ZERO CARBON FORUM

THE DEFINITIVE GUIDE TO NET ZERO - SCOPES 1 & 2

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CHECKLIST
A helpful tool to measure your progress and outstanding actions.

INTRODUCTION

The Zero Carbon Forum targets:

- Net Zero in Scopes 1 & 2 by 2030
- Net Zero across all Scopes by 2040.

Scope 1 & 2 emissions reduction is an area you directly control.

It involves reducing your gas, electricity and refrigerant gas emissions.

Before you have taken action, your Scope 1 & 2 emissions are likely to be 10 - 15% of your footprint.

Taking action sends a clear and credible message to your internal and external stakeholders about your commitment to decarbonise your business.

It also has the potential to reduce your operating costs.

This guide will take you through a simple recognised process to get you to Net Zero.

GLOSSARY

CARBON NET ZERO

Aligning with science based targets to ensure global warming remains with 1.5c threshold and investing in carbon removal projects to balance residual emissions.

CARBON NEUTRAL

Measuring your carbon emissions and ensuring you mitigate the impact through offsetting with no necessity to commit to reducing your volume or intensity. Fails to address Scope 3 emissions.

SCOPE 1

Direct Emissions from combustion, facility operation, transport (owned transport only, recharged business travel and commuting is within Scope 3).

SCOPE 2

Purchased Energy Emissions (the energy you pay for through your chosen supplier and use in your operations). This will not include energy used in sites where the energy is re-charged from the landlord – this is part of Scope 3.

LOCATION BASED

Location based footprints use the grid recognised averages to convert kWh to CO2e. We recommend reporting on location based so stakeholders can easily compare absolute emissions.

MARKET-BASED

Market-based footprints use your specific fuel mix. Use market based footprints to visualise the impact of reducing intensity through renewable sourcing.

HOTSPOTS

Your carbon footprint will identify 'hotspots' of emissions. Parts of your business that emit the greatest number of emissions. This is where you need to concentrate time, finance and resources to have the greatest reduction in carbon emissions.

AMR

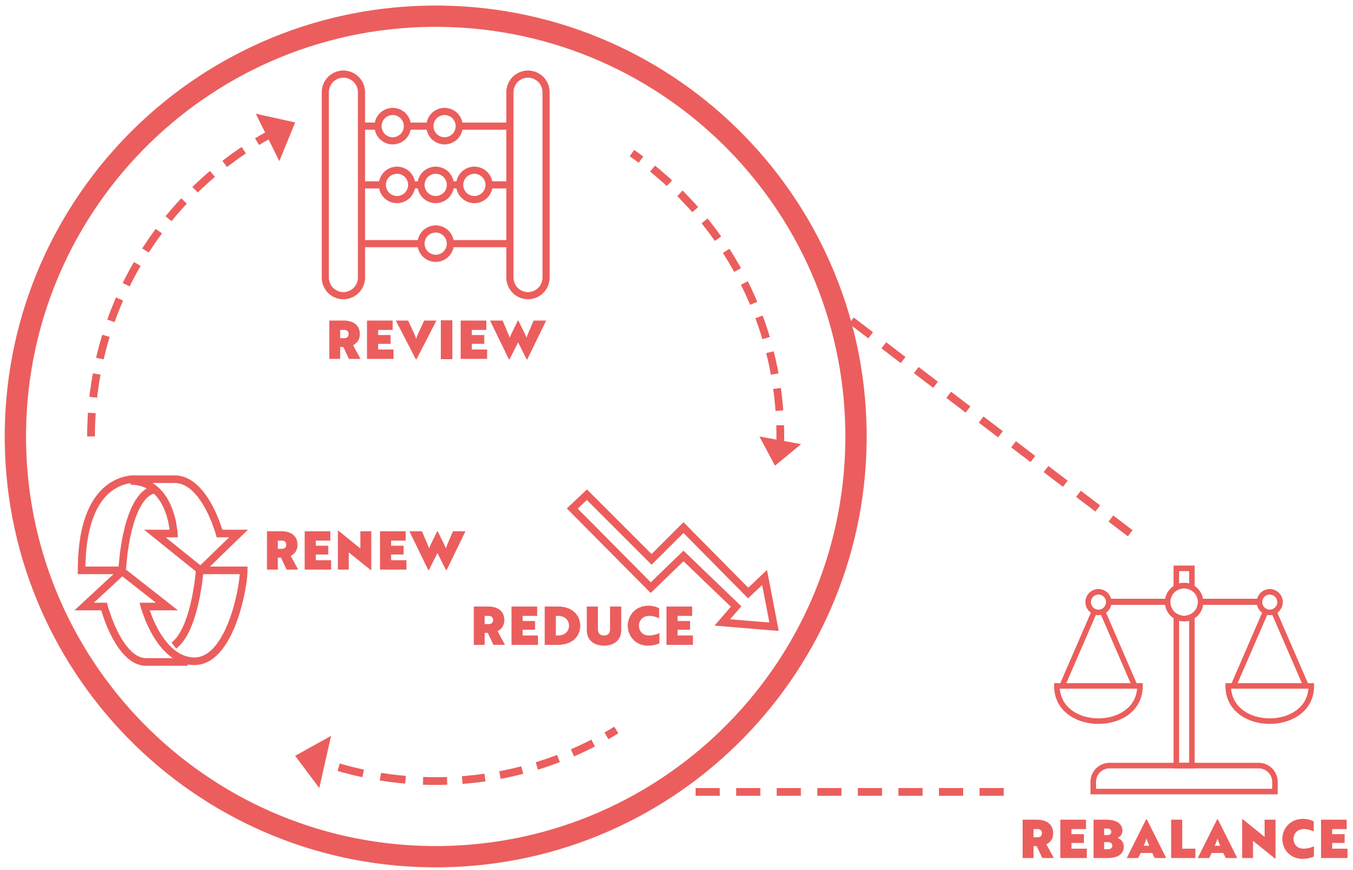
Automated Meter Reading. An Automated Meter Reading (AMR) device send meter readings automatically for data analysis, typically every half an hour. This data can be used to calculate your actual use every 30 minutes. They're similar to smart meters, except they don't have a visual display.

