

2030

JULY 2022

Getting a head start
on net zero with
ISO50001

Page 14

Can net zero
bring purpose and
direction to ESOS?

Page 22

The Taskforce on
Climate-related
Financial Disclosure
(TCFD)

Page 28

FOREWORD

UK government must connect industry and policy with near-term targets to deliver net zero

More focus is needed on industry with scalable sector-based frameworks and short- and medium-term milestones.

Co-Written by: Nick Barrance, Head of Marketing at Alfa Energy Group
Lisa Turner, Campaign Manager at Alfa Energy Group

Looking at this issue of 2030, reflecting on COP26 and how industry can employ voluntary standards, certification schemes and even mandatory ones in order to implement a pathway to net zero, the 2030 team spoke to Dr Seyed Ebrahimi, Principal Consultant of Sustainability Operations at Alfa Energy Group about the recent Climate Change Committee (CCC) Progress Report. The dialogue outlines why the UK government needs to set policy with short term milestones now, and route sector specific frameworks through relevant sector associations that are both flexible and scalable. The government needs to address the capabilities of both large and small and organisations, and create an environment where UK plc can confidently invest in delivering net zero emissions.

On one hand, the Progress Report confirmed that the ambition and high-level strategy to achieve net zero emissions from UK government are already in place. While some issues are moving faster than expected, such as decarbonisation of power generation and large industrial cluster initiatives, the CCC found policy is lacking.

The Report is largely focused on the domestic, agriculture, and real estate sectors, and a new framework to measure government performance. Yet, as Ebrahimi points out, businesses play a major part in achieving net zero and should continue with energy efficiency and other decarbonisation initiatives which so far have gone further than any government action to date.

The message from the report is that the UK has set targets for net zero, but has not met them., "The problem is that no one is asking why?" comments Ebrahimi. "While real action from government is needed to kick start a candid drive to net zero, many organisations are getting on with decarbonisation". "Taking from the report the real estate sector as an example, our construction clients are already working towards SBTi accredited net zero strategies, not only addressing scope 1 and 2 emissions, but also scope 3 emissions covering the most challenging area of them all, their supply chains."

What is clear is the strategy to achieve net zero for each business operation is very different. As Ebrahimi points out:

“There is a difference in sector needs, and within sectors between the larger and smaller organisations, so any frameworks must address that. A lot of legislation is aimed at larger companies, but 99.9% of companies in the UK are SMEs, so what’s going to happen to them? The SMEs will have their own unique capital and operational challenges when decarbonising and will therefore need to be treated very differently to the larger listed corporates.”

Shorter term milestones and scalable sector specific frameworks are needed

Ebrahimi argues that a lack of direction from government and sector associations is causing significant confusion. Ebrahimi sees a need for short- and medium-term milestones, driven through a greater onus on sector associations to deliver scalable sector specific frameworks. The confusion combined with delays in government action is causing some businesses to pause: what Ebrahimi calls “a wait and see approach”.

Ebrahimi added: “In some areas we are seeing far too much offsetting taking place, rather than real action to reduce emissions. While offsetting has a place, it is what you do once all other avenues have been exhausted. This can be seen as greenwashing, which will have a negative impact on an organisation’s reputation and contractability.”

While the CCC now has a framework for measuring government progress in delivering net zero, industry needs tools to capture and manage complex supply chain data, in order to report into government to

evidence progress.

“There are various software systems and technologies available to support reporting into any voluntary or mandatory initiatives, but it is important to choose a system that supports your unique requirements, is flexible and scalable. Choosing the wrong system could prove costly”, states Ebrahimi.

Get ahead and realise the benefits or get caught out

Instead of waiting for the government to catch up, many businesses are already reporting voluntarily, but this comes with a stark warning from Ebrahimi:

“With the myriad of carbon reporting schemes available, I always recommend a gap analysis to ensure the right ones are put in place. Not all schemes are right for all organisations and choosing the wrong scheme could set you down the wrong path and hinder progress.”

Many forward-thinking businesses are already working towards net zero. They are not treating decarbonisation as a cost, but a way to become more efficient and better at what they do. These bright stars are going through a transformational process to function more effectively, recognising the performance benefits, avoiding being left with stranded assets once policy does bite while at the same time creating sustainable growth.

“It’s best to get ahead of the inevitable”, according to Ebrahimi. “The UK government will soon catch up. Short-term measures to meet net zero targets will be imposed and will suddenly become more onerous.”



CONTENTS

Seven months on from COP26 – has any progress been made?	8
Five reasons for having an approved Science-Based Target	12
Getting a head start on net zero with ISO50001	14
Net zero and Science-Based Targets	16
A new corporate standard for net zero	19
Can net zero bring purpose and direction to ESOS?	22
How to use life cycle assessment to quantify and reduce your scope 3 emissions	24
Integrating climate risks in financial decision-making - The Task Force on Climate-related Financial Disclosure (TCFD)	28

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NET ZERO CARBON NEWS ROUNDUP

Finding it hard to stay on top with what's happening in the sustainability news?

