INEOS

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INEOS

There is no doubt that difficult times lie ahead as the world moves towards net zero by 2050.

Manufacturing in Europe, in particular, is suffering, compared to the US and Asia, due to the high price of its energy.

In the UK, this is made worse by high, punitive taxation which is killing the North Sea, reducing investment, putting high-quality jobs at risk, whilst making the UK even more reliant on overseas energy.

INEOS is responding to these challenging market conditions – with bold new projects, in the US and China, with continued investment, and steady progress towards net zero around the world.

In this edition of INCH, we focus on energy, which is a talking point all over the world.

Energy markets have changed due to the war in Ukraine, and the energy transition.

As you would expect, INEOS is taking matters into its own hands.

Our energy business will be at the forefront of the current energy transition and is involved in game-changing plans to acquire LNG from the USA to Europe.

The company is a first mover among European corporates to secure competitive sources of energy to meet its own needs and those of its customers in Europe, as part of the energy transition.

We have seen the INEOS-led Greensand carbon capture and storage project achieve a world first, and we continue to invest in hydrogen.

Its achievements so far – and its goals – are laid bare in the 2022 sustainability report, which highlights a 12% reduction in greenhouse gas emissions compared to 2019 and sets a new target to incorporate 850,000 tonnes of recycled or bio-attributed materials into its polymer products by 2030.

INCH focuses too on equality and diversity and asks some of INEOS' senior women colleagues to share their early experiences in our industry. Their stories make for uncomfortable reading, but things are changing. You only have to hear from some of the company's younger women to see that.

It's an action-packed edition and one we hope you will find interesting.

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The second phase of the Cameron LNG project in Louisiana is due to be completed in May 2026

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INEOS Energy

Oil & Gas

INEOS set up its oil & gas business in 2015 after it acquired North Sea gas fields owned by DEA.

INEOS Energy Trading

The business was established in 2017 to market and trade the gas production from INEOS' upstream assets in the North Sea. It markets over 4.5 million therms of equity gas a day as well as purchasing and supplying energy to a host of INEOS' manufacturing sites.

HydrogenOne

INEOS provided the cornerstone funding for HydrogenOne Capital, which was established to provide investors with opportunities in clean hydrogen and energy storage for the energy transition.

Carbon Capture & Storage

A world first in March 2023. The INEOS-led Project Greensand shows that Carbon Capture and Storage (CCS) can work after carbon dioxide (CO_2) from Belgium is successfully captured, transported and stored under the Danish North Sea.

IMAGE: £1 billion is to be invested into the production and use of hydrogen at the Grangemouth site accompanied by carbon capture and storage of at least 1 million tonnes per annum of CO_2 by 2030

A

INEOS Energy is committed to meeting society's energy needs through the current energy transition. Producing oil and gas, power and carbon credits. Supported by investment in LNG, Hydrogen and Carbon Capture and Storage.

Discover more about INEOS Energy overleaf ➤

B

C

B. INEOS manufactures essential raw materials for wind turbines and solar panels

C. A world first, Project Greensand, shows that Carbon Capture and Storage (CCS) can work after carbon dioxide (CO_2) from Belgium is successfully captured, transported and stored under the Danish North Sea

D. INEOS believes hydrogen is the way forward to help decarbonise buses, trains and HGVs

INEOS cannot survive without energy. And neither can the world. Both rely on oil and gas to function. And they will do for years to come until governments and consumers are able to tap into a source of energy that is reliable, affordable and sustainable.

"Oil and gas companies can support this transition by providing alternatives, but they can't make people buy electric cars or use less energy," said David Bucknall, CEO of INEOS Energy and former head of BP's global oil and low carbon trading businesses.

INEOS, which manufactures essential chemicals for the preservation of food and water, for clothing, medicines, electronics, cars, planes, buildings, wind turbines and solar panels, has used gas and oil for decades. As both a fuel and as a raw material.

INEOS also uses wind power and hydrogen to run some of its plants. Wood pulp and recycled plastic is also being used – instead of gas and oil – to make some of its products.

"If we can, we are doing it," he said.

That transition is also one of the reasons why INEOS Energy was launched. The new business is designed to reflect the changing climate.

"This isn't green washing," said Brian Gilvary, who became chairman of INEOS Energy after he retired from BP.

"INEOS Energy is an exciting new business that incorporates all of the existing INEOS Oil & Gas assets and will also enable INEOS to become a powerful force in the coming energy transition."

Hydrogen and renewable energy will both play a huge role in that transition.

INEOS has set out plans to develop 'green hydrogen' projects – using electrolysis and renewable energy – in Norway, Germany and Belgium, as well as the UK, which will also host the headquarters of its new hydrogen-focused unit.

What industry needs, though, says INEOS, is greater policy certainty from government.

"If the investment framework is in place, then investment tends to follow it," he said. "Germany is very advanced. It has tax incentives and fiscal incentives which you need to create those investments."

The German government recently awarded INEOS €770,000 to carry out a feasibility study into its plans to build and operate a new green hydrogen plant at the Verbund site in Koln – a move that could cut $C0_2$ emissions by more than 100,000 tonnes per year.

"The funding decision shows the significance that the state attaches to our project," said Dr Stephan Müller, Commercial Energy Manager at INEOS in Köln. "Water electrolysis for the production of green hydrogen is an incredibly important component of our ambitious sustainability agenda with the goal of reaching net zero by 2045.

Those plans, though, are only part of INEOS' €2 billion Euro package of green hydrogen projects across Europe announced in October last year.

Prof. Dr. Andreas Pinkwart, Former Minister of Economics and Innovation, described the German project as an important step on the way to a climate-neutral chemical industry in North Rhine-Westphalia.

"In the future, the project can supply not only the Köln Chempark but also logistics with green hydrogen," he said. "We need precisely such holistic projects to be successful in the transformation."

Up until 2015, INEOS had focused solely on chemicals.

But in October of that year, it ventured upstream for the first time.

It bought all the UK North Sea gas fields owned by the DEA Group, followed by Fairfield Energy Holdings Ltd's 25% interest in the Clipper South platform.

Months later, INEOS bought DONG Energy's entire oil and gas assets in the North Sea for more than €1 billion and acquired the 235-mile Forties Pipeline System, which delivers about 40% of the UK's oil and gas to the mainland.

They were landmark acquisitions and steered the company into new, exciting territory.

Acquiring DONG Energy's assets has also meant INEOS Energy is now at the forefront of one of the most exciting projects in the world.

The Greensand carbon capture and storage project in Denmark has the potential to reduce the amount of CO_2 emitted into the atmosphere efficiently and quickly.

In March, the INEOS-led Greensand project achieved a world first, proving to the world that Carbon Capture and Storage (CCS) can work, after carbon dioxide (CO_2) from Belgium was successfully captured, transported cross border and stored under the Danish North Sea in a retired INEOS oil reservoir.

Recently, INEOS also provided cornerstone funding for HydrogenOne Capital which was established to provide investors with opportunities in clean hydrogen and energy storage for the energy transition.

Despite the huge strides that INEOS is making, the company believes that natural gas will still play a huge part in life after 2050.

And it's not alone in thinking that.

The Gas Exporting Countries Forum, an international governmental organisation made up of 19 member countries, believes natural gas will actually increase its share in the global energy mix from over 23% today to 27% in 2050 – not least because the global population is set to rise by almost two billion to 9.7 billion by 2050, which will pile additional pressure on the demand for energy, food and materials.

"Natural gas will come out on top in the global energy mix," said a spokesman.

It argued that despite 'aggressive' decarbonisation actions under the EU's proposed Fit for 55 package, natural gas was still viewed as having a future.

Earlier this year The European Commission also said that natural gas and nuclear power had a role to play in the shift to a renewable-based future.

"It's about time," said Robert Bryce, author of A Question of Power. "The policymakers in Europe are finally embracing energy realism."

Prof. Dr. Andreas Pinkwart researched and taught entrepreneurship when this subject did not even exist at German universities

"We need precisely such holistic projects to be successful in the transformation"

– Prof. Dr. Andreas Pinkwart, Former Minister of Economics and Innovation, speaking about INEOS' plans to build and operate a new green hydrogen plant at the Verbund site in Köln

"It cannot stand alone, but it is an important tool if we are to solve the climate crisis," said David.

He said the determination to seek alternative, cleaner sources of energy was high on INEOS' agenda.

Each business has developed a roadmap – effectively an investment plan – to achieve net zero by 2050, while still remaining profitable and ahead of evolving regulations and legislation.

"Based on the roadmaps developed to date, we will achieve a reduction of over 33% by 2030, the one third marker on the road to net zero," he said.

