lost income.
- The provider will carry out a visual survey and a structural survey before installing, which will eliminate any roof that is unlikely to be sound for the next 25 years.

Electric vehicle charging



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EV charging facilities
Benefits for your organisation

Charge your own fleet of minibuses?

Generate revenue by allowing the public to utilise charging facilities

Increase staff retention and workplace satisfaction

Corporate Social Responsibility

Help do your bit

What charger do you need for your school?
Questions to consider for the business case

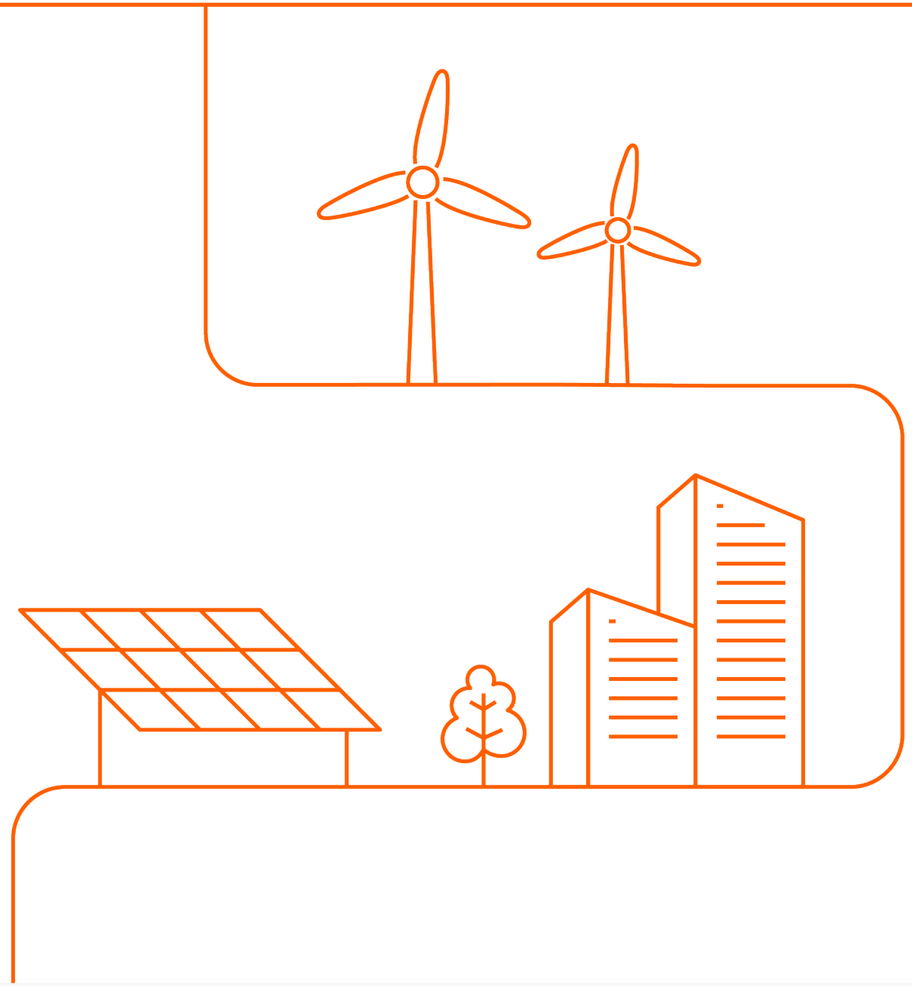
- Length of time you want people to charge for?
- Do you want to charge per hour or per kWh or not at all?
- Electric supply capacity to your site and distribution (chargers will generally spur off existing supplies)
- Car parking space/ proximity of the car park to nearest building/supply point
- Number of staff with electric vehicles that may have a charging requirement
- Number of minibuses that could be electric in the near future and their average mileage
- Can you offer it to the general public? Proximity to neighbouring terraced streets / flats where charging of EVs could pose a challenge? Location: is your site in an area that attracts visitors outside of site opening times?

Slow	Fast	Rapid
3-6 kW max	7-22 kW	43 kW+
6-12 hours to charge	3-7 hours to charge	Usually 80% within 20-40 minutes

Funding
Workplace funding scheme

- This grant is for state-funded schools and education institutions to install electric vehicle chargepoint sockets at their site(s).
- You can get 75% off the cost to buy and install chargepoints up to a maximum of:
- £2500 per socket
- 40 sockets across all sites (this includes any applications made previously through the Workplace Charging Scheme)
- Successful applicants will receive a voucher that is valid for 180 days from the date of issue. The installation must be completed within this time.

https://www.find-government-grants.service.gov.uk/grants/workplace-charging-scheme-for-state-funded-education-institutions-1