At Net Zero Carbon, we take a look at the week's biggest net zero news to cut through the noise and bring you the most important stories featuring net zero emissions activity. Here are some of the recent features:



Property sector pledges to take unified action on carbon emissions

The British property sector is to take unified action to reduce carbon emissions. The initiative by the British Property Federation (BPF) encourages members to sign-up to take the Net Zero Pledge. Participants will be expected to measure and report publicly on progress.



IEA: Stronger energy efficiency has significant part to play in meeting climate goals

Stronger efficiency measures can reduce energy bills, fuel imports and greenhouse gas emissions significantly, analysis by the International Energy Agency has found.



£23bn needed to decarbonise millions of problem homes over the next decade

The government needs to spend £23 billion over the next 10 years on improving energy efficiency in England's housing stock to reduce energy bills, a report from an association of housing sector organisations has concluded.



Mobile operators sets net zero targets while decoupling data from emissions

The mobile phone industry is getting its act together on efforts to address climate change, while decoupling traffic data growth from emissions, a new report has found.



UK group to develop standard to verify net zero buildings

Leading built environment organisations have joined forces to develop a standard for verifying UK buildings as net zero carbon.



Boeing shareholders vote in support of Scope 3 emissions disclosure

Nearly all of Boeing's shareholders have voted in favour of a motion calling on the company to report greenhouse gas emissions not only from its operations, but also from its supply chain and use of products.



Executive bonuses at two-thirds of FTSE 350 firms linked to ESG performance

Senior executives at an increasing number of FTSE 350 firms must demonstrate improvements in environmental, social and governance (ESG) performance in order to receive their annual bonus for the year, a report has found.



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Net Zero Carbon, our sustainability and net zero educational portal, provides independent guides, news and insight to organisations and those responsible for the delivery of net zero emissions targets.



SEVEN MONTHS ON FROM COP26 – HAS ANY PROGRESS BEEN MADE?

Written by: Samuel Clements,
Sustainability Specialist at Alfa Energy Group

Seven months ago, negotiators at the UN Glasgow Climate Summit celebrated a series of new commitments to lower GHG emissions and build resilience to the impacts of climate change.

So, what progress has been made since then, and what steps can organisations take to lead the way in reducing their carbon emissions and embracing net zero?

First, let's recap what was promised at COP26.

- More than 100 world leaders committed to ending and reversing deforestation by 2030, in the first major deal of the Summit.
- Rich countries committed to honour a promise made in 2009 to provide \$100bn a year in climate finance to the developing world from 2020.
- 25 countries and public finance institutions committed to end finance for overseas fossil fuel energy projects by 2022 and shift to clean energy.
- The UK committed to being the first net zero aligned financial centre in the world, legally mandating financial institutions to publicly disclose decarbonisation transition plans.
- 180 nations and organisations pledged to phase out coal, including five of the world's top coal power generators.
- The UK Government announced £290 million in new UK funding, including support for countries in the Asia Pacific to deal with the impact of global warming.
- A declaration was signed by dozens of countries committing to restricting the sale of new cars and vans to zero emission models by 2040.

- Mark Carney, former governor of the Bank of England and UN climate envoy, announced the Glasgow Financial Alliance for Net Zero network (GFANZ), aimed at bringing together leading net zero initiatives from across the financial system to accelerate the transition to net zero emissions by 2050.
- The US and China made a deal which set out plans to work together to tackle methane and take steps to reduce the rate of deforestation globally.

Six months on, the war in Ukraine, soaring inflation, the global energy crisis, and ongoing Covid-19 pandemic have derailed some of these commitments. As things stand:

- There has been little progress on the COP26 promises of cash. Resources are being stretched by the additional strains of high energy and food prices around the world, and the effects of the war in Ukraine. However developed countries did recently produce evidence that they would meet the climate finance promise this year or next, with the five-year average from 2020 to 2025 at around \$100bn.
- Although more than 160 firms with \$70 trillion in assets are involved in the GFANZ initiative, it is unclear how much of that is flowing to the poorest countries that need it most.
- At the end of May, the European Commission said the EU needed to find an extra €210bn (£178bn) over the next five years to pay for phasing out Russian fossil fuels and speeding up the switch to green energy (the EU was spending €100bn a year on Russian fossil fuels).
- As the recovery from Covid has quickened, and the war in Ukraine has raised energy insecurity and prices, some countries have considered a return to coal, or a delay to its phasing out. In fact, global demand for coal is expected to reach an all-time high this year, derailing many of the promises made at the Summit. Simultaneously, investors are still ploughing funds into fossil fuels rather than clean tech and being richly rewarded.



