



EQUITY

ENERGIES

Andrew Donald
27th February 2025

What is the future of energy pricing?

- Where are the energy market and prices headed?
- What questions should you be asking your energy consultant?
- How can you reduce your reliance on the grid - eliminating energy waste and on-site generation



The Big Energy Summit 2025

A stimulus for action in local energy & climate change



26 – 27 February 2025

Birmingham Conference and Events Centre, Hill Street,
Birmingham, B5 4EW

“He was so learned that he could name a horse in nine languages; so ignorant that he bought a cow to ride on”

Benjamin Franklin

JAN

FEB

WMO confirms warmest year Global Temperature

Met Office



MENU



NEWS



2024: record-breaking watershed year for global climate

rest years on

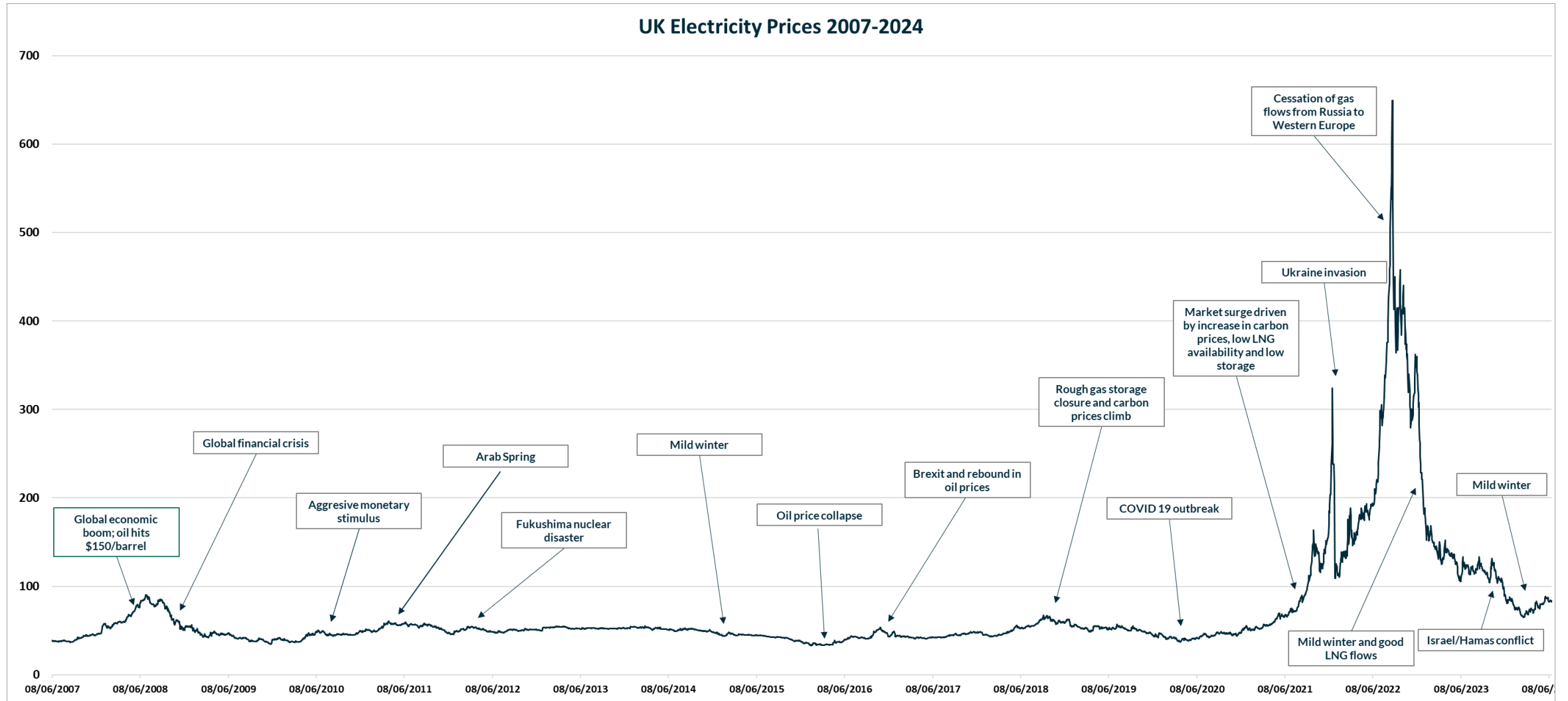
Energy price volatility pre-Russia/Ukraine war

UK Electricity Prices (2007-2020)



Energy volatility incl. post-Russia/Ukraine war

UK Electricity Prices 2007-2024



Annual Gas Fixed Price Assessments

Outlook: Last week > Assess March weather - Look to close down April, potentially lock a small proportion of Oct clients . **This week> More favourable prices for closing down April, hold further out**