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Decarbonising your heating system

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Decarbonisation of heating systems

How do you help make your site more viable? Requires a “whole school approach”

Insulate your building - Reduce heat losses - Reduce the size and cost of the new system

Upgrade heating pipes/radiators

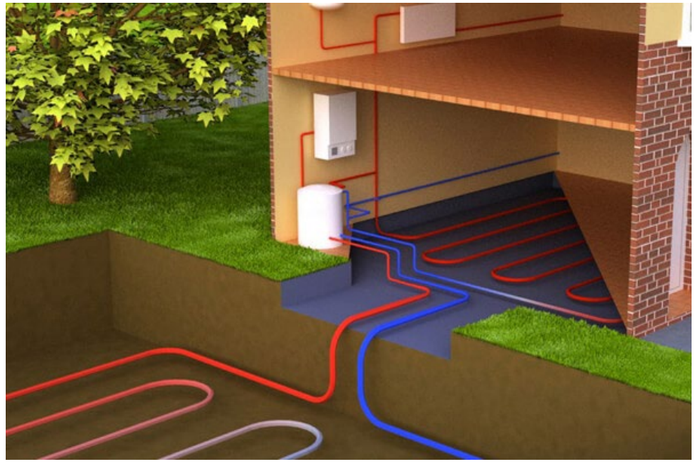
Reduce electrical demand – Solar PV, LED, reduce wastage

What are the alternatives?

ASHP ?

GSHP ?

Biomass ?



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Heat decarbonisation plans (HDPs)

- Your strategic plan to understand your carbon emissions and how to reduce them, creating a holistic whole building action plan and timeline
- Highlights the key requirements and implications in terms of investment, building, electrical and mechanical plant changes required.
- Understand specific costs, running cost impact & carbon impact
- Identifies carbon and energy reduction options across electrical/ mechanical/ behavioural / building fabric improvements too
- A heat decarbonisation plan is key to supporting your application for Salix Public Sector Decarbonisation Scheme
- HDP PLUS – this ensures the application is ready for PSDS

Funding your heat decarbonisation plan
Low Carbon Skills Fund Phase 5

- £16m in the pot instead (£17m last year)
- Pot distributed between the following, 34% £100k and under, 38% £100-£500k, 28% £500k plus
- Not fastest finger first, the portal is open from today 2pm until 1st May 2pm. This gives us a longer window for applications. They will still be randomised.
- There must be evidence of one end of life boiler for design (boiler over or nearly 10 years old).
- Geared more towards design that's feasible so that the school can proceed to an installation in due course.
- We have help process £4,000,000 work of HDP and Design bids
- You can still proceed with a HDP Plus in order to prepare for PSDS if you are unsuccessful with LCSF Phase 5

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Funding your decarbonisation
Public Sector Decarbonisation Scheme (PSDS)

- The Public Sector Decarbonisation Scheme (PSDS) provides grants for public sector bodies to fund heat decarbonisation and energy efficiency measures.
- The eligibility criteria becomes more stringent in each new round and features fundamental differences.
- Evidence of savings must be included within the submission (energy data for prior two years).
- Evidence of aged equipment must be included.
- Applicants are required to contribute funding.
- Only bespoke submissions will be accepted. Previous failed submissions can re-apply but will need to reflect the criteria.

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How to help your energy budget

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Quick wins
Energy saving

- Check you are not heating unoccupied areas.
- Always close outside doors and windows when the heating is on.
- Avoid placing obstructions in front of heaters.
- Remove portable electric heaters.
- Ensure thermostats are not near heat sources, such as photocopiers, nor in rooms where windows are left open by occupants.
- Did you know that reducing heating by 1ºC can save as much 8% on your energy costs? And reducing the heating by an hour each day will make a similar saving.
- As a general rule, classrooms should be heated to around 18°C; while gymnasiums, corridors and general areas can be reduced to 15°C.
- Ensure you change heating times to react to British Summer Time and ensure the schedules take into account weekends and holidays.
- Only use lights when daylight is inadequate.
- Keep roof lights, windows and light fittings clean.
- Back of house lighting in store cupboards etc. is a quick control win.
- Use passive infrared sensor lights that are activated once movement is detected.
- Avoid opening windows to cool a room, adjust the heating instead.
- Avoid comfort cooling where possible (try blinds, solar shading, increased ventilation, opening windows).
- Ensure air conditioning systems are regularly inspected to optimise efficiency with a TM44 air conditioning inspection.
- Extractor fans extract heat as well as the air, turn them off when not needed.
- Replace damaged draught seals before winter (heating season).
- Use inner and outer doors in draught lobbies as a “heat lock” when going in and out.
- Switch off all ICT equipment when not needed, avoid standby functions.