- This year has seen record deforestation in both the Amazon and the Congo. An important forestry meeting meant to be held in Kunming, China, in 2020, the Convention on Biological Diversity, is now again in limbo due to the Chinese government's response to the resurgence of Covid-19.
- There is a lack of accountability and timeline for nations to follow through on their promises. Obvious recent world events have caused the focus on the climate crisis to slip, but the effects of climate change will continue to intensify regardless.

What can organisations do to drive net zero?



Global climate action conferences, such as COP26 and the G7 Summit, come and go in a flash and fury of publicity, heated debate and grand promises. Once the dust has settled and corporate and government delegations are no longer the focus of media discussions, other issues arise, people's attention moves on.

Global discussions between leaders and experts influencing businesses to adopt net zero and sustainability strategies prove, however, the positive impact that leaders and policy makers can have on businesses. If governments fail to act, corporations will need to lead the way. This is not as unlikely as it may sound. Businesses are increasingly being driven by a trio of forces outstripping the power of any legislation, past or future. Those forces are their stakeholders: employees, investors and customers. These groups, rather than government regulations, will power the shift to sustainable business models. Whether due to enlightened self-interest or market forces, business leaders are being moved to respond.

It helps if net zero is seen as more than the fight against climate change. For example, in a world of rising and volatile energy prices, it can mean energy security through PPAs and greater onsite renewables, and a lower energy footprint through energy efficiency. It can mean boosting innovation, as solutions and new ways of doing business are developed, or greater engagement as staff join in initiatives. Ultimately, it means the sustainability of any business, not just the planet.

Organisations that pursue a carbon reduction strategy make themselves more desirable to stakeholders and future employees, helping them stand out from competitors as leaders in climate action.

UK focus

The UK has not pushed for enough change to be able to deliver on its target to become net zero by 2050. This, at least, was the belief of The Independent Climate Change Committee (CCC) in April 2022, the body set up to monitor progress on reducing emissions and achieving carbon budgets and targets. By June 2022, in a damning progress report to parliament, the CCC stated that the government *is* failing to enact the policies needed to reach the UK's net zero targets. With the UK retaining COP presidency until COP27 in November 2022, however, there is hope the government will step up to deliver more over the coming months.



In April the Government announced its plans for the energy sector, focusing on the ways it can secure energy within the UK to reduce the reliance on oil and gas from international sources. This involved the formation of a new public body - the Future System Operator (FSO) - to oversee the energy network, boost security and resilience for UK energy supplies and support the transition to net zero emissions.

Also in April, the Government published the British Energy Security Strategy, detailing how the UK will increase the use of wind, new nuclear, solar and hydrogen to help the country move to a more secure and renewable energy. The aim of this strategy is to see 95% of electricity coming from low carbon sources by 2030. However, the plan lacks emphasis on energy efficiency, and controversially also includes the production of domestic oil and gas from new licensing for North Sea drilling projects, expected to launch in the autumn. The CCC has stated that the plans do not focus on what is needed now, and that the UK will not see a positive impact from these strategies for the next five years.

As reported by The Guardian in May 2022, analysis has found that several major UK fossil fuel projects have been approved since COP26 concluded, while about 50 schemes are thought to be in the pipeline between now and 2025. The head of the International Energy Agency said last year no new fossil fuel developments should go ahead if net zero global targets are to be reached by 2050. It is estimated that nearly half of existing fossil fuel sites would need to be shut down early if global heating is to stay within the 1.5C global heating limit set by governments internationally.



5



Reasons

FOR HAVING AN
APPROVED SCIENCE-
BASED TARGET (SBT)

1

Boost business resilience and increase competitiveness

Emissions reduction goals often lead to reductions in cost and increases in operational efficiency. SBTs take this further in challenging businesses to align with the net zero economy. This means developing a roadmap for the short- and medium-term to meet the longer-term vision. Being part of this global initiative both differentiates your company and means you are part of a bigger movement. Working together increases the chance of delivering the necessary carbon reductions.

2

Drive innovation and transform business practices

Setting goals can inspire new solutions and product offerings. The long-term nature of a SBT encourages long term planning for the development of solutions, technologies and financing.

3

Build credibility and reputation

Garnering credibility in the sustainability space by committing to an SBT in a transparent and ambitious manner can prove beneficial with investors, consumers and other stakeholders. Rather than simply setting a target you think we can meet, setting an SBT means putting your company on track for where you – and the world – need to be by 2050.

4

Influence, and prepare for shifts in, public policy

Targets can work to both signal to policy makers that businesses are taking climate science seriously and to help businesses adapt to future policy change. Having a science-based target can help you to build positive relationships with government and regulatory bodies.