GLOBAL WARMING POTENTIAL (GWP)

A measure of the potential warming impact of different greenhouse gases. Indexed against carbon dioxide (CO2) (which has a GWP 1). For example, a tonne of methane is equivalent to emitting 81 tonnes of carbon dioxide (over 20 years), so it's GWP is 81.

Strictly speaking you don't get recognised for being net zero on just Scope 1 and 2. You need to include Scope 3. However, for continuity we are retaining the terminology in order to apply the methodology.
*Carbon is used as the common terminology but we actually mean all greenhouse gases (Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, Sulphur hexafluoride, Nitrogen trifluoride) as a Carbon Dioxide Equivalent (CO2e)
**Credible levels of reduction will vary depending on sector and proposition. Best practice would be to align your reduction ambitions to Science Based Targets sciencebasedtargets.org
***Any reference to offsetting should be understood as carbon removal activity, where possible with additionality, and strictly not including carbon avoidance.

THE APPROACH



If you need help with any of the 4Rs please reach out to us support@zerocarbonforum.com

THE 4R'S

01 REVIEW
Measure your emissions and utilities usage.

02 REDUCE
Behaviour change, energy saving equipment, fit outs & renovations, maintenance, running a successful trial, lifecycle costing.

03 RENEW
Electricity, Gas, G-gas, benchmarks.

04 REBALANCE
Offsetting and carbon removals.

THE APPROACH

REVIEW

Measure your footprint.

IDENTIFY YOUR EMISSION SOURCES

e.g., energy, natural gas, LPG, wood, coal, owned vehicle miles, fugitive gases.

COLLECT YOUR DATA

e.g., energy/gas bills, automatic meter data, maintenance contractor records, expense claims for company cars.

CONVERT TO CARBON

Each unit of measurement has a carbon equivalent factor e.g., kWh > CO2e.

REDUCE

Identify ways to remove emissions from your footprint by using less.

INVEST IN YOUR PEOPLE

e.g., improve carbon literacy, incentivise good practice, embed behavioural change, empower action.

INVEST IN MORE EFFICIENT CORE EQUIPMENT

e.g., cookline, lighting, HVAC.

INVEST IN TECHNOLOGY

that can reduce energy used by core equipment e.g., efficient lighting, building controls, voltage optimisation.

RENEW

Reduce the intensity of remaining emissions by sourcing renewable energy and other lower intensity fuels.

RENEWABLE POWER

Bio gases, F-Gases with lower global warming potential, lower emission vehicles wind, solar and hydro.

ELECTRIFY YOUR ESTATE

Electrification enables you to move to cleaner, renewable fuel. Beware potential commercial and operational barriers.

REBALANCE

When all reduction actions are complete, calculate your residual emissions and invest in carbon-removal projects to achieve net zero.

MAINTAIN

integrity by ensuring your projects are credible (VCS, Gold Standard).

CONSIDER

whether nature based or tech-based projects are right for you.

FUTURE-PROOF

your supply and costs by developing an offsetting procurement strategy, aim for insetting eventually.

SCOPE 1 & 2 EMISSIONS SOURCES

Identify your emission sources. This table contains all your possible Scope 1 & 2 emissions.
Review and identify which is relevant to your business, alongside the information from your footprint.

EMISSIONS SOURCE	SCOPE	REASONING
Electricity	2	Every building uses electricity. Emissions are produced by the energy generator, typically from the burning of fossil fuels. Gas-fired power stations are the largest single generation source of electricity in the UK.
Natural Gas	1	Many operators use gas for cooking and heating. Gas is burned onsite, releasing greenhouse gases.
LPG	1	LPG is liquid petroleum gas; typically used in bulk from underground storage tanks in sites that are not connected to the gas grid, or in smaller quantities for BBQs or outdoor heating.
Fugitive Gases	1	Most existing cooling systems, such as refrigeration and air conditioning involve the use of high global warming potential (GWP) gases. The most common is R404A, which has a GWP nearly 4,000 times greater than carbon dioxide. Systems exist now that use gases with much lower GWP, such as: CO2, R32 and R290A.
Owned Vehicle Miles	1	Emissions from company-owned vehicles are included in Scope 1. The company is directly responsible for the burning of the fuel to power them.
Wood, Coal & Other Minor Sources	1	Open fires, BBQs, diesel generators, petrol mowers - will only ever be a tiny impact.

REVIEW 1 MEASURE YOUR EMISSIONS (YOUR 'CARBON FOOTPRINT')

"What gets measured gets managed"

Peter Drucker

How to meaure your emissions

COLLECT YOUR DATA

This includes energy/gas bills, automatic meter data, maintenance contractor records, expense claims for company cars.

CONVERT TO CARBON

Each unit of measurement has a carbon equivalent factor (e.g., kWh > CO2e). Standard UK emissions factors are published and updated annually by Defra.