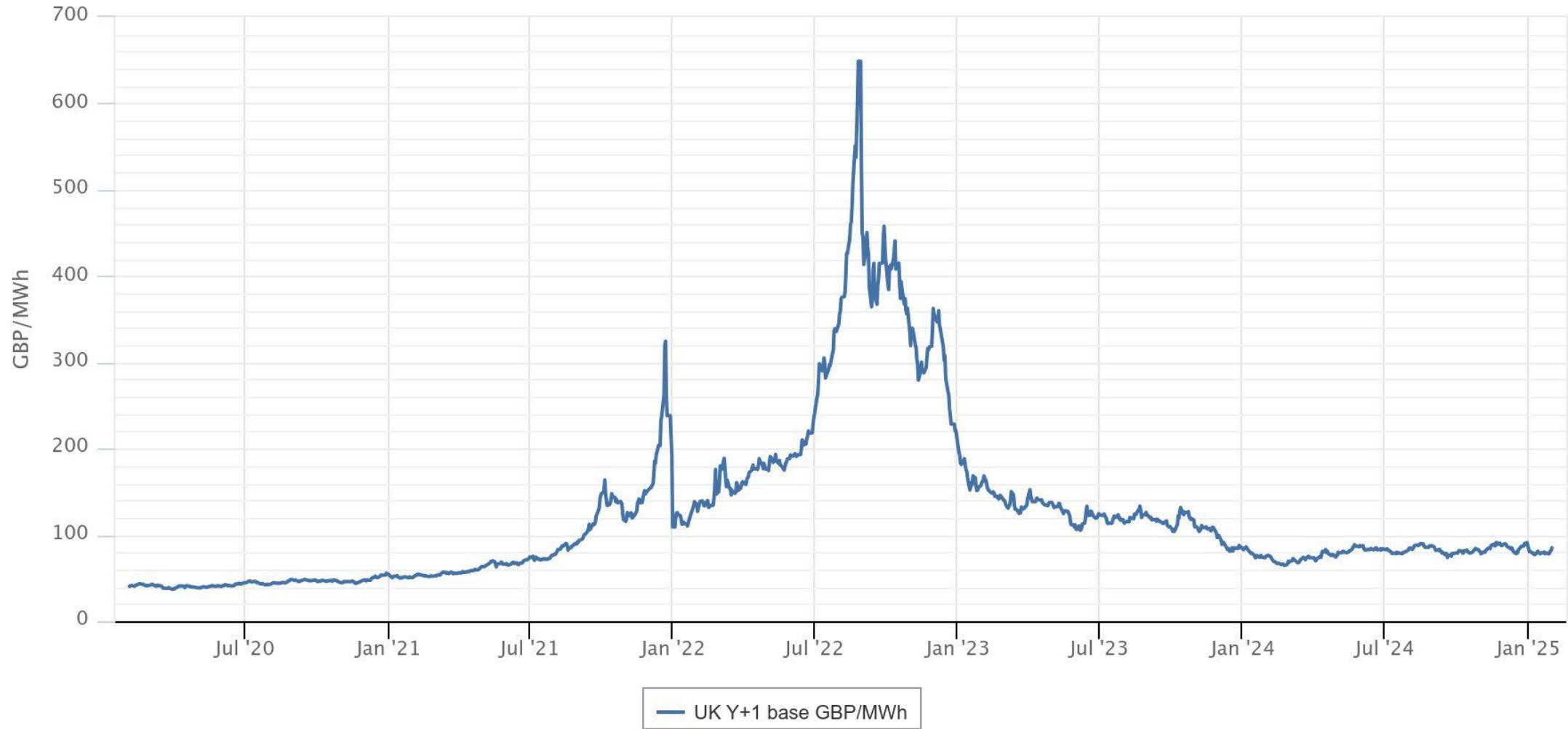


Annual Power Fixed Price Assessments

Outlook: Last week > Assess March weather - Look to close down April, potentially lock a small proportion of Oct clients . **This week> More favourable prices for closing down April, hold further out**



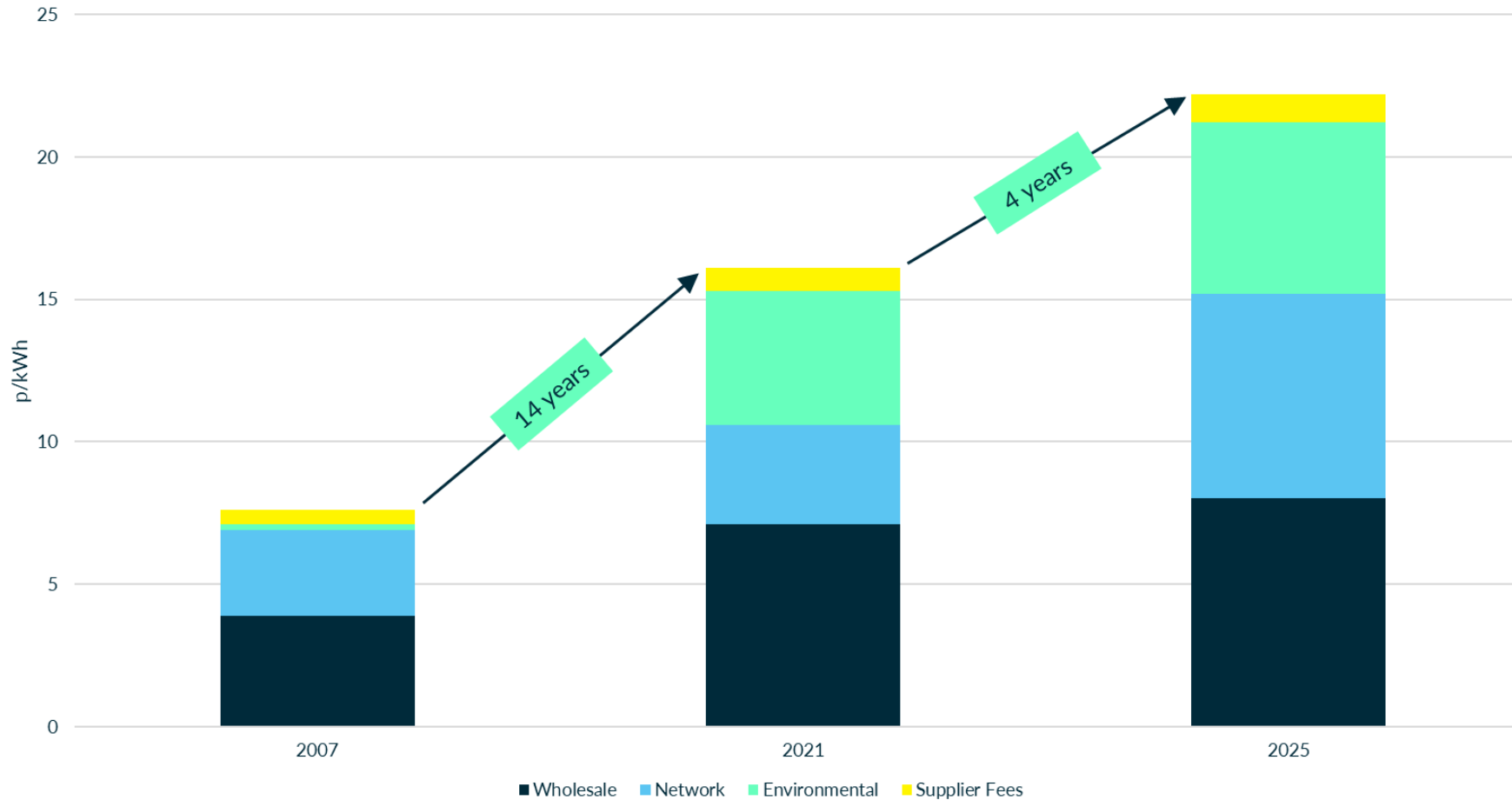
Long-term Power Price History



5-year price history. Updated monthly (last update 03/02/25)

Higher Operating Costs

UK Electricity Costs 2007-25



- Energy bills since 2021 have seen a substantial cost increase.
- Wholesale prices remain at a ~30% premium to pre-Russia/Ukraine war levels and we do not expect this to significantly improve.
- In 2022, users saw a huge increase in standing charges, more than doubling network costs on their bills.
- Subsidies for environmental schemes continue to rise with the cost being paid by end users.
- Volatile wholesale prices have made it harder for suppliers to manage volume risk, resulting in higher supplier premiums.



What is the future of energy pricing?

- Where are the energy market and prices headed?
- What questions should you be asking your energy consultant?
- How can you reduce your reliance on the grid - eliminating energy waste and on-site generation

How do we ensure best value?



The Big Energy Summit 2025

A stimulus for action in local energy & climate change



26 – 27 February 2025

Birmingham Conference and Events Centre, Hill Street,
Birmingham, B5 4EW

Procurement options.

Having assessed your requirements, there are three options available to you:

Fixed procurement

Our online eAuction platform runs a competitive tender with up to 25 suppliers competing to win.