5

Manage climate risk with confidence

Not having an SBT raises a red flag that companies are failing to manage climate risk. Methodologies that enable targets to be directly aligned with the latest science provides extra incentives and a trajectory for future years. Furthermore, SBTi is a collaboration between CDP, the United Nations Global Compact, World Resources Institute and the World Wide Fund for Nature. This official quality check, based on rigorous analysis and grounded in science, gives companies confidence in their plans.

GETTING A HEAD START ON NET ZERO WITH ISO 50001



If your business is seeking to reduce its energy use, increase efficiency and reduce costs, it is essential to do so through an energy management system (EnMS). Implementing and then monitoring and maintaining an EnMS is no simple task. It is therefore essential to follow a set of guidelines specifically designed for this purpose. This is where ISO 50001 accreditation comes in.

The ISO 50001:2018 standard is one of the most widely recognised set of EnMS guidelines available. Getting certified will enable your business to develop energy policies that reduce the amount of energy you use, set energy use targets, increase business efficiency, improve access to and use of data and ultimately reduce costs.

Alfa provides a range of services to support the route to ISO 50001 accreditation.

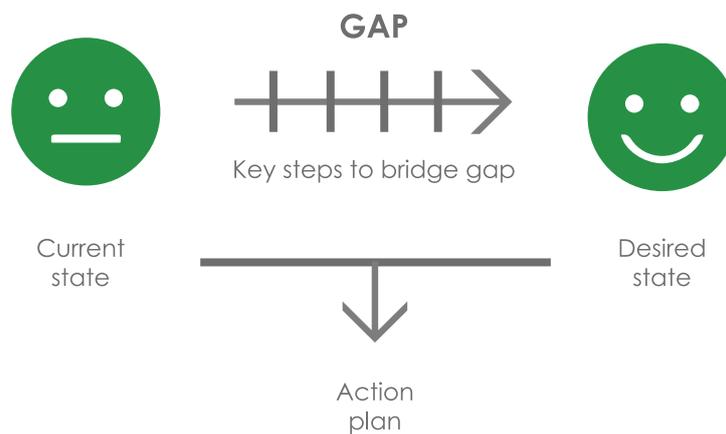
ISO 50001 gap analysis

Alfa Energy's consultants begin your ISO 150001 accreditation with a gap analysis to establish what processes are in place and what needs to be done to meet the requirements of the standard.

The gap analysis will cover all the clauses of the ISO 50001 standard, including:

- Context of the organisation.
- Energy policy, leadership, roles and responsibilities.
- Risks and opportunities.
- An energy review (including significant uses and variables affecting consumption, energy performance indicators (EnPIs) and energy baseline).
- Actions to deliver energy objectives.
- Internal audits and performance evaluation.

In addition, the analysis considers whether the organisation's significant energy consumption (in buildings, processes and transport) are covered. This is required by the Energy Savings Opportunity Scheme (ESOS), a mandatory energy assessment scheme for large organisations in the UK. This is important as many ISO 50001 systems tend to exclude transport.



Accreditation process

Once the gaps are clearly understood, we work with clients to create and document a bespoke EnMS. Our consultants will assist with implementation of the processes described in the new EnMS in line with ISO 50001.

Alfa Energy's consultants will also assist you with energy audits and internal audits of your ISO 50001 procedure. This work prepares you for the final visit by an independent auditor who will verify that your EnMS is being implemented correctly. Once this is confirmed, the independent auditor will recommend that your business is ISO 50001 accredited.

Alfa's energy and sustainability platform VISION can be utilised to meet the energy monitoring requirements of ISO 50001. For more information and to request a demo, [visit here](#).

NET ZERO AND SCIENCE-BASED TARGETS

The Paris Agreement target of net zero carbon emissions by 2050 and the UK and European Green Deals call for a deep decarbonisation of economic activities. If humankind wants to limit global warming at 1.5°C, the concentration of greenhouse gases (GHG) in the atmosphere must be reined in, and fast.

There is no commonly agreed definition of net zero. Oxford Languages puts it as 'a target of completely negating the amount of greenhouse gases produced by human activity, to be achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere.' That is to say, if you are serious about net zero, then you need a Science-based Target (SBT).

SBTs provide companies with a clearly defined path to reduce emissions in line with the Paris Agreement goals. More than 2,000 businesses around the world are already working with the Science Based Targets initiative (SBTi), a collaboration between CDP, the United Nations Global Compact, World Resources Institute and the World Wide Fund for Nature.

There is some debate as to whether businesses should be legally required to set SBTs. With more than 90% of global GDP now covered by net zero targets set nationally or regionally, such a requirement may not be so far away.