Its plans are also backed by investment.

Over €6 billion is currently being invested in a wide range of projects that will reduce INEOS' CO_2 footprint by harnessing the power of a natural gas that INEOS has been producing as a by-product for 100 years.

As Europe's largest operator of electrolysis – the technology to produce hydrogen – INEOS is in a unique position to serve the hydrogen economy.

In the UK, the focus is on green and blue hydrogen.

D

INEOS Energy

Carbon Capture & Storage

INEOS has helped to prove to the world that greenhouse gas emissions can be safely captured and permanently stored under the seabed. The game-changing, INEOS-led Project Greensand is a world first and could be operating commercially in 2025

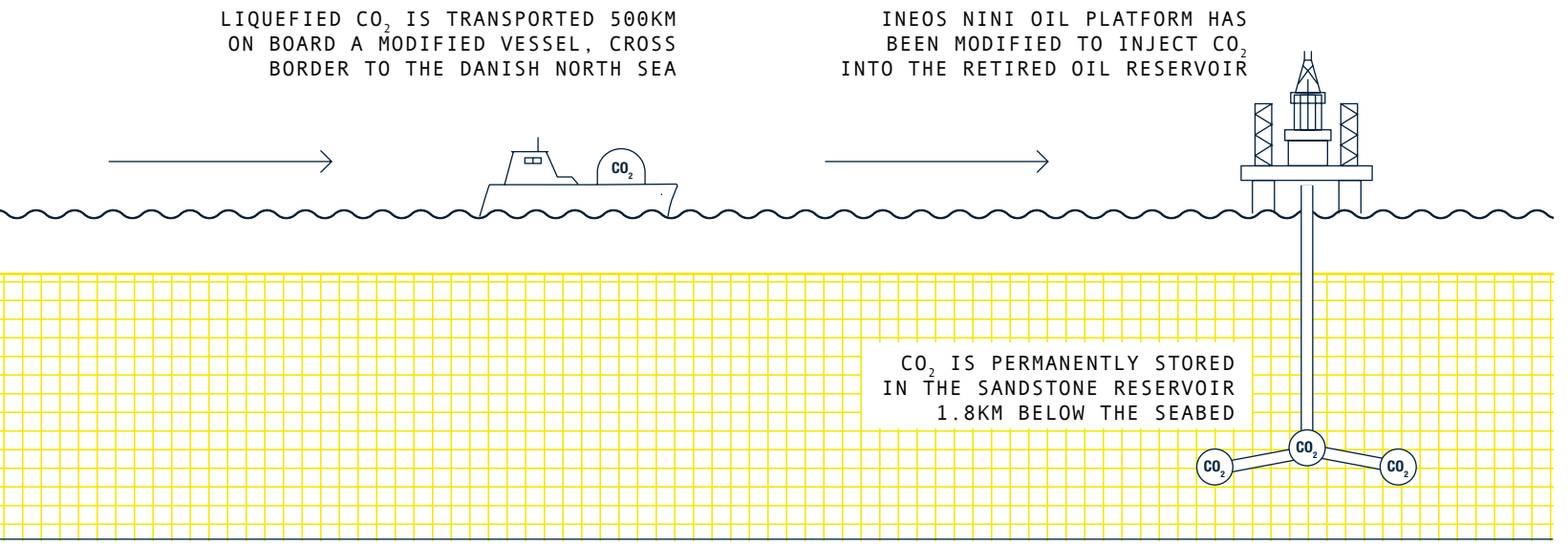
Full story overleaf ➤

CO_2 IS CAPTURED AT
INEOS OXIDE PLANT
ANTWERP, BELGIUM

THE CO_2 FOR THE PILOT PROJECT COMES FROM THE INEOS OXIDE FACTORY IN BELGIUM, WHERE CO_2 IS ALREADY BEING CAPTURED. IT IS LIQUEFIED AND TRANSPORTED BY SEA, IN CONTAINERS TO THE DANISH NORTH SEA WHERE IT IS INJECTED INTO A RETIRED INEOS OIL RESERVOIR 1,800 METRES BELOW THE SEABED, WHERE IT IS STORED PERMANENTLY.

"All the parts of the process have been developed and work well in isolation. Connecting the parts and building the infrastructure was the challenge"

– David Bucknall, CEO of INEOS Energy



INEOS has helped to prove to the world that CO_2 can be safely captured, transported and injected into retired oil and gas wells under the seabed. On March 8th 2023 it achieved the world's first cross border off-shore CO_2 storage initiative intended to mitigate climate change. The successful trial saw CO_2, captured from INEOS Oxide's plant in Belgium and shipped 500 miles by Danish Shipping to INEOS' Nini offshore oil platform in the Danish North Sea.

There, the liquefied gas was injected into the retired oil reservoir 2km under the seabed.

The INEOS-led Project Greensand was hailed as a big moment for Europe's transition to a greener economy and the world's understanding of carbon capture and storage.

"You have shown that it can be done," said Ursula von der Leyen, President of the European Commission in recognition of the Greensand project and the first injection event in Denmark on March 8.

"You have shown that we can grow our industry through innovation and competition, and at the same time, remove carbon emissions from the atmosphere, through ingenuity and cooperation."

There to witness the historic moment was Denmark's Crown Prince Frederik, Brian Gilvary, Executive Chairman of INEOS Energy, and Hugo Dijkgraaf, Chief Technology Officer at Wintershall Dea, which, along with INEOS, headed the consortium of 23 organisations involved in Project Greensand.

"This project proves that carbon capture and storage is a viable way to permanently store CO_2 emissions under the North Sea," said Hugo.

Anne H. Steffensen, CEO of Danish Shipping, said failure was not an option.

"There is no way we could have failed on this," she said.

And the reason is simple. For carbon capture and storage is seen as critically important to help decarbonise the world's energy and tackle climate change.

The consortium of 23 partners is jointly led by INEOS.

Project Greensand, as it is known due to the type of sandstone under the seabed, is the first time that the full value chain has been tested – and it is being done purely to protect the environment.

"All the parts of the process had been developed and worked well in isolation," said David Bucknall, CEO of INEOS Energy. "Connecting the parts and building the infrastructure was the challenge."

The plan now – following the successful trial – is to start operating commercially in 2025.

Once fully operational, it should be able to store up to eight million tonnes of CO_2 every year.

There is immense pride within the company at being involved in such a ground-breaking project.

Mads Weng Gade, CCO, Head of INEOS Energy Denmark, described it as a fantastic milestone in the fight against climate change.

"I have been looking forward to this day for a very long time," he said. "We have all shown true, pioneering spirit and worked hard to achieve this."

Many critics have argued that carbon capture and storage is unscalable, expensive and energy-intensive.

But David, a former BP executive, said the project was based on proven technologies.

"The pilot and development phases are about making them work together effectively," he said.

In December, the INEOS-led project received £22 million from the Danish government – the largest single grant ever awarded in Denmark.

"Denmark has one of the most ambitious climate targets in the world and sees carbon capture and storage as one of the steps necessary to reach its goals," said David. "This project will contribute significantly to Denmark's carbon reduction targets."

The project will also secure highly-skilled jobs.

"It makes sense for the oil and gas industry to drive this new industry because they have many years of experience in this field," said Mads.

"We will be using the same infrastructure, the same geology and the same people who have detailed knowledge of these reservoirs."

Instead of dismantling oil rigs, they can be repurposed.

Instead of gas flowing out, the process will simply be reversed to allow carbon dioxide to be injected into the wells.

INEOS' long-term goal is to build a fleet of ships and CO_2 storage facilities on land and a terminal so that the ships can dock, load the CO_2 into containers and then sail out to the platform.

"We anticipate Greensand to be competitive commercially once a commercial market for CO_2 is up and running," said David.

We answer the big questions regarding Project Greensand on the next page ➤

Q+A

The world's largest carbon capture facility in America closed down in 2020. Why will Project Greensand succeed?

The Petra Nova project in Texas had been designed to use captured CO_2 from the coal-fired power plant, pipe it 82 miles overland and inject into the West Ranch oil field to boost oil production. But low oil prices – due to the COVID-19 pandemic – made it uneconomic.

Project Greensand is different. By Danish law, the captured carbon dioxide cannot be used to produce more oil or gas. It is a pure climate project. It is not tied to oil and gas production. We have a completely different set of drivers.

Greensand, which will become a complete CO_2 storage hub from the mid-20s, will use proven technology and build on the experience from operating and producing the depleted oil and gas fields.

CO_2 storage offshore is already happening in the North Sea and several carbon capture and storage projects in Europe are looking to the Greensand project for answers.