- *Commodity and non-commodity costs are usually set at the point of lock in and remain fixed for the full contract duration.*
- *If wholesale prices go up or down, it doesn't impact the price paid.*

Benefits:

- Offers stability and predictability for budgeting.
- Competitive fixed price contracts provided.
- Peace of mind as fixed energy costs shields you from volatile markets.
- Easier management of energy expenses.
- Focus on other aspects of your business without energy price concerns.

Basket procurement

We have competitively tendered baskets with multiple pre-defined strategies which are fully managed by our trading team who actively monitor the global energy markets.

- *Suppliers tendered every three years, currently: Drax (elec) and TotalEnergies (gas).*
- *Choice of strategies: Purchase In Advance (PIA) or Purchase Within Period (PWP).*

Benefits:

- By grouping your energy with other businesses, you'll have the same buying power as larger corporations.
- Our experts maximise value by looking for opportunities to buy energy when prices are low.
- We'll set price limits to help you budget for your energy costs.
- We'll handle your energy contracts so you can save time and focus on running your business.

Flexible procurement

Our flexible procurement solution allows you to take advantage of market fluctuations, secure cost savings, and tailor energy purchasing strategies to specific needs.

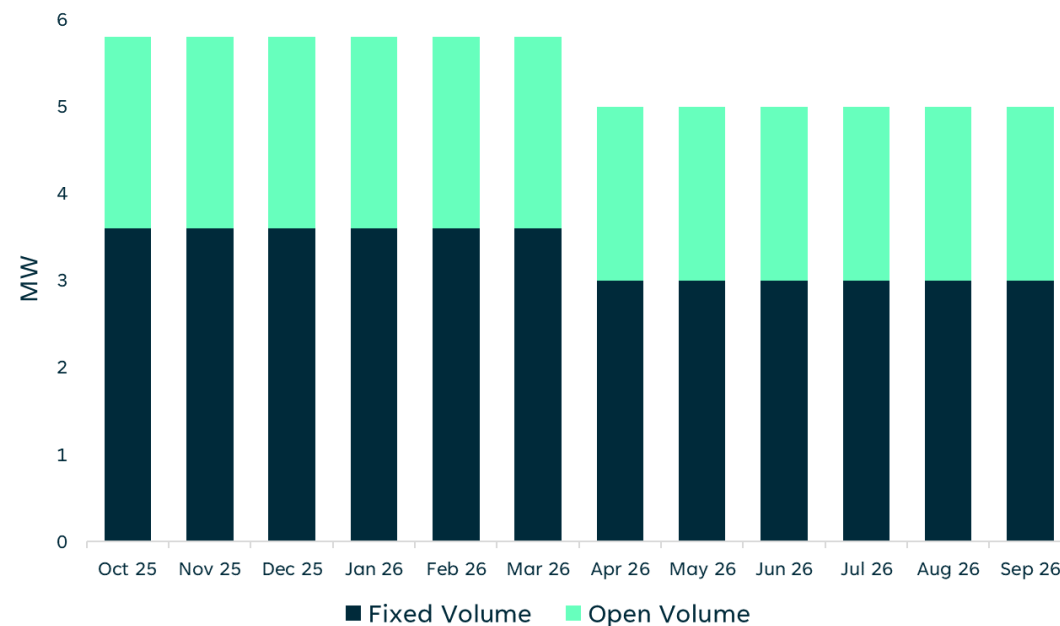
Empowers clients with greater control over their energy expenses and allows for more adaptable and strategic energy management.

Benefits:

- Opportunity for cost savings.
- Customised energy solutions.
- Active energy management.
- Our experts maximise value by looking for opportunities to buy energy when prices are low.
- Greater market insight through our trading team who actively monitor the global energy markets.
- Adaptability to changing circumstances.

Risk management and trading.

By tracking daily movement in the global markets our highly skilled energy traders gain valuable insights into market fundamentals and macro drivers, allowing them to maximise value for your authority.



A Risk Manager will work with clients to agree a detailed risk management strategy.

We break up the volume into smaller clip sizes so we're not buying everything on the same day.

If the client's energy profile changes, we can buy or sell volume during the contract.

What is the future of energy pricing?

- ~~Where are the energy market and prices headed?~~
- What questions should you be asking your energy consultant?
- How can you reduce your reliance on the grid - eliminating energy waste and on-site generation

The Big Energy Summit 2025

A stimulus for action in local energy & climate change



26 – 27 February 2025

Birmingham Conference and Events Centre, Hill Street,
Birmingham, B5 4EW

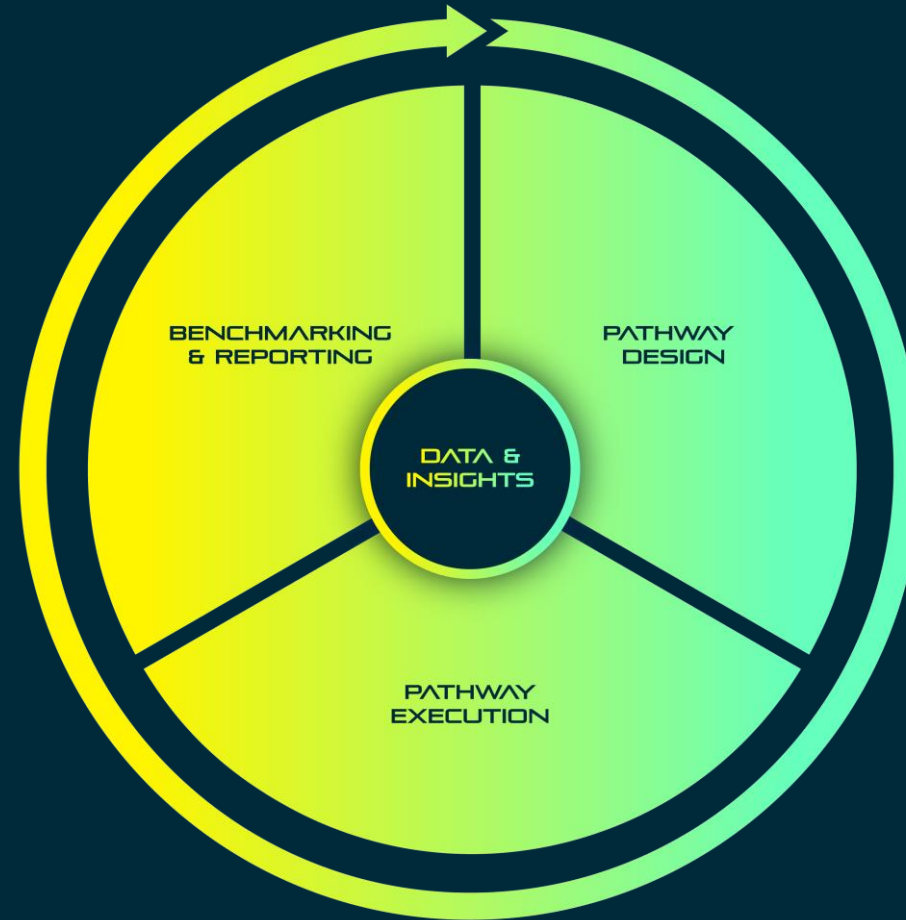
Our process.