Introducing…

GREENER SCHOOLS INDEX

ZERO

Because every school doing a bit is better than one school doing it perfectly!

Together we can help you establish where your school is on the sustainability map and help you accelerate your journey.

- ❑ Register at www.greenerschoolsindex.co.uk
- ❑ Complete the survey
- ❑ Download your results and share with your SLT & Board of Governors
- ❑ Identify your next steps
- ❑ Share your successes and engage with other users

Features

+ Tailored report for next steps
+ One point of access to additional support
+ Easy-to-complete questionnaire
+ Ability to benchmark against other schools

Benefits

+ Create a comprehensive Climate Action Plan
+ Access to free resources
+ Helps celebrate and share success
+ It’s free to use!

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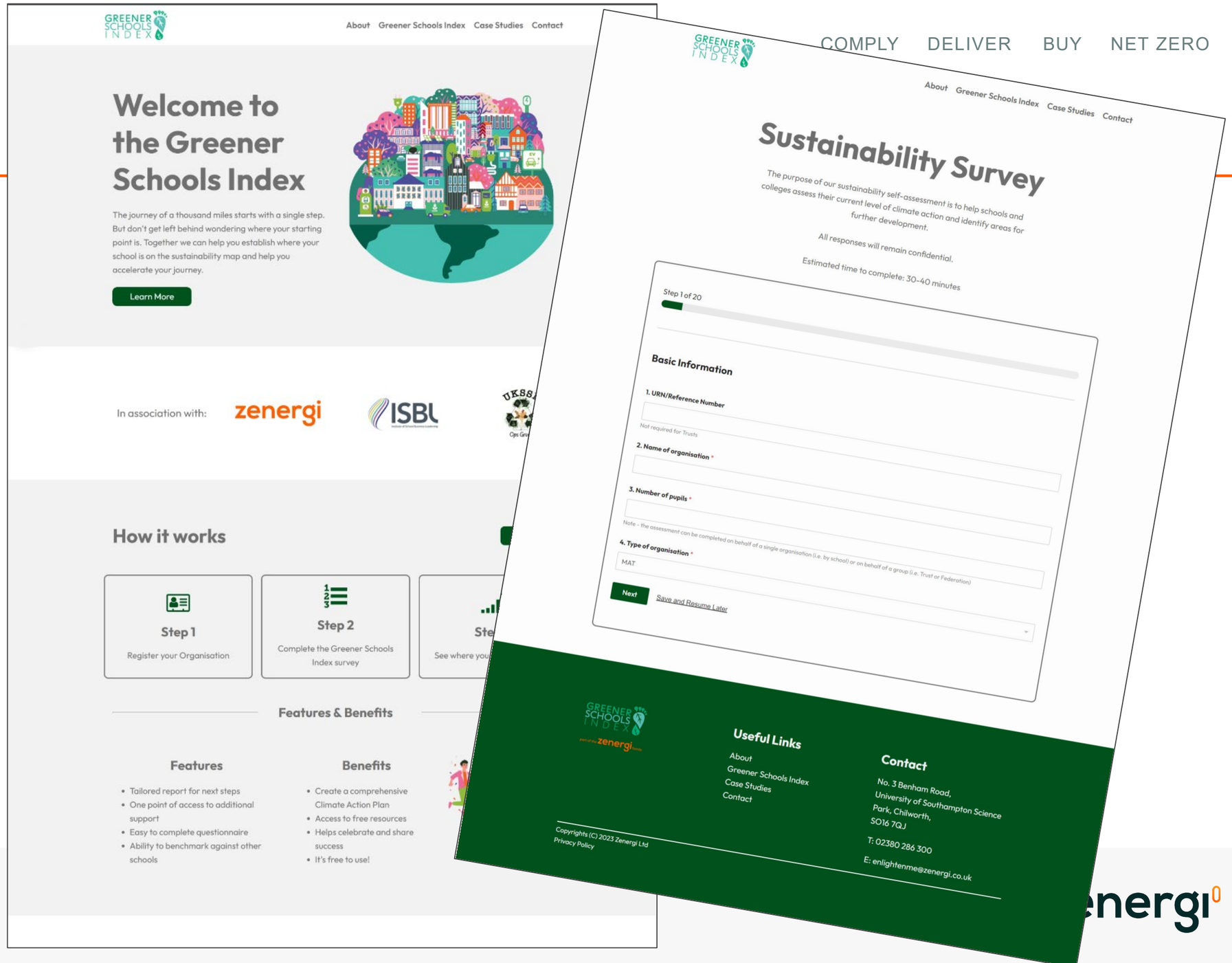
Get started:

greenerschoolsindex.co.uk



Thank you

Contacts

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