Why does government backing matter so much?

Denmark's decision to award £22 million to the INEOS-led Greensand project is incredibly important.

We cannot do this kind of thing on our own, but with government support, projects like this are more likely to succeed.

Governments can create the right tax and incentive structure, they can ensure the investment is viable, sustainable and can be scaled to the size needed to make a difference.

We rely on the politicians because somebody needs to sign off the fact that this is going to be good for the environment and good for society at large.

Why store CO_2 rather than reduce emissions?

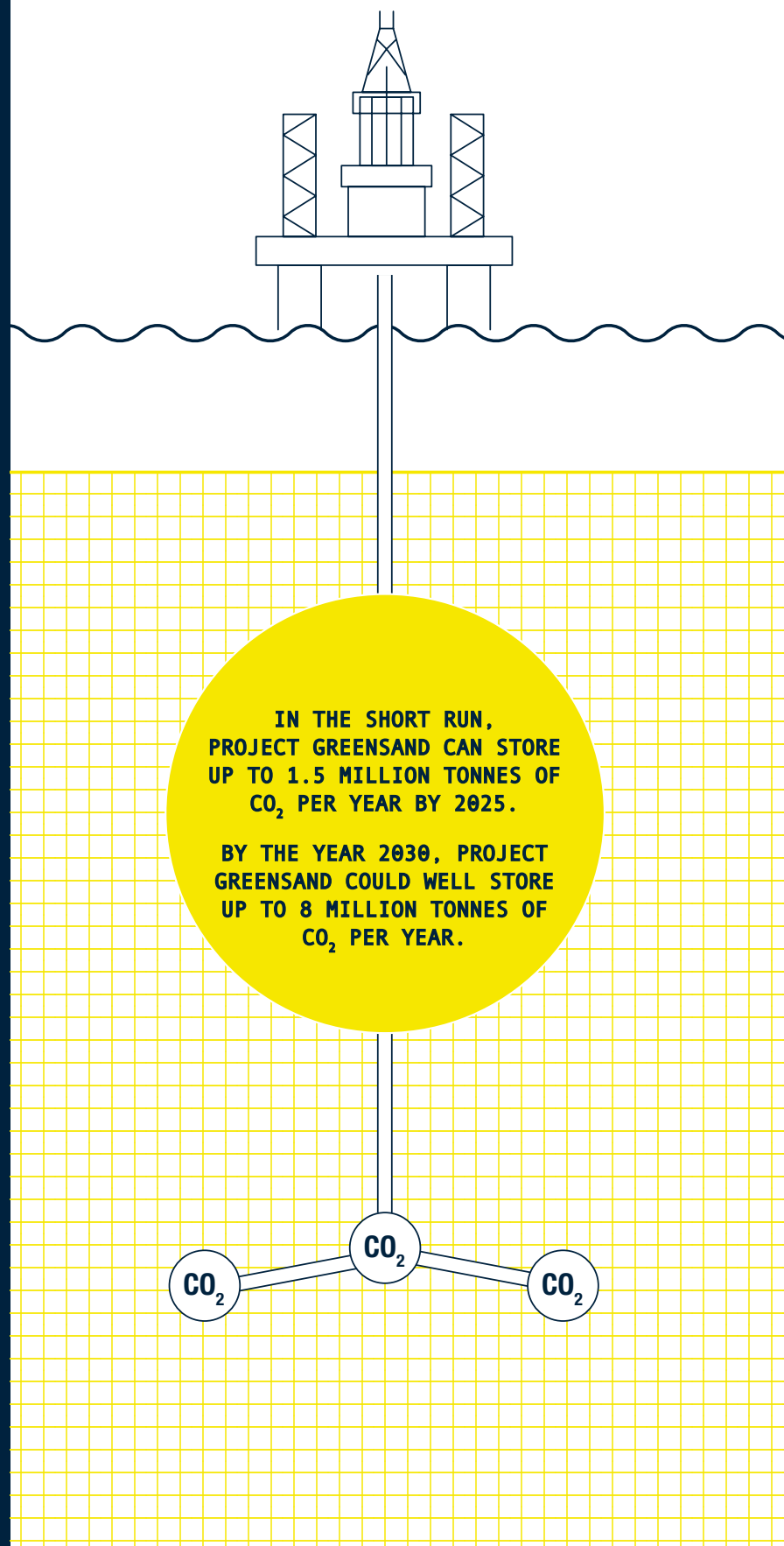
We need to do both. Installing photovoltaic systems, building offshore wind farms, and replacing petrol and diesel cars with electric cars are all steps in the right direction, but they are not enough. CO_2 must be removed from the known emission sources, if possible, and stored in the subsoil if we are to solve the climate crisis.

How will you prevent the stored carbon from leaking into the atmosphere?

The oil and gas has been in the reservoirs targeted by the Greensand project for millions of years without leaking. The CO_2 will be stored in the subsoil about 2 km below the seabed with a very thick layer of impermeable shale rock above acting as a permanent seal. Pressure of the gas will be closely monitored as will the seabed.

Could injecting CO_2 into wells cause earthquakes?

We have produced and injected water in the reservoir for many years and know the limitations of the reservoir very well. The CO_2 will be stored under the same pressure, and continuously monitored to ensure it is safely stored.

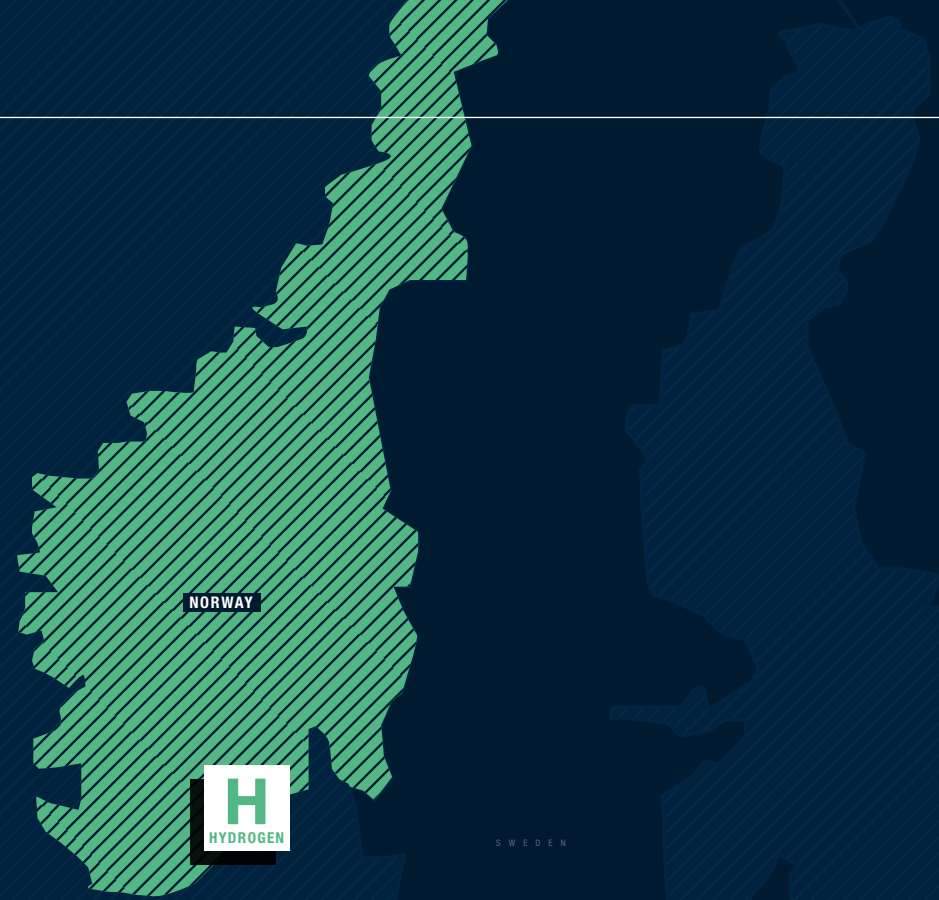


€1 MILLION NORWEGIAN GOVERNMENT FUNDING

Rafnes, Norway

THE Norwegian government has given INEOS Inovyn €1 million to analyse its plans to build one of Norway's first hydrogen plants at its chemical manufacturing site in Rafnes.

Project Aquarius is seen as an important part of INEOS' strategy to take a leading role in developing industrial-scale hydrogen manufacturing. If built, zero-carbon electricity will be used to produce clean hydrogen through the electrolysis of water.