Net Zero Benchmarking & reporting

We benchmark your GHG emissions and identify Energy Efficiency and on-site Renewable Energy generation opportunities.

Net Zero data & insights

Data and actionable insights drive the entire process, and we ensure you understand the potential impacts of every energy decision you make.



Net Zero pathway design

We design a Net Zero pathway to meet your commercial and environmental objectives, based on their unique circumstances and requirements.

Net Zero pathway execution

We manage and execute energy solutions to accelerate your Net Zero pathway and unlock financial, environmental, and societal value.

Our Steps.

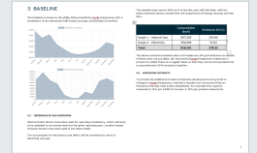
1. Gather Data & Insights

- Conduct desktop analysis
- Carry out site audits
- Install MY ZEERO meters



2. Baseline & Benchmark

- Calculate your Scopes 1 & 2 emissions
- Set your carbon reduction targets



3. Analysis & Recommendations

- Analyse initial findings
- Develop a list of decarbonization initiatives

A screenshot of the 'Analysis & Recommendations' section. It features a table with multiple columns, including 'Initiative', 'Priority', 'Status', and 'Action'. The table is filled with data, and the rows are color-coded in shades of green and blue. The table is presented in a clear, structured format.

4. Feasibility Analysis

- Quantify emissions reduction and energy savings potential
- Assess commercial feasibility of initiatives



5. Results Summary

- Develop multiple net zero pathways
- Summarise and determine a score for each pathway
- Commercial feasibility



6. Pathway Execution & Next Steps

- Develop an implementation plan
- Align with you on next steps



First thing's first – unlock data & insights.

We can gather insights in multiple ways:

- **Desktop analysis** of your utility data, ESOS reports if required, equipment specifications, sustainability reports and any other useful documentations
- **On-site audit** of your facility, to gather additional details on equipment specs and behavioral patterns, and engage with facility managers
- Using our **MY ZEERO** solution to identify energy and emissions hotspots, and acquire a robust energy profile of your operations



Baseline and Benchmark.

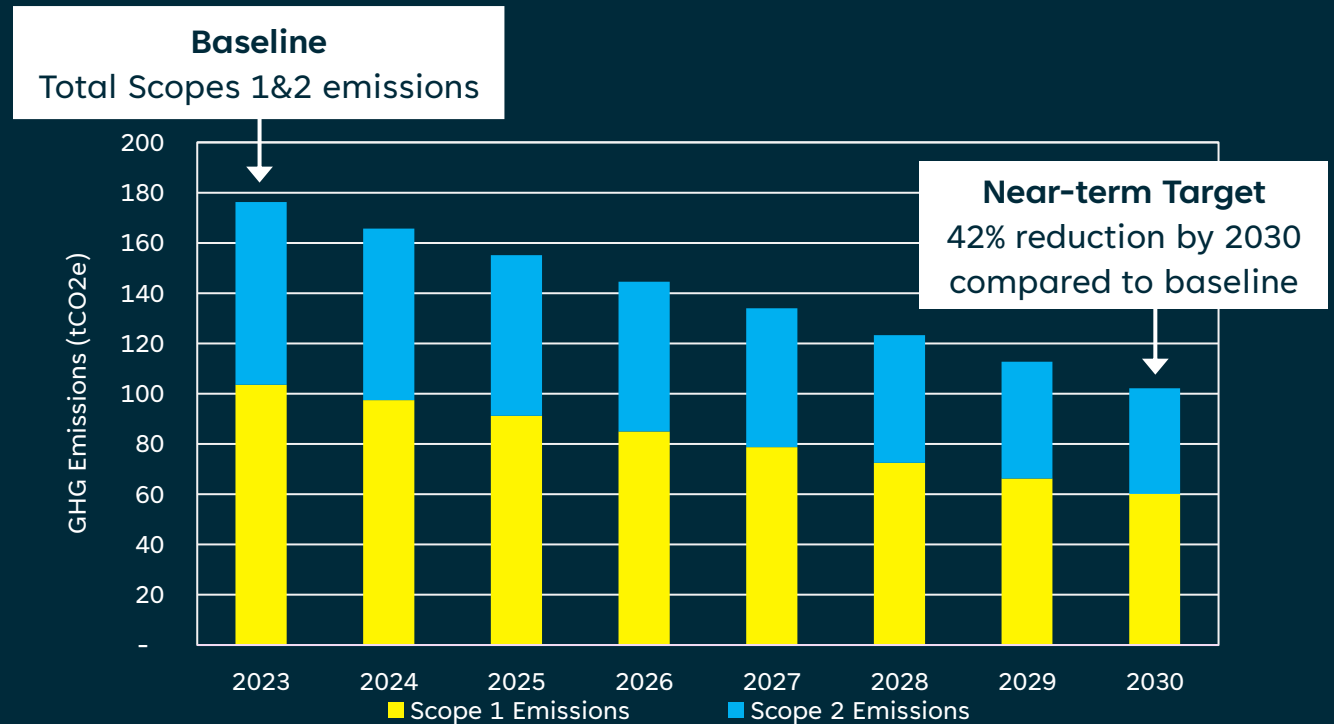
Where you are now and where you need to be.

1. Baseline

- Gathering utility and fuels consumption data
- Calculating your Scopes 1 & 2 emissions
- Initiating Scope 3 baselining process

2. Benchmark

- Setting decarbonisation targets in line with climate science, e.g. SBTi
- Near-term targets to give organisations a milestone to hit
- Calculate carbon intensity to factor in business growth and sector-specific challenges (i.e., hard-to-abate sectors)



	Consumption (kwh)	Emissions Baseline (tCO ₂)	Near-term Target (tCO ₂)
Scope 1 - Natural Gas	567,505	103.60	60.09
Scope 2 - Electricity	350,695	72.62	42.12
Total	918,201	176.22	102.99

Analysis and Recommendations.