Committing to science-based targets (SBTi)

A step by step process



Science Based Target Initiative submission

Since 2015 more than 1,000 companies have joined the initiative to set a science-based climate target. In 16 countries in the Organisation for Economic Co-operation and Development (OECD), at least 20% of companies that have a high impact on global emissions are now part of the SBTi.

Having developed science-based targets for other clients using the SBTi framework and methodology, Alfa Energy knows how tough it can be to meet the requirements of the verification process. We can help you to not only meet the initial requirements for verification, but also carry out the on-going annual disclosure which ensures stakeholders are aware of the progress that your company is making towards its net zero target.

Working recently with The Carey Group, we drew on knowledge of the GHG Protocol to help the company complete the SBTi target verification process. Specifically, we worked with The Carey Group to:

- Create an initial statement of intent to declare the company's commitment to net zero.
- Create the emission baseline following a methodology accepted by the SBTi.
- Create a target that meets the requirements. We developed two emission reduction targets, one for scopes 1 + 2, and one for scope 3 which meet the criteria for verification.
- Completed the full submission form and liaise with the SBTi on the verification process.
- Support on communication of commitments to stakeholders, including incorporating progress into annual statements.

To learn more about how we worked with The Carey Group to establish a net zero strategy approved by the SBTi, and why it is so important to the company, read the case below and listen to the podcast linked within it.

At Alfa Energy, we help companies to align to net zero and prepare for what is to come on a mandatory basis. To kick things off, we can help your company to gain external verification of its baseline emissions and methodology. To learn more, click [here](#).



Net zero and SBTi case study

Alfa's sustainability experts undertook a thorough analysis of the Carey Group entire supply chain in order to align the company to the Science Based Targets Initiative (SBTi) approach. The Carey Group's emissions target was validated by SBTi in March 2022 – [click here to learn more.](#)

"As we develop our carbon strategy and Science-Based Targets, we are leaning on Alfa Energy's expertise to get us on the right track in terms of data and baseline."

Anna Baker, Head of Sustainability, The Carey Group

A NEW CORPORATE STANDARD FOR NET ZERO

It's easy to get tied in knots with sustainability jargon and greenwash. Navigating your way through the many standards, frameworks, and targets can be tough. The purpose of this article is to clarify the different definitions around decarbonisation and look at whether a new corporate standard for net zero could help matters.

In June 2019, the UK government amended the Climate Change Act from 80% to 100% GHG reduced emissions – or 'net zero' – by 2050. In the same year, the European Commission announced the European Green Deal as the strategy through which to achieve EU 'climate neutrality' by 2050.

The terms "net zero" and "climate neutral" are part of the lexicon of global climate change terms. Though they are sometimes used interchangeably, they have different definitions. Understanding the nuances is important.

- **Carbon neutral** is about reaching a balance between the emission of carbon into the atmosphere, and the removal of the climate pollutant through carbon sinks or other offsets. Put most simply, it is a "point in time" statement, where historical emissions are measured and offset, an approach which is holding less and less credibility with investors and customers.
- **Climate neutral** means the same but refers to the emission and mitigation of all greenhouse gases – not just carbon. That said, some take the definition further to include the elimination of all other negative environmental impacts, or at least some climate impacts beyond GHG emissions, such as radiative forcing from aircrafts (often used to calculate emissions from business travel).
- **Net zero carbon** ('net' meaning to balance or cancel out) also means achieving a balance between emissions into the atmosphere and their removal. However, it also implies making changes to reduce carbon emissions to the lowest amount – and offsetting as a last resort. Those leftover emissions are often referred to as residual emissions. Since a net zero approach will involve a clear reduction strategy, ideally before offsetting unavoidable emissions, the EU's 'climate neutral' target is, for all intents and purposes, a 'net zero' target.

- **Climate positive** (aka **carbon negative**... confusing, isn't it!) is another term that is sometimes used. This means that an activity goes beyond achieving net zero carbon emissions to create an environmental benefit by removing additional carbon dioxide from the atmosphere. Some argue that net zero is not enough and businesses must shoot for net positive.

Certainly, offsetting alone is an approach which is holding less and less credibility with investors and customers, but for some 'net zero' is also in the cross hairs. According to Oxford economist Kate Raworth, it is in danger of becoming "just another piece of jargon" as many firms continue to operate based on linear, extractive business models. She calls for companies to go past zero into an era of sequestration where we are drawing down far more carbon than the world is emitting. However let's not run before we can walk.

Net zero carbon commitments always involve emission reductions. This requires an initial carbon footprint measurement. This is followed by strategic GHG emission reduction initiatives, the implementation of renewable energy solutions and then carbon offsetting.

Get in touch to see how Alfa Energy can help your business take action.