BELGIUM GOVERNMENT FUNDING

Antwerp Lillo, Belgium

Funding has been provided by the Belgian government to investigate the possibility of mixing captured carbon dioxide waste with sustainably-generated hydrogen to produce methanol, which is used in medicines, paints, car parts, clothing, and even fuel.

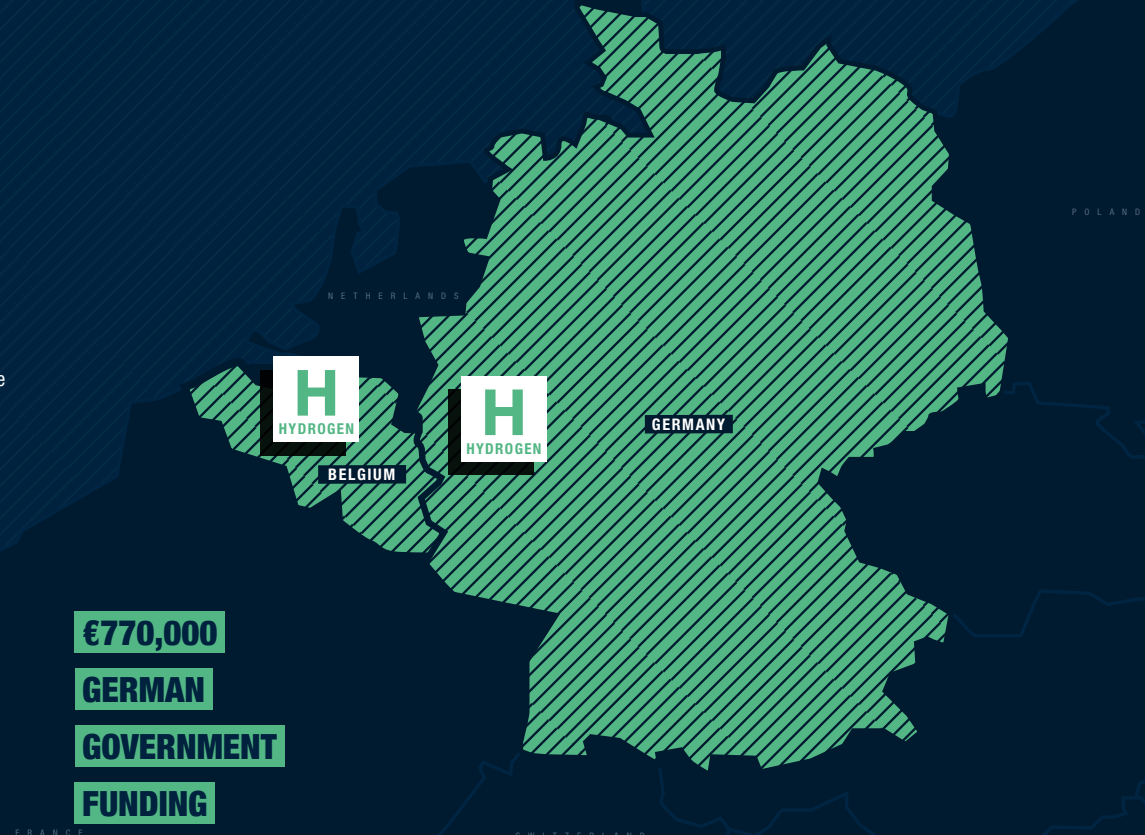
If the consortium agrees, a plant, capable of producing 8,000 tonnes of sustainable methanol every year, will be built at INEOS Inovyn's chemical manufacturing complex at Lillo.

€770,000 GERMAN GOVERNMENT FUNDING

Köln, Germany

INEOS has been given €770,000 by the German government to help fund a feasibility study into plans to build a new green hydrogen plant in Köln, which will cut CO_2 emissions by about 100,000 tonnes per year.

The hydrogen produced in the new plant, using only renewable energy, would be used directly to produce green ammonia.



Hydrogen

INEOS is not short of ambition when it comes to hydrogen and how it can help cut greenhouse gas emissions. But it cannot do anything without government support. Europe's on board, but more is needed from the UK Government.

GOVERNMENTS around the world are now investing their time, energy and money in hydrogen projects. For INEOS, that is good and welcome news. "The lead in all this has to come from industry, but we cannot do anything without government support," said Wouter Bleukx, INEOS' Hydrogen Business Manager, who likened it to the early days of wind power, which attracted significant government investment. "That's what we need here," he said.

Governments in Norway, Belgium and Germany are all investing in hydrogen projects put forward by INEOS.

"Hydrogen projects are not without risk because they are extremely expensive, but if we didn't believe in this, we wouldn't be doing it," he said.

INEOS was recently awarded €770,000 to carry out a feasibility study to see whether green hydrogen can be integrated at INEOS' O&P site in Köln, Germany, and converted into green ammonia by INEOS Nitriles.

Producing green ammonia could cut global greenhouse gas emissions by almost 1% every year.

In April this year, the Norwegian government gave INEOS Inovyn €1 million to thoroughly analyse its Project Aquarius plans to build one of Norway's first hydrogen plants at its chemical manufacturing site in Rafnes.

"We support those who take the lead in technology development," said Nils Kristian Nakstad at Enova, a state enterprise owned by Norway's Ministry of Climate and Environment.

Geir Tuft, CEO of INEOS Inovyn, said the Aquarius project was an important part of INEOS' strategy to take a leading role in developing industrial-scale hydrogen manufacturing.

Zero-carbon electricity will be used to produce clean hydrogen through the electrolysis of water.

These government investments follow similar funding for an ambitious project in Belgium to investigate the possibility of mixing captured carbon dioxide waste with sustainably-generated hydrogen to produce methanol, a chemical widely used in everything from medicines, clothing and paints, to car parts and fuel.

If the consortium agrees, a plant, capable of producing 8,000 tonnes of sustainable methanol every year, will be built at INEOS Inovyn's chemical manufacturing complex at Lillo.

The UK government has so far been slower to react, but Wouter said INEOS Inovyn, which has been producing and using low-carbon hydrogen in the UK for over 100 years, was pressing ahead with its plans for its Runcorn site regardless.

It is currently building a compression unit to increase the supply of hydrogen to help fuel the UK's transport network – and produce hydrogen-powered stationary fuel cells, allowing polluting diesel generators to become a thing of the past.

Funding, though, will be sought for its planned electrolyser.

"We are planning to apply for government funding, but if it is not forthcoming, we will have to look elsewhere," said Wouter.

What INEOS hopes to establish, through its many hydrogen-based projects around the world, is credibility.

"We are gaining a lot of expertise, a lot of knowledge, a lot of networks and a lot of partners," he said. "But we need to make something work on the ground before we set off on another big adventure."

INEOS believes in a future powered by hydrogen. The challenge for its hydrogen team, which recently doubled in size, is convincing governments that a net zero economy by 2050 will be impossible without it.

For INEOS' ambitions don't end here.

It is already exploring the possibility of building a large-scale electrolyser 'in a windy and sunny place' so it can produce enough cheap green hydrogen – and its derivatives – to be transported to the European market.

INEOS wants to be at the forefront of the energy transition and is prepared to invest to make that happen.

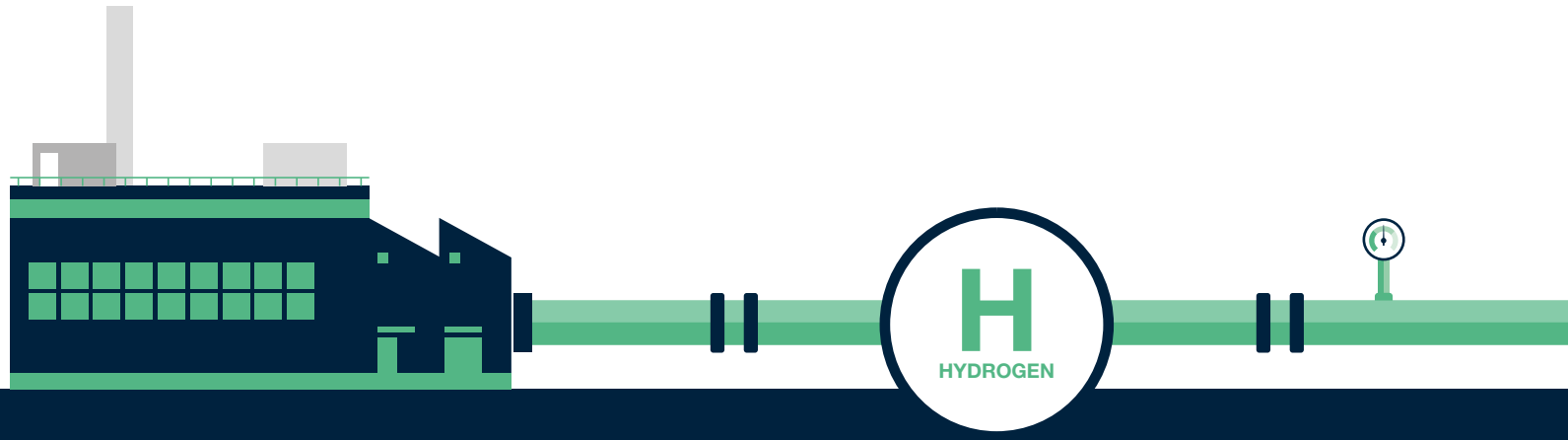
"We support those who take the lead in technology development"

– Nils Kristian Nakstad, Enova, a state enterprise owned by Norway's Ministry of Climate and Environment

Hydrogen

Next year tests will be carried out to discover whether hydrogen can be pumped through existing natural gas pipelines.

