

# Decarbonisation Services

## EVERYONE NEEDS TO DECARBONISE

That's the clear implication of the UK Government's 2050 net zero target and the science underpinning the United Nations' Paris Accord.

From defence to energy, transport to agriculture, retail to finance, no sector is unaffected. The scale and speed of change requires a transformation to how these systems work.

There is already a compelling business case for embracing this change by adopting low carbon business models, technologies and practices. It is an opportunity to place yourself ahead of the curve. If no action is taken it will soon turn into a business risk as new low-carbon policies start to bite and increasing legislative burden starts to exert pressure in every sector.

Companies will be required to disclose their carbon emissions, and all listed companies and large asset owners will be expected to disclose in line with the Task Force on Climate Related Financial Disclosure (TCFD) recommendations by 2022. There are an increasing number of legal challenges being placed on large projects linked to whether these satisfy the requirements of the Climate Change Act and/or the Paris agreement. Recent case law indicates that these challenges can be successful.

## UNDERSTANDING YOUR GREENHOUSE GAS EMISSIONS

Calculating and reporting a carbon footprint is commonplace in some sectors but new to others. New legislation like the Streamlined Energy and Reporting (SECR) scheme will impose an obligation on many companies that have no previous experience of carbon accounting. Whether you are experienced or novice, we can help. Our services include:

- ▶ Assistance with boundary setting, and selecting the right approach for you, based on either ownership or control.
- ▶ Scope 1, 2 and 3 carbon calculation:

*Direct:  
You are  
responsible  
for these*

**Scope 1:** Greenhouse gas emissions from your own sources (e.g. vehicle exhausts);

**Scope 2:** Emissions from the generation of energy that you purchase (e.g. power station emissions); and

*Indirect:  
You can  
influence  
these*

**Scope 3 (aka embodied emissions):** All other emissions resulting from your activities (e.g. from your supply chain, business travel, waste disposal, your customers' use of your products)

- ▶ Methodology development for complex cases.
- ▶ Third party assurance or verification.



## PLANNING TO THRIVE IN A LOW-CARBON WORLD

Having measured your emissions, the next step is to make a plan for reduction. This demonstrates to your stakeholders that you are future-proofing your business and helps you to budget for the required capital investments. At this stage the questions become:

- ▶ How quickly do you need to eliminate your emissions?
- ▶ What is the most cost-effective pathway?
- ▶ Which technologies should you invest in?
- ▶ How can you work with partners to accelerate the transition and multiply the benefits?
- ▶ How can you optimise your low-carbon journey to remain competitive, agile and resilient?
- ▶ What are the key milestones and dependencies?

The Frazer-Nash team comprises a breadth of industry and technology specialists who can help develop your plans and identify optimal ways to manage the transition. Our services include:

- ▶ Net zero strategy development.
- ▶ Science-based targets.
- ▶ Technology roadmaps.
- ▶ Business case development.
- ▶ Techno-economic feasibility assessment.
- ▶ Digital twin modelling.
- ▶ Renewable energy.
- ▶ Low carbon fuels.
- ▶ Ultra-low emission vehicles.
- ▶ Circular economy.

We have provided decarbonisation support to clients in the UK government, private and non-governmental sectors. This ranges from advice to inform national decarbonisation strategies through to carbon calculations for business and specific projects. Our staff have significant hands-on, practical, experience of carbon calculation and the challenges faced by business in decarbonising their activities.

For more information about Frazer-Nash please visit our website.  
[www.fnc.co.uk](http://www.fnc.co.uk)

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## HOW WE HAVE HELPED OUR CLIENTS:

### Sustainable Future of Freight

Frazer-Nash was tasked by the National Infrastructure Commission (NIC) to develop, technically appraise and illustrate feasible options for the UK to achieve a clean, zero-emissions road and rail freight sector by 2050. The work included an assessment of the baseline emissions of carbon and air pollutants in the UK, and five other European countries, which are the main freight trading partners of the UK. Several alternative fuels and technologies were assessed for their technical readiness, maturity, cost of implementation and lifecycle emissions of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub> and fine particulate matter. We then developed a timeline for the transition to a UK wide zero-emission freight system by 2050. The work contributed to the NIC final report on Better Delivery: The Challenge for Freight<sup>1</sup>, which will directly influence UK government transport policy.

1: <https://www.nic.org.uk/publications/better-delivery-the-challenge-for-freight/>.



### Low Carbon Mobility - A Sustainable Future for Transport

The IMechE commissioned Frazer-Nash to undertake a review of the role of rail as a sustainable transport option within the UK. We undertook research focussing on the potential for rail to reduce CO<sub>2</sub> emissions in support of the UK 2050 decarbonisation targets. The study focussed on the ways in which the environmental performance of transport could be improved, including technical, operational, behavioural and fiscal solutions. The Frazer-Nash report makes recommendations for cost-effective policy actions to yield a reduction in CO<sub>2</sub> emissions for transport. These recommendations are made in the context of an infrastructure investment programme, which can deliver current railway capacity and performance and accommodate the predicted future growth.



## MEET SOME OF THE TEAM:

### Howard Lungley



Howard is a management consultant with over 20 years' experience leading sustainability strategy for global brands, and delivering business change for sustainability. Prior to joining Frazer-Nash, Howard worked at BT, responsible for operational environmental strategy, notably science-based targets, electric vehicles and decarbonisation of heat. Howard previously led the business case, forecasts and roadmaps to decarbonise BT's fleet of 30,000 vehicles and 6,000 buildings. He established science-based targets addressing 5.5 Mt CO<sub>2</sub>e. Howard has previously analysed the rail industry's whole life carbon footprint using input-output analysis for RSSB.

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### Ellen Pennifold



Ellen is an experienced Environment and Sustainability Consultant. She has an MSc in Environmental Management, and is currently working towards a further MSc in Climate Change and Development which focuses on sustainable development, climate change ethics, and low carbon development. She has supported Nationally Significant Infrastructure Projects by providing environmental management and sustainability advice, in addition to carbon footprinting. Ellen has provided technical environmental advice to the UK government regarding carbon and emissions assessment of the freight transport sector.

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For more information about Frazer-Nash please visit our website.

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