Standardising key terms

A new corporate net zero standard by the Science-Based Targets initiative (SBTi) encourages businesses to invest in projects and activities that further avoid and remove emissions beyond their value chain – in parallel with reducing emissions in line with science directly across all direct and indirect operations. While corporate decarbonisation will play a critical role in reaching net zero, a significant amount of emissions occur beyond the reach of corporate supply chains. The private sector can play a huge role in bridging this emissions gap, supporting the Paris Agreement, and getting ahead of impending regulation.

Such standardisation is vital as 'net zero' and 'climate neutral' underpin the world's decarbonisation transition. This will help corporations to take a complete approach to carbon accounting that leads to robust and realistic decision making on carbon reduction, something that has been lacking. For example, research by the New Climate Institute and non-profit Carbon Market Watch into corporate net zero commitments has revealed a widespread over-reliance on offsetting and under-reporting of Scope 3 (indirect) emissions that undermines their credibility.

Furthermore, in early 2022 Climate Corporate Responsibility Monitor analysed the climate pledges and reduction activities of the 25 companies supposedly leading on sustainability. It found that just three clearly commit to deep decarbonisation, i.e. emission reductions across more than 90% of their full value chain, including the supply chain. What's more at least a third of these companies fail to disclose emissions across scope 1, 2 and 3, meaning they could be failing to account for up to 98% of their carbon footprints.

If your business wants help navigating net zero, setting Science Based Targets (SBTs), or mapping your Scope 3 emissions, click [here](#).

CAN NET ZERO BRING PURPOSE AND DIRECTION TO ESOS?

The Energy Savings Opportunity Scheme (ESOS) requires large businesses in the UK to measure their total energy consumption at least every four years and carry out audits (or alternative compliance route e.g. ISO 50001) of the energy used by their buildings, industrial processes and transport. The audits are intended to identify practical and cost-effective energy saving opportunities. Completion of an audit is mandatory, but implementation of the recommendations from the audit is left to the discretion of the participant.

The Department of Business, Energy and Industrial Strategy (BEIS) has identified a potential conflict between the energy efficiency recommendations from an ESOS audit and the recommendations required to help a business along its journey to net zero. For one, shorter term cost saving actions recommended through current ESOS audits can sometimes conflict with longer term investments that will be required to get businesses on a trajectory to meet net zero targets. Longer term investments might include zero carbon technologies, electric vehicles, and clean heat. As such, the idea of introducing a net zero element into energy audits is currently under review. The consultation is open until the end of September and changes are likely to come into force during the current phase (Phase 3), which runs until 2023.

Net zero aside, ESOS in its current form has faced criticism over the fact that some businesses view ESOS purely as a compliance exercise; perceptions of the varying quality of assessors; the lack of standardisation of the ESOS report; and the fact that implementation of recommendations is not mandatory. Beefing up ESOS to address net zero could make businesses take it more seriously and improve the uptake of recommendations.

The proposed changes include mandating organisations to:

- Carry out an assessment of which current energy-using processes and activities need to be addressed to become net zero by 2050.
- Outline current technologies used, and then identify what the low and/or zero carbon options are for each technology, the potential for investment and cost-effectiveness in the shorter or longer term, and when a suitable upgrade could take place.

- Publicly disclose high-level information from their ESOS report on a central website and set a target or action plan which they are required to report against. This would allow organisations to compare their performance with similar participants, allow third parties to compare ESOS data, improve the quality of audits and increase transparency.

Other suggestions include:

- Support for additional de-carbonisation through GHG management 'substitution' approaches.
- Extending ESOS to cover a larger range of enterprises (either to all medium-sized enterprises, or to a subset of medium-sized enterprises).
- Improving the standard of ESOS auditors, by reviewing the current processes through which they certified by professional bodies, and the processes that ensure they are appropriately qualified.
- Standardising auditing methods and information required; tighten requirements around site sampling, use of de minimis exemptions, and use of energy data.
- Ensuring reports include metrics that allow participants to better judge their energy performance and include more focus on energy management and behaviour change.
- Better alignment of ESOS with Streamlined Energy and Carbon Reporting by changing the ESOS qualification thresholds to match SECR. Businesses would be in scope of ESOS if they meet at least two of the following criteria: at least 250 employees, a balance sheet of £18 million or turnover of £36 million. This may mean that some businesses will be under the scope of ESOS for the first time.

Net zero is a logical extension of ESOS; it will raise awareness of important measures of which your business may have previously been unaware; it enhances energy managers' business case when going to their boards; and assessors feel confident that this is both feasible and deliverable.

HOW CAN I SAVE ON COMPLIANCE, CERTIFICATION AND NET ZERO STRATEGY COSTS?