EXPERIENCED CARBON ACCOUNTANTS

The forum uses the Greenhouse Gas Protocol to undertake your footprint ghgprotocol.org

Email us to get started

support@zerocarbonforum.com

Emissions from electricity generation can be measured in one of 2 ways:

1. LOCATION-BASED ACCOUNTING

Accounts for quantity used and grid intensity based on location.

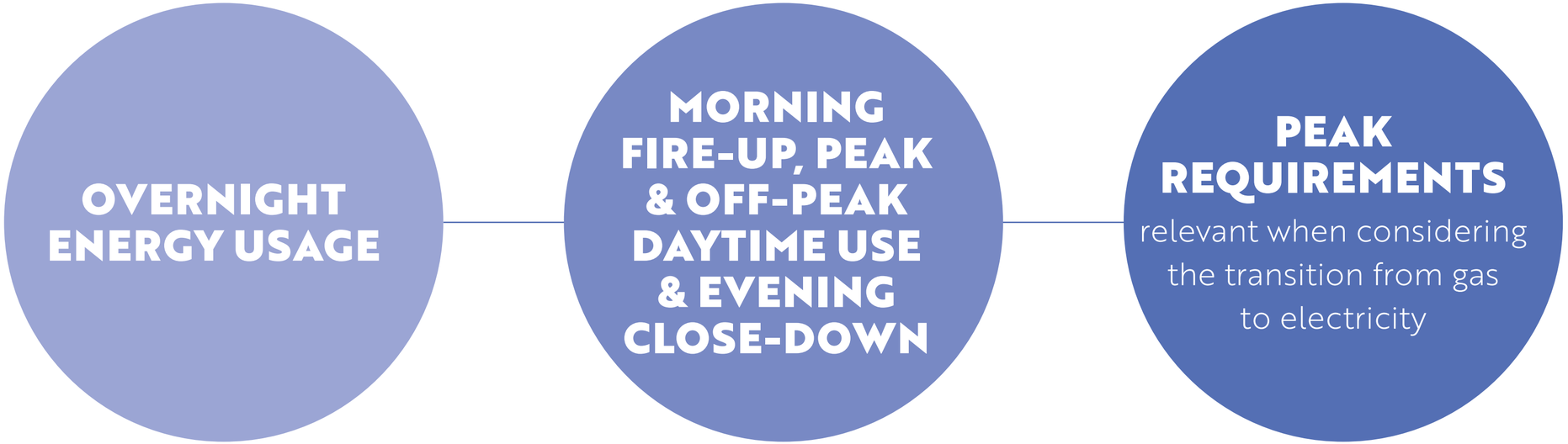
2. MARKET-BASED ACCOUNTING

Applies a conversion factor based on how the electricity was generated. This is typically used to demonstrate a reduction in impact when sourcing renewable electricity.

REVIEW 2 MEASURE YOUR UTILITIES USAGE

Install Automated Meter Readings (AMR) or Smart Meters. These provide you with half-hourly consumption data for your electricity and gas.

Measuring your half-hourly usage enables you to monitor (and therefore reduce):



The Forum provides you with a free Energy Health Check.
If you have not completed this, contact support@zerocarbonforum.com to get started.

REDUCE: ENERGY CONSUMPTION & EFFICIENCY

Hospitality operators have

REDUCED ENERGY USE BY UP TO 30%

from operational practices, which can be

WORTH OVER £5,000

in additional profits per outlet.

There are 3 routes to reducing consumption:

1 BEHAVIOUR CHANGE

Engage your teams to operate more efficiently

2 TECH CHANGE

Introduce energy saving equipment.

This could be:

More efficient versions of existing equipment (e.g., a fridge with a better energy rating)

Technology to reduce consumption (e.g., variable extraction, e-cubes, voltage optimisation)

3 MAX PERFORMANCE

Ensure you are maximising performance during fit outs and renovations.

REDUCE 1 : BEHAVIOUR CHANGE

1.
USE AUTOMATIC METER READING

(AMR) data to identify reduction opportunities by site (e.g., reducing usage overnight, during prep, off peak, close down etc.).

2.
INTRODUCE ENERGY CHAMPIONS

in operational roles who can activate and inspire action at a site level. Champions can be recruited from different levels to suit your business.

3.
EMBED HARD BEHAVIOURS

by setting timers and using smart meters to automate actions. This negates the need for communications campaigns as it takes responsibility away from your teams.

REDUCE 1 : BEHAVIOUR CHANGE

ENGAGE YOUR FUNCTIONAL TEAMS

- Operations enact energy saving behaviours. Integrate guidance into SOPs.
- Internal marketing and communications can amplify the message and get employees motivated to take action.
- Finance can measure, report and demonstrate financial savings to operators and leadership.
- Learning & Development can ensure that messages are included in all L&D materials – for new and existing employees.

TOP TIPS FOR ENGAGING YOUR TEAMS

- Engage employees with carbon literacy, incentives for good practice, and friendly competition.
- Empower action by demonstrating support from the top and sharing best practice.
- Be aware of staff turnover. Maintain momentum by refreshing campaigns and calls to action.

REDUCE 1 : BEHAVIOUR CHANGE

CASE STUDY: Behaviour change in national restaurant chain

Overall Energy Savings

Full Year Results

- **12%** Consumption Saving
- **£560k** & **705** tCO^2 Savings
- **3.7 kWh** Less Electricity

Total KWH by Week

Behaviour change is the single most effective way to reduce your emissions and related costs'.