- Analysis of data and information to identify a list of decarbination initiatives
- Calculating potential emissions reduction and energy savings
- Detailing initiatives requirements including provisions for replacing systems, certain timelines for installation and required capacity
- Providing alternative options to compare emissions reduction impact with commercial feasibility

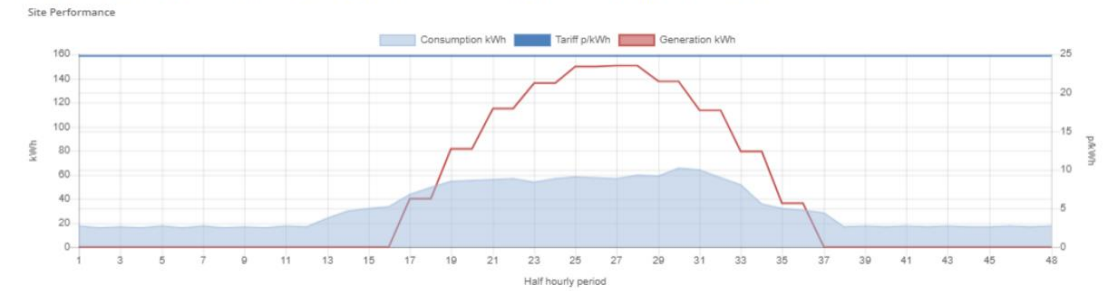
Please see an example of a heating options assessment on the right.

Opportunity Name	Description	Indicative Investment Cost	Emissions reduction (tCO2e/yr)	Utility Cost Savings first year	ROI / Payback years
Heating Option A: Air source heat pumps to replace gas heaters RECOMMENDED	Replacing the gas heaters in the factory spaces with Air Source Heat Pumps. The required capacity is estimated to be 320 kW to cover the peak heating demand...	£204,500 – £300,000	92	-£6,350	No payback
Heating Option B: Gas CHP to replace gas heaters	A gas CHP can be installed as both a heating and power generation alternative. The CHP size will have an electrical output of 209 kW and a heat output of 320 kW. The CHP has the potential for considerably improved power generation efficiency...	£216,100	-43.25	£52,250	5
Heating Option C: Biomass CHP to replace gas heaters	Similar to option B, a biomass CHP offers both heating and off-grid power generation with the use of biomass (woodchips 30cm). The CHP size is 193 kW for electrical and 320 kW for heating. Provisions for the biomass supply include an appropriate storage facility...	£772,600	99.07	£35,350	19

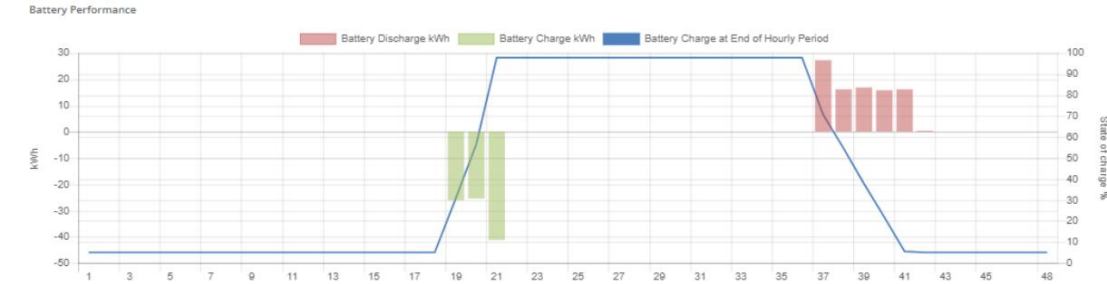
Feasibility Assessment.

- Software uses real data (inc. HH data) to build the energy profile of the site
- Assessment of up to 10 energy efficiency and renewable technologies including:
 - Air source and ground source heat pumps
 - CHPs
 - Solar PV & Wind
 - Biomass alternatives
 - Batteries
- We can deduce emissions reduction impact, equipment size, Capex, associated costs, utility savings, ROI, financial projections and more
- Our software can combine multiple technologies to develop a holistic Net Zero business case, e.g., combining ASHP with Solar and batteries to maximise efficiency of the system

522 kW PV with 100 kWh battery and ASHP – Solar generation modelled on 11/10/2023 against site consumption



522 kW PV with 100 kWh battery and ASHP – Battery charge and discharge profile on 11/10/2023



6.6 SOLAR PV WITH BATTERY AND AIR SOURCE HEAT PUMP

Overview

Following the assessments previously, this section assesses the combination of the onsite PV system with battery storage and the air source heat pump system to look at this combination holistically. Three options were identified:

1. Option 1: Maximum PV capacity of 522 kW solar output (as per the option in 6.4), 300 kWh battery and 320 kW air source heat pump system (as per 6.1)
2. Option 2: Maximum PV capacity of 522 kW solar output, 100 kWh battery, and 320 kW air source heat pump system
3. Option 3: Maximum CO2 reduction option as per the software analysis, which comprises of 381.5 kW PV output and 320 kW air source heat pump system

Assumptions	Option 1: Max PV Capacity + 300 kWh battery + ASHP	Option 2: Max PV capacity + 100 kWh battery	Option 3: Optimised for £ per tonne reduction
PV Capacity	522 kW	522 kW	381.5 kW
Battery Type	ST-SES 300kWh	ST-SES 100kWh	None
Useable Battery Capacity	300 kWh	100 kWh	None
Max Charge Rate	50% per half hour	50% per half hour	None
Max Discharge Rate	50% per half hour	50% per half hour	None
Air Source Heat Pump	320 kW	320 kW	320 kW

The analysis highlights that complementing the air source heat pump with a solar and/or battery system significantly enhances the commercial viability compared to a standalone system, reducing the payback time of heat pumps from non-existent to 11-12 years. This is because excess generation from the solar system supplies a good portion of the electricity for the heat pump which is cheaper than current grid electricity prices, and demonstrates how combining different sustainable technologies can work together to provide a return on investment.

As mentioned in section 6.5 this analysis does not include demand flexibility services which would unlock additional revenue from the assets and improve the return on investment. A separate exercise is recommended to explore this further.

Overview	Option 1	Option 2	Option 3	Standalone ASHP
PV Capacity	522 kW	522 kW	381.5 kW	None
Battery Size	300kWh	100kWh	None	None
Air source Heat Pump	320 kW	320 kW	320 kW	320 kW
CO2 saved - %	111.8 tCO2e/year – 84.8%	109.46 tCO2e/year – 83%	106 tCO2e/year – 80.4%	92 tCO2e/year – 70%
Payback	12 years	11 years	11 years	None in 20 years
Net operating revenue*	£57,780 /year	£55,806 /year	£44,768 /year	-£8,387 /year

*(Utility savings + Exports – Maintenance costs)