Although the deadline for Phase 3 ESOS is December 2023, in our experience LEED assessors are in high demand the closer you get to the deadline. Looking at ESOS early gives you time to plan site visits, especially if you have multiple and complex sites. Given that a net zero site audit can include the ESOS requirements, combine ESOS, net zero and potential ISO 50001 programmes to save on costs. **Call us** today so we can discuss how to streamline and save on compliance and net zero strategy development.

HOW TO USE LIFE CYCLE ASSESSMENT TO QUANTIFY AND REDUCE YOUR SCOPE 3 EMISSIONS

Written by: Seyed Ebrahimi,
Principal Consultant, Sustainability Strategy

Unlike Scope 1 and 2 emissions, Scope 3 emissions are far harder to control and track accurately, but they are key to reaching net zero. With Scope 1 and 2, an organisation will normally have the data required to convert direct purchases of gas and electricity into a value in tonnes of GHGs. Most organisations are unlikely to have the same insight when it comes to suppliers of other goods and services.

Life cycle assessment (LCA) can be used to quantify Scope 1-3 emissions by providing information on the environmental impacts of systems, services, and products, throughout the entire life cycle. It therefore enables you to accurately and efficiently plan and deliver a road map to reduce emissions in line with a net zero strategy.

Life Cycle Assessment

Life cycle Assessment (LCA) can be used to provide information on the environmental impacts of processes, services and products, throughout the entire life cycle. LCA stands for Life Cycle Analysis and is also known as 'cradle-to-grave' analysis. LCA refers to the assessment of environmental impacts of a product throughout its life cycle from its raw materials to disposal or recycling. The various stages considered in assessing

the environmental impacts start from the extraction of raw materials and move toward material processing, manufacture, distribution, use, repair, maintenance, and disposal or recycling (ScienceDirect, 2022).

- To support clients with identifying cost/emission hotspots (baseline) for a particular product/service
- For R&D work on alternative manufacturing processes and or materials
- To communicate this information to stakeholders and customers (i.e., Environmental Product Declarations)

How Alfa Energy uses LCAs to assess environmental impacts of products/systems

Our LCA service involves a comprehensive life cycle inventory of energy-materials that are essential across a client's specific product/system value chain. We do so by calculating the cumulative impact of the associated emissions and costs. The aim is to provide a systems view of the environmental profile of products/services. We adopt a hybrid LCA approach combining input-output (IO) models and process-based LCA for a complete system boundary. This approach is widely recognised as a more accurate approach, as process-based LCA

(on its own) could suffer from incomplete system boundaries (accounting for parts of a supply chain that are difficult or impractical to map).

The suggested hybrid approaches are based on the intended use purpose of an LCA and help define the extent and content of the assessment. We always consider the information needs of our customers and define each study case-by-case. In order to better understand the primary and support processes of a company (context of organisation), we initially conduct a supply and value chain analysis to identify and categorise key actors and activities and help scope intervention points to optimise cost and environmental performance. This entails a first-level analysis to provide a sectoral/industry level assessment and categorisation of suppliers (based on net spend/emission).

Using LCA to identify the carbon and cost hotspots, we conduct supply chain configuration and supply chain optimisation. The supply chain configuration work involves scenario modelling, considering alternative supply chain routes/networks and comparing short vs long supply chains among other solutions.

Together, these measures will provide a comprehensive system-view assessment of a company's operations and suggest realistic decarbonisation strategies. These strategies could entail improving supply chain performance and efficiency, balancing

supply and demand, helping procure sufficient raw materials for manufacturing and distribution (meet demand based on triple bottom line efficiency).

Life Cycle Costing (LCC)

Life Cycle Costing maps the total cost of ownership of a product / service / system throughout its entire life span (cradle-to-grave costs). LCC is best used to evaluate the procurement of a new product/service and can provide informed decision making on how (and where) to reduce costs throughout the different stages of the product life cycle (raw material acquisition, manufacturing/processing, use-stage, maintenance, end of life). LCC does not consider the depreciation cost associated with the capital cost.

Traditionally, costing approaches mainly focused on the up-front cost (capital cost) of manufacturing or procurement of a product/service. These approaches failed to account for post-sales costs and could also result in missing important transaction costs associated with business function interrelationships. In other words, a company choosing a particular material or manufacturing process with a low upfront cost could fail to account for higher post-sale costs such as maintenance, use-stage, customer service, and disposal costs. Furthermore, if LCC is used in parallel with LCA it could provide decision-makers with important information required when substituting or comparing a high energy-intensive material or manufacturing process

with alternatives. This could be fed back to the research and development team and used in future procurement and design decisions.

Environmental Product Declarations (EPD)

An EPD is a standardised document used in both B2B and B2C communication. It transparently and scientifically describes the environmental impacts of your system/product/service. EPDs are validated by a third party and as such can be used to compare with EPDs for other products/services if the same product category rules are applied. The most common sector making use of EPDs is the construction sector, but increasingly it is becoming popular in other industries.