REDUCE 2 : ENERGY-SAVING EQUIPMENT

ENERGY-SAVING EQUIPMENT COMES IN 2 FORMS

1. More efficient core equipment. This is about replacing existing equipment with more efficient alternatives e.g., efficient ovens and grills, low energy lighting, efficient HVAC.

2. Technology that can reduce energy through innovation. This could be new tech, or supplementary additions that enhance existing tech e.g., building controls, voltage optimisation.

*Digital twinning is the recreation of a building and its assets in technology to model what impact a change in use or equipment might have. It can be used to forecast energy savings.

TAKE ACTION

Specific action to drive change includes:

1. Use your ESOS recommendations to drive investment and action. ZCS provide ESOS services, email here to start support@zerocarbonforum.com

2. Use guidance provided by the Forum:

- Climate Action Plan (CAP)
- Low Carbon Technology and Equipment Action Group
- Low Carbon Equipment Data Capture Template
- Zero Carbon Marketplace

3. Run trials and commission independent research to inform good decision making.

4. Submetering and digital twinning* can help identify hotspots across different asset types and are helpful to trial and prove savings before mass roll out.

5. Update fitout guides to include new initiatives so that improvements become embedded (see advice in the Forum's Low Carbon Fit Out Guide).

REDUCE 3 : LOW CARBON FIT OUTS & RENOVATIONS

ZERO CARBON FORUM GUIDANCE & SUPPORT

- Zero Carbon Forum has published a Low Carbon Fit Out Guide, which includes everything you need to know.
- Check it out here >
- Consider menu choices and ensure you don't use any equipment for a single menu item.

OTHER GUIDANCE

- **SKA**
  Assess fit-outs against a set of sustainability criteria.
  The focus is energy efficiency.
- **BREEAM**
  Science-based suite of validation and certification systems for sustainable built environment. Supports ESG solutions.
- **LEED**
  World Wide Green building rating system.

*Digital twinning is the recreation of a building and its assets in technology to model what impact a change in use or equipment might have. It can be used to forecast energy savings.

MAINTENANCE

Once your specification is right it's time to think about the right level of maintenance.

1.
Good pre planned maintenance services can help with energy consumption but also operational performance and asset longevity.

2.
It can also save you money in more costly reactive repairs and will reduce asset down time.

3.
Numerous large assets require compliance visits anyway so pre planned maintenance can be built into these.

4.
Speak with your maintenance contractors about making the most of their engineers' time on site: e.g. gas, refrigeration, coffee machines, HVAC, catering equipment.

5.
Some maintenance can be very simple and completed by teams on site – cleaning and observation. E.g. Fridge door seals, fridge door curtains, fridge exhausts, extraction filters, ventilation exhausts, catering equipment cleanliness.

RUNNING A SUCCESSFUL TRIAL

In some cases, depending on size of operator and scalability of solution these can be, or may need to be, done in tandem

1. DESKTOP ANALYSIS TO PROVIDE FOUNDATIONAL DATA	2. PROOF OF CONCEPT (POC)	3. PILOT	4. ROLL OUT	5. EVALUATION
Carry out Market Testing and identify suppliers that can support. Understand usage at a site level (using AMR data). Suppliers provide forecast savings based on their assumptions and lab testing.	Consider if solutions can be installed without impacting team or guest journey. Validate desktop savings through sub metering and/or Measurement & Verification (M&V) protocol. Refine business case for pilot.	Validate the POC savings are representative for the estate. Identify reasoning for top/ bottom performers to inform roll out. Refine business case for roll out.	Define scope using diminishing returns hurdle and out of scope sites (lease end, location, specific assets). Requires Project Management resource.	Prove benefits flowing through to P&L and footprint.
Savings are considered as forecast only	Savings are considered as forecast only	Savings are considered as likely	Savings are considered as highly likely	Savings are considered as landed

Project Cost and Savings Accuracy Improves as the process progresses

If multiple solutions available then pilot against each other and a control group

REDUCE BY LIFECYCLE COSTING

Ensure your commercial evaluation considers running costs as well as capital costs, planned and reactive maintenance forecasts and asset longevity.

You can visualise the payback of spending a little bit more up front in terms of operational cost saving, site profitability, additional sales required etc.

In this example we look at how spending a bit more money on a higher specification hood dishwasher can save money and carbon. We consider the impact of a single unit for demonstration purposes. If you are installing multiple items, you will accumulate additional savings.

Incremental Capital Spend	£404	The Difference between the incumbent and new price
Annual Savings of Net Running Costs	-£936	The Difference between electricity, gas, water and maintenance costs
CO2 Saving ££	-£0.87	The CO2e impact of the change
Payback on Investment	5.2 Months	
Return on Investment	232%	

RENEW: ENERGY

SOURCE RENEWABLE ELECTRICITY TO REDUCE THE INTENSITY OF YOUR SCOPE 2 EMISSIONS

Most people start with electricity
(see the energy strategy progression hierarchy).

NB. Ensure your supply partners can prove the credibility of your renewable / clean fuels. Renewable Energy Guarantee of Origin (REGO) and Renewable Gas Guarantee of Origin (RGGO) are the recognised certificates globally. However, note that REGOs and RGGOs are often traded separately to your fuel mix so may well be unbundled and therefore not specifically linked to the fuel you buy as they simply prove there is enough fuel available to cover your volumes.

RENEW: PROGRESSION INTO PRACTICE

If you are starting from scratch here's the 101...