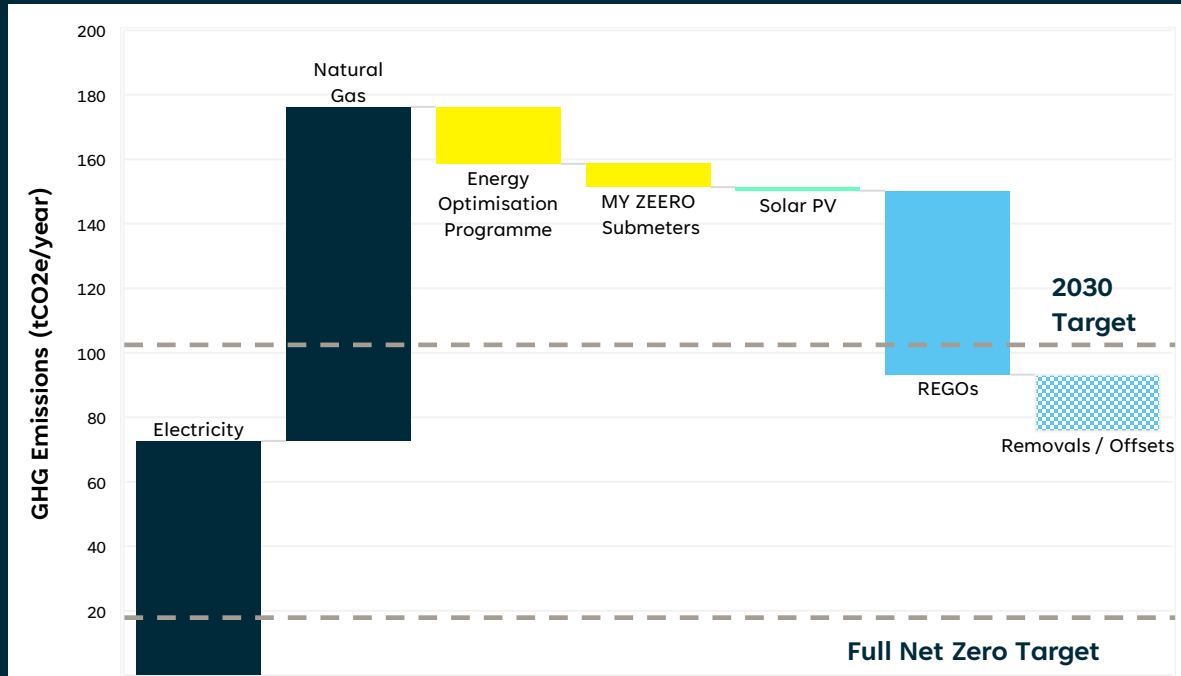
Results – exploring multiple pathways.

- Based on the analysis and feasibility assessment, we can lay out multiple net zero pathways (3 to 5 pathway for each roadmap recommended)
- Each pathway has all the figures calculated to compare with each other
- Scoring of each pathway based on your decarbonisation outcomes and commercial feasibility
- Detail the advantages and risks for each pathway, giving a qualitative description for each scenario
- We give our recommendation, and then align with you for a final conversation to determine which pathway works for you
- Develop a financing pathway that will maximise your return on investment, i.e. phasing initiatives to boost savings, different financing options that match your budget constraints, etc.

	Pathway 1: Quick Wins & REGOs	Pathway 2: Full Renewable Integration with ASHP, Solar PV, & Battery Systems	Additional Pathways
Capex	£39k-55k	£835k-852k	...
Payback	1.5-2.5 years	10 years	
Emissions reduction without certificates or removals	26 tCO ₂ /annum	127 tCO ₂ /annum	
2030 near-term Net Zero target	Yes for near-term target (but dependent on REGO certificates)	Yes can achieve short-term targets	
2050 near-term Net Zero target	Cannot achieve long-term targets as 90% reduction without removals not Net Zero compliant	Yes can achieve long-term targets (with REGOs or further decarbonisation)	
Advantages	<ul style="list-style-type: none"> • Low Capex • Quick payback • ... 	<ul style="list-style-type: none"> • Net-zero emissions (100% emissions reduction possible) • ... 	
Risks / disadvantages	<ul style="list-style-type: none"> • Reliant on REGOs / certificates to achieve near-term targets which can be expensive • ... 	<ul style="list-style-type: none"> • Higher Capex requirement • ... 	

Choose the pathway that is right for you.

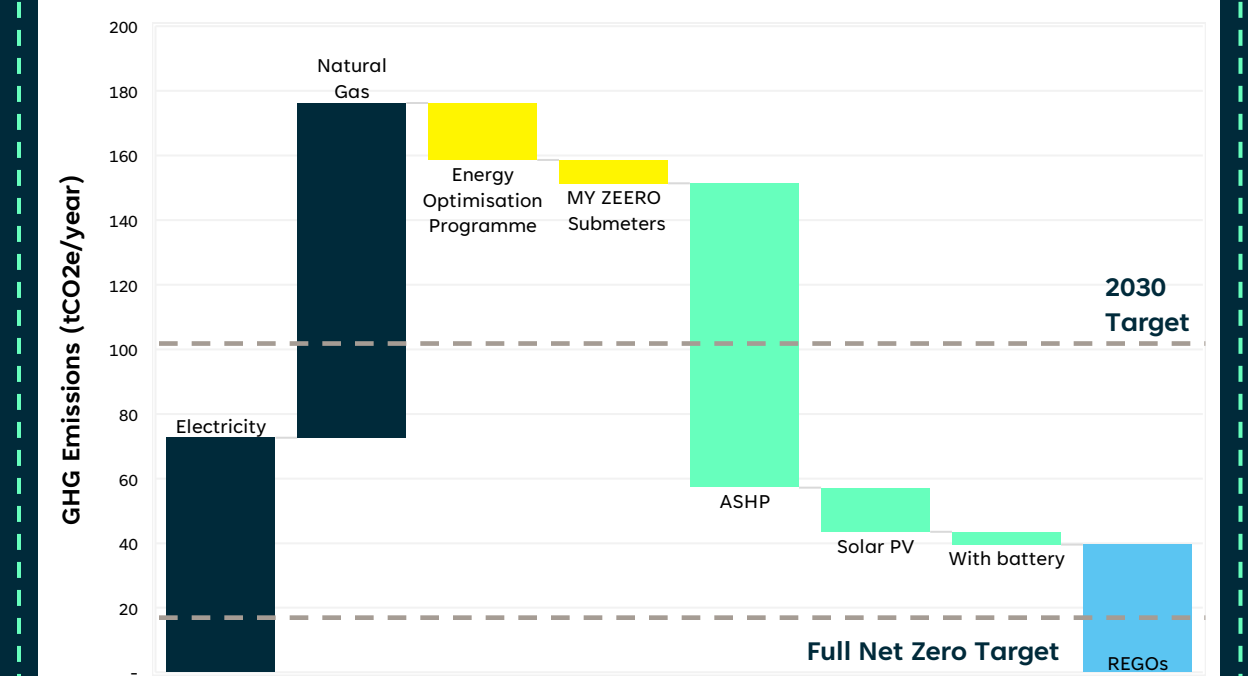
Option 1: Quick Wins & Certifications



Capex	Payback	tCO ₂ removed	Annual Savings (Y1)	REGOs %	Removals %
£39k-55k	1.5-2.5 years	26 tCO ₂ /annum	£23,800	32%	10%