It is an exciting time for INEOS, which will supply the hydrogen to SGN, because it could provide SGN with the blueprint for repurposing all the high-pressure pipelines in the UK network.



€1.2BN INVESTMENT

INEOS is building a world-scale hydrogen production plant in Grangemouth. Once built, clean, low-carbon hydrogen will be used to power its processes and manufacture vital materials for a wide range of sectors

FUEL OF THE FUTURE

Clean, low-carbon hydrogen will be used to power INEOS' processes and manufacture vital materials for a wide range of sectors. It will cut emissions by more than one million tonnes of CO_2 each year

PIONEERING research is to be carried out to discover whether existing natural gas pipelines in the UK can be repurposed for hydrogen. The research is critical to understanding whether hydrogen can replace natural gas in the UK's gas network and help to decarbonise heating.

INEOS will supply hydrogen to SGN, which will flow through a 30km decommissioned pipeline between INEOS' Grangemouth refinery and Granton on the outskirts of Edinburgh.

Andrew Gardner, chairman of INEOS Grangemouth, said if the trial – the first of its kind – was successful, the Scottish petrochemicals site could become a hub for hydrogen production, use and export.

"Hydrogen gas behaves slightly differently from natural gas, so it is important to understand what is needed to repurpose the pipeline, and the wider 11,000km of local transmission system (LTS) pipelines throughout the UK, to carry hydrogen," said Gemma Simpson, SGN Director of LTS Futures.

"SGN's LTS Futures project combines a suite of laboratory and offsite testing in preparation for a live trial of the Grangemouth to Granton pipeline."

In August, the energy regulator Ofgem approved the research to understand if the Grangemouth to Granton pipeline could be repurposed for the live trial.

"The offsite trials' work will allow us to develop and test procedures for making new connections to the live trial pipeline," said Gemma.

The project is currently developing evidence for the next stage.

If successful, SGN will be able to carry out a live trial next year, which will deliver a blueprint for repurposing the UK's LTS network, driving decarbonisation and supporting SGN's net zero goals.

Frazer Smith, Business Manager for INEOS FPS, said the trials were important.

"With the project programme concluding in 2025, vital learning and validation of the hydrogen evidence base will be available to support both Scottish and UK Government decarbonisation policy, including the UK Government's heat policy decisions due for 2026," he said.

SGN's local transmission system is part of the national critical infrastructure that reaches millions of homes and businesses across the UK.

"We believe hydrogen has the potential to provide customers with a choice on how they heat their homes as part of a whole systems approach for decarbonising heat," said Gemma.

The trial is the latest good news for the Grangemouth site.

Earlier this year, INEOS invited major engineering design contractors to tender for the next stage of its world-scale hydrogen production plant.

Once built, clean, low-carbon hydrogen will be used to power its processes and manufacture vital materials for a wide range of sectors, cutting emissions by more than one million tonnes of CO_2 each year.

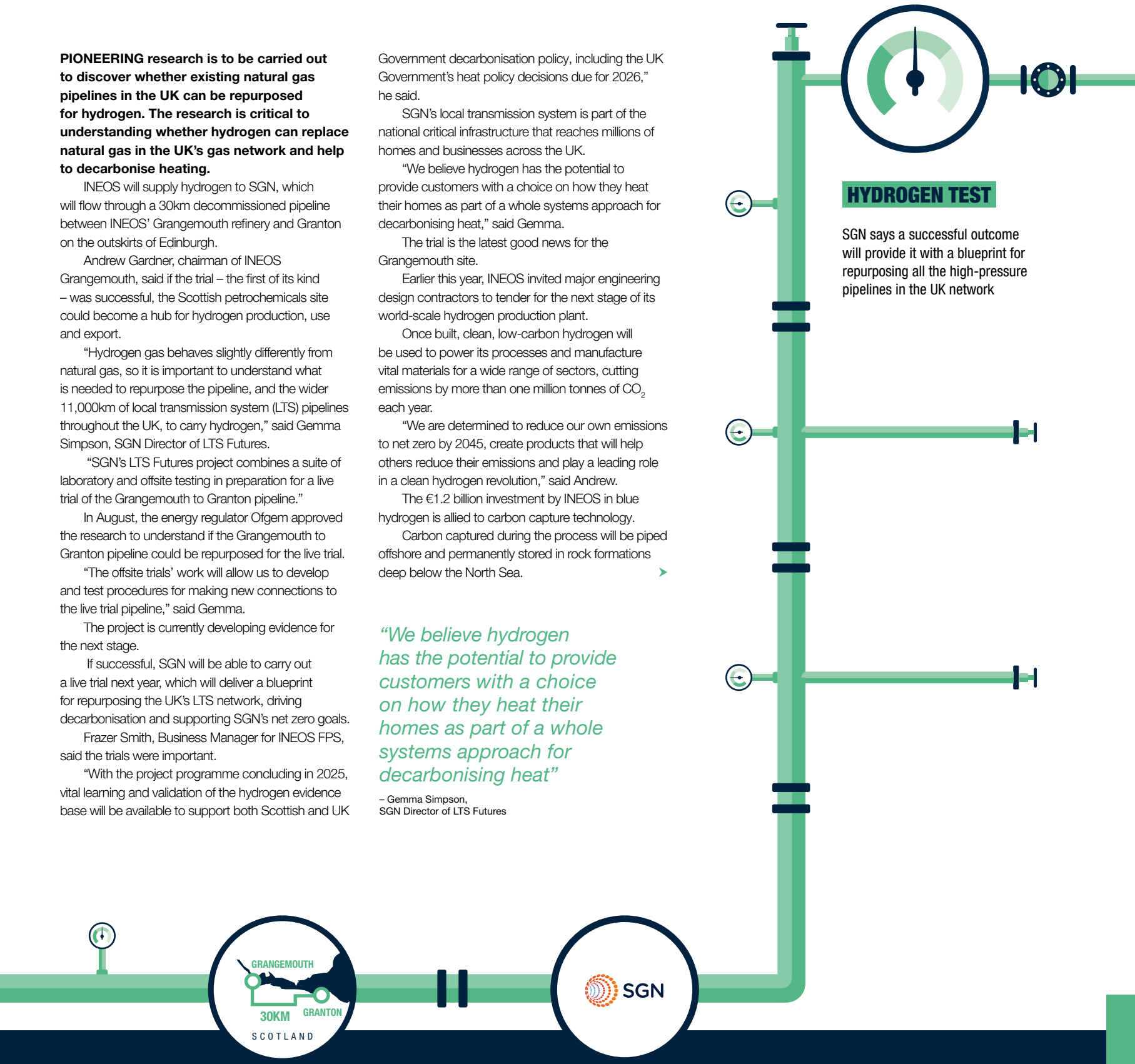
"We are determined to reduce our own emissions to net zero by 2045, create products that will help others reduce their emissions and play a leading role in a clean hydrogen revolution," said Andrew.

The €1.2 billion investment by INEOS in blue hydrogen is allied to carbon capture technology.

Carbon captured during the process will be piped offshore and permanently stored in rock formations deep below the North Sea.