The comparability of EPDs is one of its strengths, as it can help offer credible and verified data concerning the environmental

performance of products (based on LCA standards and principles). At Alfa Energy, we aim to follow applicable product category rules, comply with EPD guidelines, and most importantly include customer-driven approaches (using transparent communication).

Our team has over a decade experience in conducting LCA studies, in a variety of different sectors (energy, aviation, agri-food, automotive, mining and other service sectors). We have conducted LCA studies for both internal use purposes (e.g. R&D) and public stakeholder communication. For more information, please contact Alfa's Principal Consultant Seyed Ebrahimi seyed.ebrahimi@alfaenergy.co.uk

What is LCA?

Life Cycle Assessment (LCA) is a technique for assessing the potential environmental aspects and potential aspects associated with a product (or service), by:

- compiling an inventory of relevant inputs and outputs,
- evaluating the potential environmental impacts associated with those inputs and outputs,
- interpreting the results of the inventory and impact phases in relation to the objectives of the study.



LCA Process Flow



INTEGRATING CLIMATE RISKS IN FINANCIAL DECISION-MAKING - THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURE (TCFD)



As we head towards a warming, albeit net zero future, it's hard to say which companies will endure, flourish or dwindle as the environment changes, regulations evolve, new technologies emerge, and customer behaviour shifts. Without reliable climate-related financial information, financial markets cannot price climate-related risks and opportunities correctly and may potentially face a rocky transition to a low-carbon economy. That's why The Financial Stability Board established the TCFD in 2015 to develop climate-related disclosures that "could promote more informed investment, credit [or lending], and insurance underwriting decisions"¹ and, in turn, "would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks."²

Aimed predominantly at large corporates, investors and banks, the hope is that better information will allow companies to incorporate climate-related risks and opportunities into their risk management and strategic planning processes. As this occurs, companies' and investors' understanding of the financial implications associated with climate change will grow, empowering the markets to channel investment to sustainable and resilient solutions, opportunities, and business models.

Disclosure is recommended on the governance of climate risks across the business, including board oversight, financial planning and management practices.

¹ FSB, "Proposal for a Disclosure Task Force on Climate-Related Risks," November 9, 2015.

² The term "carbon-related assets" is not well defined, but is generally considered to refer to assets or organizations with relatively high direct or indirect GHG emissions.]

How do we help clients with TCFD?

We help clients to disclose their climate risk and opportunities, develop scenarios to understand climate impacts on their business and quantify the costs and upside on their bottom lines. Using the task force's outlined specific recommendations, we assist clients in disclosing details of the following four areas:

- 1. Governance** - Disclosing an organisation's governance around climate-related risks and opportunities. These are the top-down administrative policies for climate-related risks and opportunities, and how these issues are addressed at the board and management levels.
- 2. Strategy** - Disclosing impacts of climate-related risks and opportunities on organisation's business, strategy, and financial planning. Here we take a look at the resilience of your organisational strategy to manage climate-related scenarios.
- 3. Strategic Planning Risk Management** - Disclosing how a client would identify, assess, manage climate-related risks, and integrate these into the broader risk management strategy. This includes Physical and Transition Risks, Resource Efficiency, energy, and Markets.
- 4. Metrics and targets** - Disclosing metrics and targets required to evaluate and handle relevant climate-related risks and opportunities. We can assist clients with mapping scope 1, 2, and 3 GHG emissions and set the targets they could use to manage risks and opportunities.

Physical risks are environmental events like floods or storms, whereas **transition risks** arise from changes in policy and new technologies, such as the growth of renewable energy.

Our TCFD reporting service includes the following:

- **Gap analysis** – we review your existing climate strategy and disclosures to see which recommendations they meet and prioritise where to focus for compliance should be.
- **Scenario modelling** – we map your carbon footprint, look for hotspots, and identify realistic interventions. For example, raw material substitution, using technological improvements to improve manufacturing process, routing, consumer behavioural change, and end of life treatment.
- **Supply chain resilience** – we help implement a more comprehensive approach to looking at your supply chain optimisation by combining strategy resilience and sustainability.
- **Roadmap** – we define the duration and timeline for selected strategies.
- **Risk analysis** – we investigate both physical and transition risks relevant to your business.
- **Recommendations** – as well as providing clients with as many applicable recommended disclosures as possible, we help identify areas for improvement.

If you want to better understand the new strategic landscape in climate disclosure, its implications through the business hierarchy and the opportunities for competitive advantage, we're here to help. Please contact Alfa's Principal Consultant Seyed Ebrahimi seyed.ebrahimi@alfaenergy.co.uk





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