RENEWABLE ENERGY GUARANTEE OF ORIGIN (REGO) The scheme is designed to provide transparency on renewable generation levels. www.ofgem.gov.uk/environmental-and-social-schemes/renewable-energy-guarantees-origin-rego

UNBUNDLED It is possible to source renewable energy in one year that is backed off by REGO bought at a different time (vintage) or different generation type (heritage). This is becoming less frequent as the rules around REGO and GOO (the EU equivalent) have changed*. In turn this has had a major impact on the price premium.

BUNDLED This is where the renewable energy bought is directly linked to REGO. This is considered more credible as the transparency is clearer and the vintage/heritage matches the purchased volumes. This is very similar to how the credibility of any carbon offsetting is judged too.

ENTRY LEVEL Most people start with sourcing renewable energy via their incumbent supply agreement, or as part of a tender brief for a new contract. This means you can start almost immediately or in the relatively short-term future.

This approach means it's easy to access and other than being prepared to evaluate your price and consider the credibility of REGO as a result of that it's much the same as buying your energy the same way you do already either fixed or flexibly.

Speak with your energy supplier or broker about availability and REGO prices available.

*Renewable Energy Guarantees of Origin (REGO) | Ofgem

PPA (POWER PURCHASE AGREEMENT) The feasibility of a PPA will be determined by your baseload volumes and how much you are willing to commit to longer term. The timing of when you can start will depend on how much volume you have fixed or hedged and for how long.

You will need to check with your supplier/broker whether there is a sleeving clause in your supply agreement. If not you can request one is added or you will have to wait until you have a new contract. It is possible to commit volumes to a PPA and not sleeve them into your supply agreement but that is normally reserved for very high users mainly from the practicality of balancing the volumes.

You will need to commit volumes and a price point much further out than you would probably normally do. These volumes will need to be paid for whether you use the energy or not. Most people would start only committing around 10-20% of their baseload because of that.

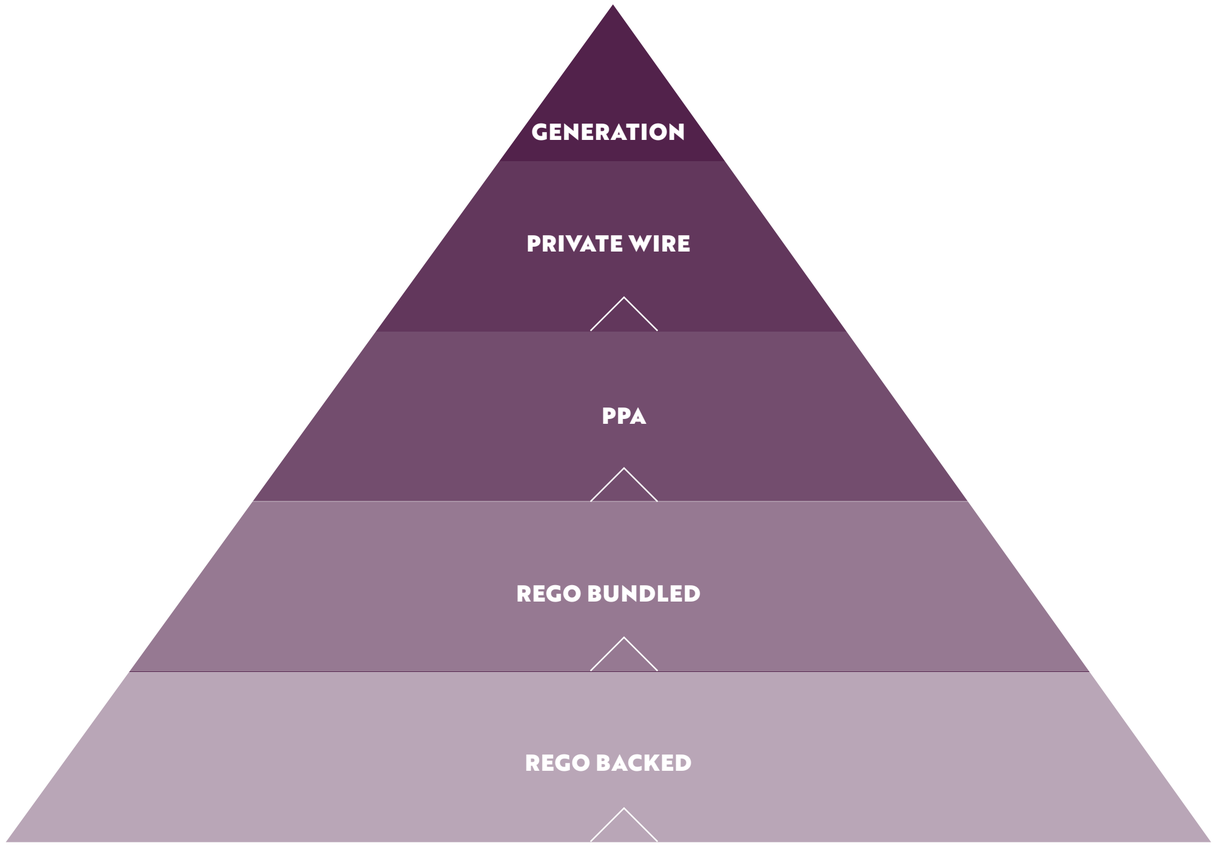
There are different types of PPA and things to watch out for are: unbundled vs. bundled REGO, new to earth vs. incumbent asset, additionality.

PRIVATE WIRE These tend to work better for large single site volumes but in the case of hospitality may be achievable collaboratively through a shared landlord for example. They may also be viable on a large brewery operation or a central production kitchen. They can be done by entering into a PPA style agreement with the generator or even through a joint venture with the asset owner.