"We believe hydrogen has the potential to provide customers with a choice on how they heat their homes as part of a whole systems approach for decarbonising heat"

– Gemma Simpson,
SGN Director of LTS Futures



HYDROGEN TEST

SGN says a successful outcome will provide it with a blueprint for repurposing all the high-pressure pipelines in the UK network

30KM PIPELINE

Tests will show whether the 30km decommissioned pipeline can be adapted to carry pure hydrogen. The tests are important because hydrogen gas behaves slightly differently from natural gas

PROJECT PARTNER

INEOS will supply the hydrogen to SGN, which will flow it through a 30km section of decommissioned pipeline between INEOS' Grangemouth site and Granton

HYDROGEN-POWERED GRENADIER DEMONSTRATOR

CAPABLE OF DOING EVERYTHING A CONVENTIONALLY-POWERED GRENADIER CAN DO, BUT WITH ZERO EMISSIONS

Hydrogen

INEOS has built a hydrogen-powered 4x4 to prove its commitment to net zero. It can do everything that a diesel or petrol-run Grenadier can do, but it emits nothing but water vapour. What's stopping it hitting the road? A lack of infrastructure in the UK.

HYDROGEN has long been championed as the fuel of the future because it produces zero emissions when used for energy. But it's also been put on a back burner for years, much to INEOS' dismay. Now, to demonstrate its own commitment to net zero, INEOS has built a hydrogen fuel cell variant of its 4x4 Grenadier that emits nothing but water vapour.

"It's an extraordinary vehicle," said Lynn Calder, CEO INEOS Automotive. "It's capable of doing everything a conventionally-powered Grenadier can do, but with zero emissions."

The Grenadier Demonstrator made its global debut earlier this year at the Goodwood Festival of Speed.

It is fitted with BMW Group's latest hydrogen fuel cell, zero-emissions powertrain, which is considered to be the most advanced and powerful in the car industry.

The project to develop a hydrogen-fuelled Grenadier began in June 2022 with one, clear aim: its on- and off-road capabilities and towing capacities must not be compromised.

To ensure they weren't, the 4x4 underwent rigorous testing, which included the notorious trails of the Austrian mountains and the various offroad challenges around Graz.

Over the years there has been widespread debate about the pros and cons of electric versus hydrogen vehicles.

INEOS Automotive will bring a battery electric 4X4 to market in 2026, but believes there needs to be a mix of powertrains, with different technologies suited to different uses.

Electric batteries are viewed as ideal for city centres and short journeys, but unsuitable for haulage and public transport because of their weight, charging times and range.

Filling a car or truck with hydrogen, on the other hand, is quick and easy. But there just aren't enough hydrogen refuelling stations.

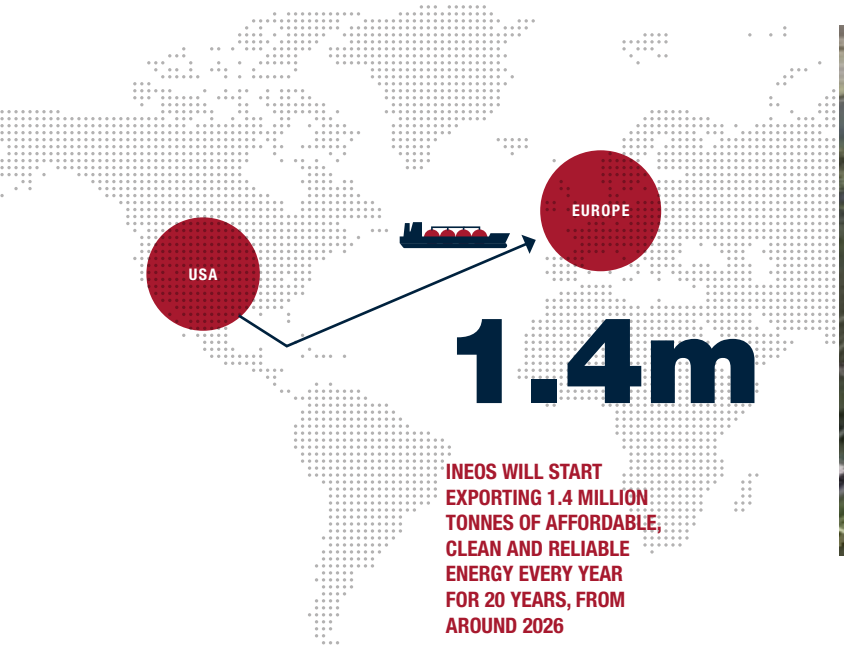
"Our demonstrator proves that the technology is capable," said Lynn. "What we need now is support from policymakers to help provide the infrastructure for the next generation of hydrogen vehicles."

INEOS already produces and uses 450,000 tonnes of low carbon hydrogen every year, the equivalent of replacing up to 2 billion litres of diesel.

The company is Europe's largest existing operator of electrolysis, the critical technology which uses renewable energy to produce hydrogen for power generation, transportation and industrial use.

"Along with our all-electric model due in 2026, our hydrogen-powered Grenadier Demonstrator shows INEOS' commitment to net zero and to hydrogen as a key fuel of the future," said Lynn.

CAMERON LNG PHASE 2, LOUISIANA



1.4m

INEOS WILL START EXPORTING 1.4 MILLION TONNES OF AFFORDABLE, CLEAN AND RELIABLE ENERGY EVERY YEAR FOR 20 YEARS, FROM AROUND 2026

PORT ARTHUR LNG, TEXAS

SEMPRA

Sempra Infrastructure will develop the export terminals. CEO Justin Bird said his company wanted to build a long-term relationship with INEOS because it shared its vision of increasing the world's energy security while advancing lower-carbon energy sources.

Liquefied Natural Gas

INEOS signs long-term contract to start exporting 1.4m tonnes of affordable, clean and reliable energy to Europe

INEOS is stepping up to help Europe cut its greenhouse gas emissions – to fill the gap left by Russian gas, and to help alleviate the structural energy issues in Europe. It has signed a contract with Sempra, an American energy infrastructure company, to start exporting 1.4 million tonnes of affordable, clean and reliable energy every year for 20 years, from 2026.

The decision to start exporting liquefied natural gas from the US Gulf Coast – and enter the global LNG market – is a first for INEOS, and comes at a time of significant transformation in the energy industry.

"We are looking forward to building a long-term relationship with a company that shares our vision of increasing the world's energy security while simultaneously advancing lower-carbon energy sources," said Justin Bird, CEO of Sempra Infrastructure, which will be developing the export terminals.

Brian Gilvary, Chairman of INEOS Energy, said INEOS also intends to build partnerships with other industrial users of energy in Europe to help them access the same competitive sources of energy.

"We will be the first market entrant to operate in this way in many years," he said.

Although INEOS has never shipped LNG before, it has been safely transporting America's competitively-priced liquefied ethane gas to Europe since 2015.

David Bucknall, CEO of INEOS Energy, described Sempra as experts in building and operating LNG facilities and said the American company shared its vision.

"This agreement is an important part of our strategy," he said.

The LNG will be delivered free-on-board from either the proposed LNG processing and export facility in Jefferson County, Texas, or the Cameron LNG Phase 2 project in Hackberry, Louisiana.

INEOS, though, remains committed to achieving net zero by 2050 across its operations.

"The company is working to decarbonise the supply chain through carbon capture and storage and provide optionality for alternative sources of energy, such as its leadership in the production of hydrogen, as we develop them over time," said David.

Sempra's agreement with INEOS is a preliminary non-binding arrangement, and the development of the Port Arthur and Cameron sites are subject to securing all necessary permits, signing engineering and construction contracts, obtaining financing and a final investment decision.

"We are looking forward to building a long-term relationship with a company that shares our vision of increasing the world's energy security while simultaneously advancing lower-carbon energy sources"

– Justin Bird, CEO of Sempra Infrastructure

INEOS and SINOPEC sign four significant petrochemical deals

SINOPEC

HDPE joint venture

INEOS and SINOPEC will establish a third 50:50 joint venture to build a new 500ktpa high-density polyethylene plant in Tianjin. In addition to the Tianjin plant, INEOS and SINOPEC will build at least two additional 500ktpa HDPE plants in the future to produce INEOS pipe grade under licence. The INEOS technology is again world leading.

Tianjin Nangang Ethylene Project

INEOS and SINOPEC have also announced a joint venture that will see INEOS acquire a 50% share in the existing Tianjin Nangang Ethylene Project. The project is currently building a 1.2 million tonne ethane cracker, expected to come on-stream at the end of 2023, and downstream derivative plants in Tianjin.

SECCO joint venture

INEOS will acquire 50% of Shanghai SECCO Petrochemical Company Limited (“SECCO”). SECCO has a capacity of 4.2 million tonnes of petrochemicals including ethylene, propylene, polyethylene, polypropylene, styrene, polystyrene, acrylonitrile, butadiene, benzene and toluene.