Recommended

Option 2: Full Renewables Integration

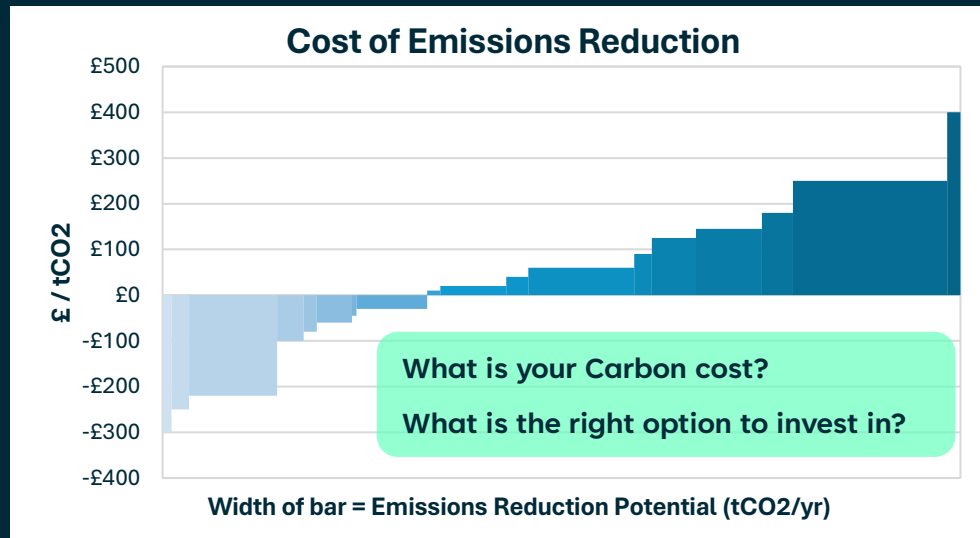


Capex	Payback	tCO ₂ removed	Annual Savings (Y1)	REGOs %	Removals %
£835k-852k	10 years	127 tCO ₂ /annum	£78,000	28%	0%

Commercial Feasibility: Unlock capital to fund your net zero journey.

Develop a budget plan for your pathway

- Prioritise low ROI initiatives / quick wins to accumulate savings
- Assess the implementation timelines based on financial viability
- Maximise your ROI by combining solutions that compliment each other



Public Sector Decarbonisation Scheme

Access funding for Public Sector heat decarbonisation and energy efficiency projects in England.

Scottish Green Public Sector Estate Decarbonisation Scheme

Access funding for Public Sector heat decarbonisation and energy efficiency in Scotland.

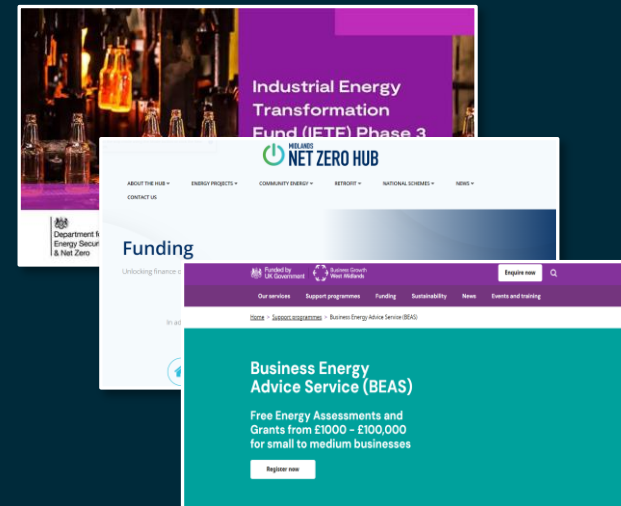
Industrial Energy Transformation Fund

Access funding for Public Sector low-carbon and efficiency projects in England, Wales, and Northern Ireland.

Explore funding schemes & financing options for your projects

- Review potential grants and funding solutions
- Finance your journey with our DCC in-house funding options tailored for your budget needs

Grant Review



Financing Options

Pay upfront

Monthly installments

Integrate cost into your procurement contract

Pathway Execution.

We will turn your Net Zero pathway into action. We can coordinate your Net Zero pathway execution plan through our partners within the DCC Energy group.

Project Management Towards Execution

- Site Survey
- System Design
- Installation
- Commissioning
- Maintenance & Monitoring
- Costing Analysis

Service & Technology Providers

- PPA & renewable sourcing
- Circuit level metering
- Solar PV
- Battery storage
- Heat pumps & electric heating
- EV charging
- Biofuels
- Backup & onsite generation



A snippet of our Net Zero reporting pack.

Opportunity Name	Description	Indicative Investment Cost	Emissions reduction (tCO2e/yr)**	Utility Cost Savings first year (£/yr)	ROI / Payback yrs***
Submeters	Installing sub-meters (number to be determined) at the circuit level to continuously measure and monitor half hourly electricity consumption. This will allow for more granular insight into energy usage and help optimise the energy system to reduce energy waste.				
Heating Option A:	Replacing the gas Source Heat Pumps with Air Source Heat Pumps to replace gas heaters. The required heat capacity will be covered by the solar panels (see Renewable Assessment for more detail). It is advised to consider other initiatives, particularly those that would reduce the heat demand, such as the heat pump availability and efficiency of gas heaters replaced.				
Heating Option B:	A gas CHP can be used to generate alternative power generation output of 209 kW. The CHP has the potential to avoid the purchase of non-wholesale level electricity.				

6 RENEWABLES ASSESSMENT - DEEPDIVE

6.1 AIR SOURCE HEAT PUMPS

Overview

The air source heat pump will displace the natural gas fuel used for heating.

In order to fully displace the heating capacity, the software will model the heating load and reduce 70% of the carbon emissions over the 20-year period.

Commercially, the heat pump technology alone will not have a payback period. It can be commercially beneficial when combined with other initiatives, such as solar panels.

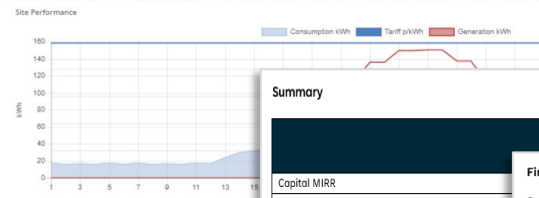
Assumptions

Heat pump availability	100%
Efficiency of gas heaters replaced	80%

Commercials

Capital investment	£20k
Value of fuel saved	£3k
Cost of additional electricity	£3k
Operation and maintenance	£2k
Payback	No payback
Unlevered MIRR – rate of return	
NPV – net present value	-£3k

522 kW PV with 100 kWh battery and ASHP – Solar generation modelled on 11/10/2023 against site consumption



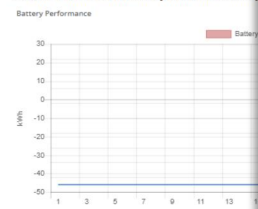
Summary

	Option 1: Max Capacity + 300 kWh	Option 2: Max Capacity + 100 kWh	Option 3: Optimised (412kW + 300 kWh)
Capital MIRR			
Simple payback			
NPV			