ON SITE GENERATION There's an argument to say that these are much easier to get in place than PPA or private wire (certainly the latter). However, it relies upon capital investment or other funding such as pay as you save, the right conditions on site (space, orientation etc.), and it generally makes sense to have some certainty over your property asset. Most people start with solar, although wind may be viable in some circumstances too. You could also explore CHP or biomass, but they could be counterproductive against your other renewable initiatives.

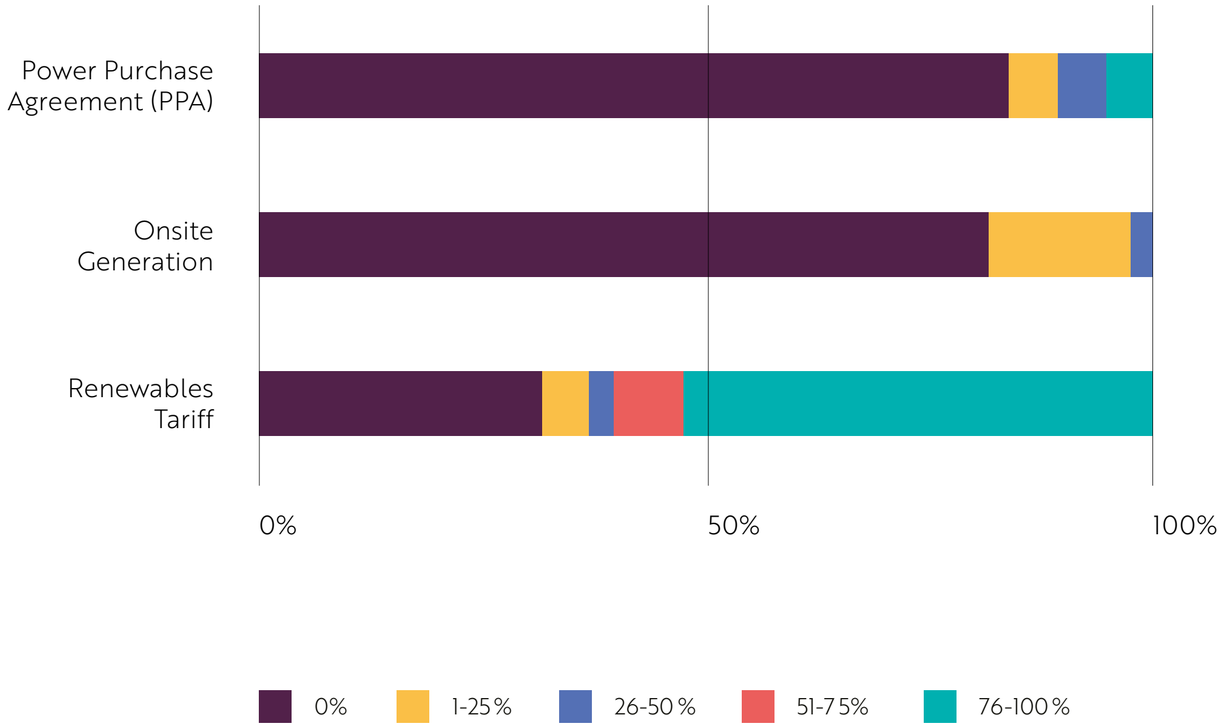
RENEW: ENERGY STRATEGY PROGRESSION

Depending on your resources and the commercial/operational viability of solution there is a hierarchy of renewable power. Each step should be individually assessed but you can aim to create additionality, protect yourself against market volatility, and eventually get free energy in return for capital investment.



- On site generation where you are creating the power e.g., solar, wind, CHP et al.
- Invest in an asset that is specifically linked to your own buildings and may also serve other buildings locally.
- Your first opportunity to create additionality. Invest in a specific (but still remote) asset that would not necessarily otherwise be built. The REGO is specifically linked.
- Your supplier is sourcing or generating renewable power where the fuel is specifically linked to your volumes.
- Your supplier can prove they have enough renewable generation to cover your demand but these are not linked geographically or by generation asset to your actual power used. The vintage may also be challenged.

RENEW: BENCHMARK



1 IN 6 FORUM MEMBERS
have entered a Power Purchase Agreement for some of their electricity needs.

1 IN 5 FORUM MEMBERS
have installed some onsite generation capacity, albeit meeting a small proportion of their needs.

OVER HALF OF FORUM MEMBERS
get 76-100% of their electricity from a renewable tariff.

RENEW: GAS

Gas is harder to convert to renewable. You have 2 options...

1. TRANSITION YOUR EXISTING GAS-FIRED EQUIPMENT TO ELECTRIC AND ENSURE YOU ARE SOURCING RENEWABLE ELECTRICITY

- By electrifying equipment and processes you can move more volume into the lower intensity fuel. Examples might be:
  - Using induction hobs.
  - Moving away from gas fired fryers, boilers, bain-maries etc.
  - Moving away from wet heating systems.

However, there are some key points to consider:

- Sometimes higher capital outlay but cheaper to install – see lifecycle costing,
- Sometimes lower longevity or more frequent repair required.
- It may impact your purchasing and hedging strategy.
- Check your Agreed Supply Capacity (ASC) vs. your current Maximum Demand (MD) and consult your ME contractor. You can get your ASC and MD from your utility bills or your supplier/energy broker will be able to confirm. Your ME contractor will be able to show how much additional capacity is required by the additional electric kit and whether you have the headroom in your existing supply capacity. Additional capacity can sometimes be granted through a paper exercise only depending on the incumbent infrastructure. If not, investing in additional capacity can be very expensive if physical works are required.