ABS joint venture

INEOS and SINOPEC will also establish a second 50:50 joint venture for ABS (Acrylonitrile Butadiene Styrene), based on INEOS’ world leading proprietary ABS Technology. This will include the 600ktpa Ningbo facility, currently under construction, plus a further 600ktpa of new capacity. INEOS and SINOPEC also plan to work together on two additional 300ktpa ABS plants, which will also be built by the joint venture based on INEOS’ world-leading Terluran® ABS technology. One of these 300kt plants will be located in Tianjin, the location of the third unit is yet to be decided.

Full of eastern promise

Joint ventures with China are set to strengthen INEOS' position in fastest-growing market in the world

TIANJIN

SHANGHAI

NINGBO

INEOS has signed four deals that will significantly reshape – and strengthen – its business in China.

INEOS Chairman and Founder Sir Jim Ratcliffe said the joint ventures with state-owned SINOPEC would establish 'a very large footprint' for INEOS in China.

"Both parties recognise the potential for closer collaboration across a number of other areas as we look ahead," he said.

SINOPEC has agreed to sell a 50% stake in Shanghai SECCO Petrochemical Company Limited to INEOS.

The Chinese company is currently capable of producing 4.2 million tonnes of vital raw materials including ethylene, polystyrene and acrylonitrile.

In addition, INEOS and SINOPEC have agreed to form two joint ventures to increase production of high-density polyethylene (HDPE) and acrylonitrile-butadiene-styrene (ABS) to meet China's rapidly growing domestic market.

As part of the ABS joint venture, SINOPEC will acquire a 50% stake in INEOS Styrolution's Ningbo plant, which is currently being built and expected to become operational next year.

"INEOS Styrolution has come a long way from being a joint venture itself in its early years," said CEO Steve Harrington.

"After acquisitions and investing into new greenfield production sites, setting up this joint venture with a strong partner in China feels like the natural next step for growth.

"This collaboration with SINOPEC allows us to continue to grow in China in fast-forward mode."

INEOS Styrolution and SINOPEC also plan to build two additional ABS plants, based on INEOS' world-leading technology.

One will be in Tianjin where the two companies also intend to build a new HDPE plant to manufacture high density polyethylene.

Long-term they hope to build at least a further two HDPE plants.

INEOS and SINOPEC have also announced a joint venture agreement that will see INEOS acquire a 50% share in the existing Tianjin Nangang Ethylene Project from SINOPEC.

The project is currently building a 1.2 million tonne ethane cracker, expected to come on-stream at the end of 2023, and downstream derivative plants in Tianjin.

INEOS and SINOPEC have worked together for years.

"Through this close relationship SINOPEC gains access to some of the best downstream technology in the world from INEOS and INEOS achieves a substantial presence in China, which is the fastest-growing market in the world," said Jim.

In 2013 INEOS began building the largest-ever acetone and phenol production plant in China after signing a joint venture with SINOPEC Yangzi Petrochemical Company.

And last year INEOS inherited a joint venture with SINOPEC after it bought BP's global acetyls and aromatics business for $5 billion.

Image: Shanghai Skyline

Women at work

INEOS CHANNELS ENERGY INTO CREATING A MORE EQUAL AND DIVERSE WORKFORCE FOR THE BENEFIT OF ALL

READ THE INSPIRING STORIES OF INEOS' WOMEN







THE chemical industry is traditionally dominated by men. But it is changing. And women, who have worked in the industry for decades, are testament to that. "When I first started out in the industry 30 years ago, things were happening that I thought were normal because I didn't see anything else," said Kathryn Shuler, Executive Director of the INEOS ICAN Foundation.

"But now that I look back, it was quite abnormal and it was not right the way women were treated."

Today thanks to a focus on recruiting more women, the number of female chemical engineers in INEOS has never been higher.

"The chemical industry is still quite predominantly male, but it is changing in a really positive way," said Sharon Todd, CEO of SCI (Society of Chemical Industry), a global innovation hub which helps to accelerate science out of the lab and into industry for society's benefit.

"The industry just needs to change faster."

INEOS is helping to close the gender gap, but realises there is still much work to be done.

Years ago, entering a world where few women had worked had its challenges.

Anja Hilden, who works at INEOS Köln in Germany, said she was often the only woman in her department when she became a chemical engineer about 30 years ago.

"It was challenging because I didn't have any role models," she said.

Women also faced further obstacles if they decided to start a family because there was an assumption that they would be the baby's primary carer.

"It's not just an issue that INEOS still has to tackle," said Anne-Gret Iturriaga Abarzua, Head of Communications at INEOS Köln. "Society has to change as well."

Quantaze Watts, Global Talent Director at INEOS Styrolution, believes the stereotypes are embedded in society.

"It goes back to when you are a kid, and you go to the store and ask for the Tonka truck and it's mainly a boy's toy, not a girl's toy," he said.

"We need to go to the little girls and let them know that they can do this, so that engineering jobs are not seen as men-only jobs."

Prof. Dr. Petra Skiebe-Corrette, Director of NatLab, a non-formal science laboratory at the Freie Universität Berlin, believes the problem stems from the moment a child becomes aware of his or her gender.

"It is important that, before these gender stereotypes kick in, girls have STEM experience and know they can do it and enjoy it," she said.

For more than 14 years INEOS has been involved in a programme in Germany, known as TuWas! The company believes that promoting science in schools is key to getting children – boys as well as girls - interested in STEM careers.

"Of all the companies supporting TuWas! – and I think there are more than 80 – INEOS is the one that supports the most schools," said Petra.

Sharon, who graduated with a degree in chemistry from Southampton University in 1988, is also all in favour of a more diverse workforce.

"Our founders were creative, inventive and valued diversity," she said. "They recognised the importance of diversity for innovation."

She believes the industry has an image problem and does not sell itself to young people, be they men or women.

"It needs to present itself as an opportunity to create change to enhance society through innovation, and as a place where, certainly for young scientists and engineers, they can put their skills to work and have a really valuable and rewarding career," she said.

She described it as a massively important challenge.

"We need this flux of diversity," she said. "We need diversity in our young people and in our middle and senior management."

She said people from all different backgrounds could help to contribute to a new wave of scientific innovation to tackle the big societal challenges of climate change and global health.

"The industry has a vital role to play in delivering real societal benefit, not just profit," she said, adding: "If we promoted the diversity of job opportunities, the breadth of experience that industry can offer and the direct ability to affect real change, I think we'd get a higher influx of women."

KATHRYN SHULER

EXECUTIVE DIRECTOR OF THE INEOS ICAN FOUNDATION

INEOS LEAGUE CITY
TEXAS, USA

"You want that diversity of thought," she said. "You need people who look and think differently. We should want diversity in the workplace because we are better for it."

"There's still work to be done but I'm pleased that we've come a long way and I look forward to future generations making things even better."

1990

Kathryn Shuler was working as a chemist at a small analytical equipment manufacturer in 1990. 'It was the first place I had worked that considered me as an equal to my male counterparts,' she said.

WOMEN may have dominated the 1971 Grammy Awards, but elsewhere, opportunities were few and far between for American women – especially those seeking careers in traditonally male-dominated professions. Kathryn Shuler had grown up knowing – and feeling – that. Even her parents tried to dissuade her from pursuing a career in science. Technical jobs were for boys. Not girls.

To appease her parents, she opted to study business at university.

But the lure of science was too great, and she eventually switched to chemistry.

She also hoped that American society would change thanks to Title IX, a 1972 piece of landmark civil rights legislation that banned sex discrimination in schools and colleges.

"Before the introduction of Title IX, universities could refuse to allow girls to enrol in certain courses," she said.

"Women could be summarily dismissed from engineering courses or stopped from pursuing science degrees. The prevailing thought was that they were only going to university to get a husband. And that they were only pursuing engineering or science courses to get a better husband."

But despite the change in the law, old habits and attitudes remained.

"There wasn't a lot of encouragement for women who pursued engineering and science," she said.

"If we were working in groups, some of my male classmates would not listen to my ideas and went so far as to meet without me."

Kathryn was determined to complete her course, though, and finally graduated from the University of Pittsburgh in 1984 with a degree in BS biochemistry.

She initially worked for a small Japanese-owned commercial analytical laboratory where she later discovered that men were paid $0.50 an hour more than women.

"It was the equivalent of a car payment back then," she said.

A year later she was working as a lab technician at a nationwide metal company's research facility, where she was responsible for a specialised piece of analytical equipment.

"I was very proud of the work I did," she said.

The job required a specialised set of tools, which kept disappearing.

"A colleague told me that he had lent them to someone, but he could never remember who," she said. "I got to the point where I couldn't do my job because I had no tools."

Thankfully her understanding male boss replaced the tools – and offered her a safe place to store them.