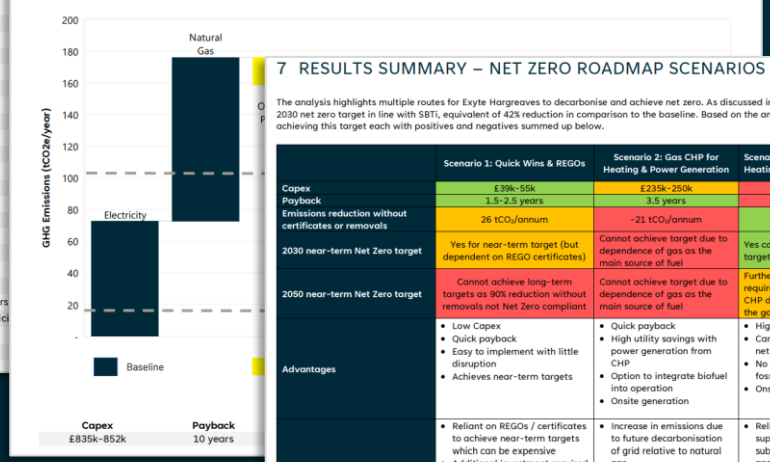
Financial Breakdown

Inflation	Variable	Value
	System size	
	System area	
	Degradation	
	Price	
	Project fees	
2.0%	Operation and maintenance	
2.3%	Export tariff	
	Annual yield	
	Generation used onsite	
	Cost of system	
	Total project fee	
	Value of electricity / heating saved	
	Battery Degradation Estimated Cost	
	Revenue from export tariff (ONSITE)	
	Operation and maintenance	
	Annual total	
	Cumulative cashflow	
	Unlevered MIRR	
	Export tariff income over 20 years	
	Saving in grid purchased electricity over 20 years	
	Average annual saving in grid purchased electricity	
	Simple payback	
6.0%	NPV	

522 kW PV with 100 kWh battery and ASHP – Battery



7.4 FULL RENEWABLE INTEGRATION WITH AIR SOURCE HEAT PUMP, SOLAR PV, AND BATTERY SYSTEMS



7 RESULTS SUMMARY – NET ZERO ROADMAP SCENARIOS

The analysis highlights multiple routes for Exyte Hargreaves to decarbonise and achieve net zero. As discussed in section 4, Exyte Hargreaves can set a near-term 2030 net zero target in line with SBTi, equivalent of 42% reduction in comparison to the baseline. Based on the analysis, there are multiple viable routes for achieving this target each with positives and negatives summarised below.

	Scenario 1: Quick Wins & REGOs	Scenario 2: Gas CHP for Heating & Power Generation	Scenario 3: Biomass CHP for Heating & Power Generation	Scenario 4: Full Renewable Integration with ASHP, Solar PV, & Battery Systems
Capex	£39k-55k	£239k-250k	£790k-810k	£835k-852k
Payback	1.5-2.5 years	3.5 years	13 years	10 years
Emissions reduction without certificates or removals	26 tCO ₂ /annum	-21 tCO ₂ /annum	124 tCO ₂ /annum	127 tCO ₂ /annum
2030 near-term Net Zero target	Yes for near-term target (but dependent on REGO certificates)	Cannot achieve target due to dependence of gas as the main source of fuel	Yes can achieve short-term targets	Yes can achieve short-term targets
2050 near-term Net Zero target	Cannot achieve long-term targets as 90% reduction without removals not Net Zero compliant	Cannot achieve target due to dependence of gas as the main source of fuel	Further measures are required as the biomass CHP does not fully displace the gas consumption	Yes can achieve long-term targets (with REGOs or further decarbonisation)
Advantages	<ul style="list-style-type: none"> Low Capex Quick payback Easy to implement with little disruption Achieves near-term targets 	<ul style="list-style-type: none"> Quick payback High utility savings with power generation from CHP Option to integrate biofuel into operation Onsite generation 	<ul style="list-style-type: none"> High carbon reduction Can achieve near-term net zero targets No dependency from fossil fuels Onsite generation 	<ul style="list-style-type: none"> Net-zero emissions (100% emissions reduction possible) Onsite generation Eliminates scope 1 as no fossil fuels on site Significantly reduces dependency on volatile grid electricity and gas prices
Risks / disadvantages	<ul style="list-style-type: none"> Reliant on REGOs / certificates to achieve near-term targets which can be expensive Additional investment required to achieve long-term targets Dependence on volatile costs of grid & natural gas No back-up generation 	<ul style="list-style-type: none"> Increase in emissions due to future decarbonisation of grid relative to natural gas Dependence on natural gas means net zero is highly unlikely Volatility of fuel costs 	<ul style="list-style-type: none"> Reliant on biomass supply which could be subject to volatile prices and supply High capex and payback time Requires construction of storage facility for biomass 	<ul style="list-style-type: none"> Higher Capex requirement No instant financial returns Dependence on REGOs to achieve long-term targets (can be expensive + might not be a viable option in future)

A little about us.

Equity Energies is changing the way organisations approach energy strategy.

We create energy equity for businesses and organisations by turning their Net Zero ambitions into action which delivers environmental, societal, and commercial value.

For more than 20 years, we've been at the forefront of the energy transition and our commitment remains unchanged; to continue to improve the energy model so it's fit for the future, delivering greater efficiencies, less waste, and more sustainable energy.

Our vision is for every organisation in the UK to be advancing on their pathway to Net Zero and beyond and benefiting from the value generated.

We call that energy equity.

Top 5

Net Zero Energy Consultancy.

20+

years of energy consultancy experience.

4.8 TWh

Currently under management.

FTSE 100

Part of FTSE 100 listed DCC Plc.

50+ billion

data points measured monthly by MY ZeERO

DCC Energy.

Equity Energies is part of DCC Energy, which is a division of DCC Plc, a FTSE 100 Company.

DCC Energy is driven by a core set of beliefs, deeply rooted in the idea that energy transition starts with the customer. The five beliefs are:

- We put customers first.
- We do energy differently.
- We offer solutions today.
- We orchestrate energy ecosystems.
- We identify emerging technology.

In addition to Equity Energies, DCC Energy has a portfolio of energy brands in the UK that are helping clients transition to Net Zero. These include Flogas, Centreco, DTGen and ProTech.

“We need a cleaner energy world. Today 65% of the energy we provide is fossil based. Our ambition is to give all customers the power to choose a cleaner energy future today with radically inclusive and independent energy solutions.”

The logo for DCC, consisting of the letters 'DCC' in a bold, blue, sans-serif font. The 'D' is stylized with a thick stroke and a slight curve at the top.

Who we work with.



“Equity Energies’ close engagement and risk management advice has helped us manage our budgets and protect us from adverse rises in energy costs. This has allowed us to ensure resources are not diverted from our core business of providing affordable housing to vulnerable people.”

Richard Ellis – Asset Director, Peabody.



Thank you.

for more information, please contact

andrew.donald@equityenergies.com

07835 684877