2. PURCHASE 'GREEN GAS'

While the advice remains to electrify your assets, in places where you can't electrify (for example due to commerciality, operational challenges, brand objections, local grid constraints etc), you can consider bio-fuels. Please note, these may not be recognised as credible routes to net zero on some reporting or accreditations. However, the premium applied and the use of an internal price of carbon will incentivise you further to explore electrification.

You can consider sourcing bio-gas and bio-LPG. As with renewable energy, these are much lower intensity alternatives to the grid supply. However, there are also some pitfalls here:

- Higher premium than renewable electricity.
- Not always recognised as a credible route to net zero. Should only be used as a stepping-stone. The internal price of carbon applied from the premium incentivises further electrification action.
- Questionable heritage and vintage RGGOs – see section on same point for REGOs.

RENEW: F-GAS

SCOPE 1 EMISSIONS FROM REFRIGERANTS ARE DUE TO FUGITIVE EMISSIONS (F-GASES)

Leaks of greenhouse gases from our refrigeration and HVAC systems. F-Gases have a disproportionate impact on warming when compared to greenhouse gases such as Carbon dioxide (CO2), as shown in the table below.

The refrigerant gas market is subject to the "F-Gas phase down" regulations, implemented in 2015, with the intention to phase out high GWP gases. This means that gases with a higher Global Warming Potential (GWP) are being phased out of use and production. Compliance to new regulations requires walk-in fridges and freezers must meet a number of legal requirements, including phase-out of systems reliant on R404A (F-Gases) - www.gov.uk/guidance/fluorinated-gases-f-gases There are different solutions for retro fit and new/replacement systems for refrigeration and air conditioning. There is a pricing and availability risk attached. However, it will make significant reductions in emissions from these sources.

Whilst the F-Gas Phase Down is broadly a compliance challenge and it reduces the intensity of emissions caused by F-Gas, it also has the following positive impacts for your operation:

EFFICIENCY
Newer, more efficient units expected to reduce operating costs

EMISSIONS
A reduction in Scope 1 emissions

You do not have to be an expert in F-Gas as you should be able to see emission reductions in your footprint through data from your FM contractors.

We recommend that you challenge your contractors to transition faster by becoming early adopters.

GAS	GLOBAL WARMING POTENTIAL (GWP)
CO2	1
R404 A	3,922
R290 A	3

REBALANCE: BEST PRACTICE FOR RESIDUAL EMISSIONS

For most operators, some level of rebalancing will be required to achieve net zero.

However, the debate on 'offsets' continues

- Should you do it up front or after?
- How credible is it?
- Is it Greenwashing?
- Avoidance or removal?
- Nature-based or tech-based?

If you need help with any of the 4Rs please reach out to us
support@zerocarbonforum.com

WE RECOMMEND

Maximise reduction and renewables first.

Make an informed decision for your own offsetting strategy.

CALCULATE YOUR RESIDUAL EMISSIONS & INVEST IN PROJECTS THAT ALIGN WITH YOUR BUSINESS

- Calculate your residual emissions and invest in projects that align with your business.
- Maintain integrity by ensuring your projects are credible (VCS, Gold Standard).
- Consider whether nature based or tech based projects are right for you.
- Future proof your supply and costs by developing an offsetting procurement strategy.

REBALANCE: OFFSETTING UNPACKED

'Carbon Offsetting' is used in reference to organisations buying 'Carbon Credits' which are then used to 'offset' the organisation's carbon impact.

The process most commonly involves buying carbon credits on the voluntary carbon market. Due diligence is key to ensure you engage in projects that are right for your organisation and strategy.

AVOIDANCE OR REMOVAL: AVOIDANCE means protecting an asset to ensure that no further carbon can be released to the atmosphere e.g., forest preservation ensuring no further trees are cut down. **REMOVAL** means an intervention that reduces the amount of carbon in the atmosphere (often referred to as sequestration) e.g., reforestation projects to plant more trees. Avoidance is not considered a credible route to net zero.

INTERNAL CARBON PRICING: The use of carbon credits can help in implementing an internal price of carbon and with the right culture and engagement can incentivise internal reduction initiatives.

NATURE-BASED OR TECH SOLUTIONS: Nature-based solutions include planting or preserving forests, coral reef cultivation and some regenerative agriculture. Nature-based projects can also contribute to better biodiversity and environment conservation. Tech-based solutions are in their infancy. They include Direct Air Capture (DAC) and Bio Energy with Carbon Capture and Storage (BECCS). Although many people prefer nature-based solutions, there is a need for tech-based projects to sequester sufficient volumes of carbon at the required pace.

ISSUANCE & RETIREMENT: A carbon credit is issued to the market when verified. It can be bought and held on account. It doesn't go out of date, but the argument is that older credits are less credible. Retiring a credit means it has been used to offset against a specific emission volume.

VINTAGE: Just like with REGO, for renewable energy a carbon credit may be issued when the project can prove that carbon is being avoided or removed. However, it stays in the market until it is retired. This means there may be cheaper, less credible credits available that have been bought in bulk previously and not yet retired meaning someone is selling them on, and they are not offering any current time value to carbon.

HERITAGE: Again, like REGO considering the heritage of carbon credits is important. Where are they produced? What activity is involved? What other positive (or adverse) impact are they having on community/environment?

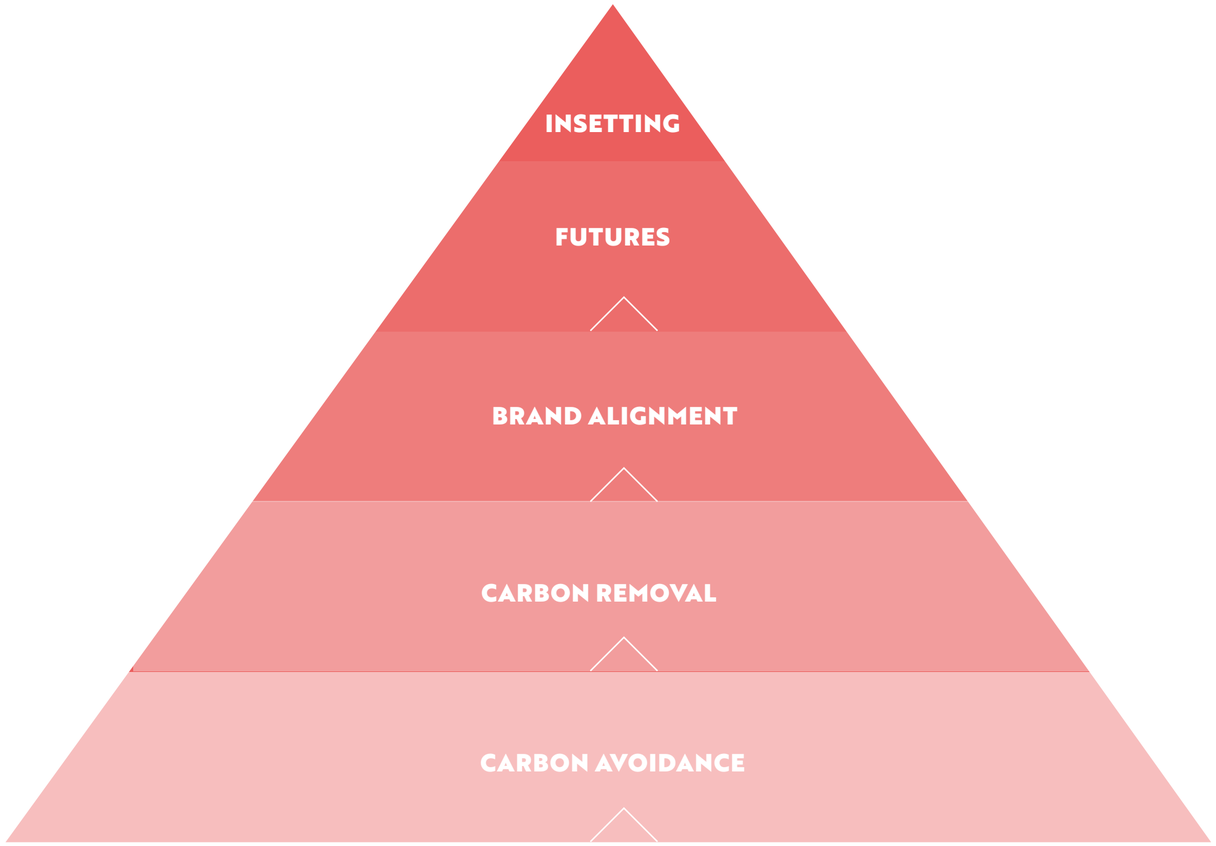
ADDITIONALITY: Additionality is about ensuring that your purchase of carbon credits enables activity that would not otherwise have happened. Credits sourced from the voluntary market would have been created whether you buy them or not. Real additionality is made when you invest in a specific project yourself. Investing in the futures market ensures that you are creating credits that would otherwise not materialise.

VALIDATION/VERIFICATION: It's important to ensure that any credits you buy are verified. Two widely recognised and trusted standards are VCS and Gold Standard.

PRICE: The price of credits is a good indicator of quality. The price of credits is volatile but typically increasing. If someone can offer you the same price as you paid previously then that's a red flag as it brings into question the vintage of the credit. At the time of writing, acceptable carbon removal projects are priced at £25-£45 per tonne. This is forecast to rise to anywhere between £150-£200 per tonne over the next 10-15 years.

REBALANCE: STRATEGY PROGRESSION

Do not pursue rebalancing investment if it is detracting time, money and resource away from actual reduction activity.
Article 6 of the Paris Agreement allows trading to be done in a regulated manner. Do your due diligence with your project partner. Be aware of the less regulated voluntary carbon market and its volatility. Don't be a green washer, be a green investor. If used correctly rebalancing can add much needed investment into additionality projects.



- Investing in projects directly linked to your supply chain and therefore can be counted as reduction if proved by an LCA.
- Investing in projects that won't mature until future years. Protecting against price and availability. Create additionality.
- Invest in projects more aligned to the specific business either through product, geography or brand value links.
- Voluntary market, nature based or tech. Projects with additionality therefore removing carbon.
- SBTs recognise avoidance up to the point of net zero. You must then transition all offsets to removal.

CHECKLIST

Use this checklist to ensure you have tackled all elements of your Scope 1 & 2 emissions

EMISSIONS SOURCE	SCOPE	RELEVANT?	WHAT HAVE YOU DONE?	WHAT ADDITIONAL SUPPORT IS REQUIRED?	COMPLETE?
Electricity	2				
Natural Gas	1				
LPG	1				
Fugitive Gases	1				
Owned Vehicle Miles	1				
Wood, Coal & Other De-Minimis Sources	1				
Rebalance	N/A				

Purchasing quality carbon removals will allow you to claim net zero on Scope 1 & 2, but may not be something your business wants to pursue. Emissions Source – see page 7 for emissions source definitions.