At the time, Kathryn remembers feeling frustrated, but today she realises what her colleague was trying to achieve.

"It was just a very passive, aggressive way of saying, you shouldn't be here," she said.

Despite the negativity that surrounded her, though, quitting was never an option.

"I saw other women leave because they weren't prepared for some of the resistance," said Kathryn. "But I never felt like giving it up because it was something I loved."

She went on to co-author several patents and started working on a company-subsidised Master's Degree despite being told she could never be promoted to a scientist even if she got her degree.

Finally, she decided to leave and secured a job as a chemist at a small analytical equipment manufacturer.

"It was 1989 and it was the first place I worked that considered me as an equal to my male counterparts," she said.

Two years later she moved to Houston to become a chemist at Solvay.

At the time, it never occurred to her that her views and abilities were being challenged more than her male colleagues.

All she knew was that she would only be treated as an equal there if she could prove she was capable wof doing the job.

Equality, however, didn't always extend to the facilities.

"If you needed to use the bathroom, you had to leave where you were and go to the administration building to use the ladies' room," said Kathryn. "It was about a 10-minute walk."

Thankfully, as more women started to join the company, management recognised the need for change, and some of the men's rooms became women's rooms.

"Not everyone was happy about that," she said.

Kathryn later moved into the Tech Service & Product Development group.

"There was only one woman in the group apart from me," she said.

Within a few years, though, she was managing the polypropylene TS&D group

After BP acquired Solvay's Houston-based polypropylene assets in 2001, Kathryn was transferred to BP's research centre near Chicago, only returning to Houston when INEOS bought most of BP's chemical assets in 2005.

Today, she's happy and fulfilled in her role at INEOS which has given her tremendous freedom over the years to make a difference.

"Over time, I've really seen a major change and a major shift," she said. "I don't hear about some of the issues that we used to hear about. I don't think everything's solved, but I think that we've really come a long way."

What's particularly pleasing to Kathryn is seeing men and women engineers or plant operators working together.

"I see more of an equal footing than I've ever seen before," she said.

But Kathryn believes what has really made the difference is INEOS' commitment to diversity.

"Sometimes I think that's taken the wrong way," she said. "Some see it as ticking a box but it goes deeper than that.

"When you hire people with different experiences, from different backgrounds, and who have different ways of looking at life, you have a bigger diversity of problem solvers."

And that, she said, is where real power lies.

"You want that diversity of thought," she said. "You need people who look and think differently. We should want diversity in the workplace because we are better for it."

Her own team reflects that approach.

She works alongside a former teacher, an exercise scientist, a graphic designer and a PR expert.

"None of them came from a corporate background but they're really phenomenal people with some really specialised skills," she said.

Despite all the positive changes, Kathryn believes some things will only change when people recognise their own prejudices.

"We all have our way of looking at the world," she said. "But we need to make sure we are not unfairly judging or limiting people based on our own prejudices. We need to look at people as individuals.

"There's still work to be done but I'm pleased that we've come a long way and I look forward to future generations making things even better."

STACY PUTMAN

MANAGER OF ADVOCACY, LEADERSHIP & STRATEGIC TECHNOLOGY DEVELOPMENT AT INEOS

INEOS OLEFINS & POLYMERS USA
TEXAS, USA

TODAY Stacy Putman is in charge of producing many of the leaders of tomorrow for INEOS' businesses in the US. The careers of more than 300 people are currently in her hands. "It's the most amazing job I have ever had," she said. "I am helping them to develop the skills to make them great leaders of the future." She understands how important it is to help, guide and support employees, because it's what was lacking when she set out on her own journey 40 years ago.

Back then, the world she entered was really for men only.

"I had studied chemistry at school and really liked it," she said. "It was like magic and cooking at the same time."

But after securing a place at Texas Tech University to study chemical engineering, an advisor took her to one side.

Find a husband quickly and then you can transfer to an easier degree, or you can just quit, he told her.

"It was pretty disheartening because this was the early 80s, not the 1940s," she said.

She did find a husband on the course, but she also decided to stay, graduated and joined the world of work.

But hers has not been an easy journey.

"The view was if you don't like it, leave," she said. "It was very much sink or swim. If you could swim, then you might get some neat opportunities or you might not. No one understood community or networking, other than the good old boy network."

Stacy said she was always made to feel that she was 'taking the place' of a man by simply working.

"We accepted a lot of things and attitudes then that we certainly would not accept today," she said.

A few years ago, she experienced a huge – and welcome – change.

She was asked by INEOS O&P's board of directors to lead a polypropylene facility in California. The job would mean moving 1,800 miles.

"I was being asked to go and set the course for the future for that plant and do it the way I saw was needed. Not follow what the guys had done."

"I was thrilled and challenged to be given such an opportunity," she said. "I told my manager that I had watched and learned from a lot of our other site directors."

But that's not what he wanted to hear. He didn't want her to copy what men had done. He wanted her to forge her own path. To be herself.

"I was being asked to go and set the course for the future for that plant and do it the way I saw was needed," she said. "Not follow what the guys had done."

She left for California.

"I had never experienced that before in my life," she said. "I made my own decisions and led a team to make recommendations. It was the best job and best experience I had ever had in my entire career."

Stacy praises INEOS' senior leadership team.

"For some time now, they have understood the importance of a diverse workforce and diverse leadership," she said. "And I think we've started to see the benefit of that in different locations and different roles."

But she believes women are sometimes holding themselves back from these opportunities.

"Just because you have never seen a woman in a role at INEOS doesn't mean that you shouldn't apply for it," she said.

"I've always replaced a man in every role I've ever had in my career. Women, and really everyone, should not hold themselves back because they don't look like the person in the job."

"So could a woman be a maintenance manager? Could a woman be a business director? Could a woman be a fire chief? That's happening all over our industry today. Until we see it repeated, society will continue to question whether or not some of these roles are really the right roles for women. Let's keep this going so we can repeat, repeat, repeat."

CASSIE BRADLEY

SUSTAINABILITY COMMERCIAL MANAGER

INEOS STYROLUTION
CHICAGO, USA

WOMEN were still in the minority when Cassie Bradley signed up to study chemical engineering at the University of Illinois at Urbana-Champaign in 2012. Family and friends were supportive of her choice, but others often seemed surprised. "The surprised reaction wasn't unusual," said Cassie. "And looking back, it did have a negative effect because it reinforced the feeling that I was out of place or didn't belong there." But since 2015, she has been working for INEOS and has had a very positive experience.

"INEOS is a good place for women to work," she said.

But she believes the company could make it even better by engaging with the women's groups that now exist within the company.

"INEOS could learn from these women's experiences, identify the reasons why so few women are in senior executive roles and, more importantly, work out how to close the gap," she said.

Cassie, who initially worked as a production engineer at the company's Channahon polystyrene plant, launched Lean Into Success, a women's networking group at INEOS Styrolution.

It is one of several groups that now exist within the INEOS group.

"It is important for women to be part of organisations like this so they can learn from each other and find mentors," she said.

"Although we may ultimately realise we are a minority, we can build a community of belonging within the organisation."

One reason why Cassie believes very few women become senior executives is due to visibility. Or lack of it.

"Women don't see other women in those roles, so they don't view themselves in those roles, and therefore don't aspire," she said.

She felt women could help support each other by learning how to 'lean in' and push outside their comfort zones to demonstrate they had the skills to become a leader.

"Women are often not given the benefit of the doubt and have to perform at a higher level early on in order to be considered as a future leader," she said.

But Cassie, who is the sustainability commercial manager at INEOS Styrolution, remains optimistic about the future for INEOS. And for women in INEOS too.

"Traditionally there has been a difference in expectations between men and women in the home as well as the workplace," she said. "A lot of times women have a full-time second job at home as well as what they're doing at work which strains both their physical and mental energies.

"But that's changing. Men want a good work life balance too. We all want to be successful both at work and at home."

FRAN MILLAR

CHIEF EXECUTIVE OFFICER AT BELSTAFF

LONDON, UK

"We were being asked to do something that nobody had ever been able to do before. It was such a massive undertaking. But it would not have happened if it had not been for INEOS and Jim."

FRAN Millar freely admits that she was once loud, pushy and aggressive at work. She saw it as the best way to operate in male-dominated environments. "I just used to go at it," she said. "But I was like a bull in a china shop and I would leave a trail of destruction behind me." Today she is CEO of INEOS Belstaff and credits those who helped her early on in her career to refine her leadership skills.

"They sort of course corrected me," she said. "I was lucky. They showed me how to refine how I operated and refine how I dealt with people without compromising who I am and my own principles."

Fran had left school at 18 because she didn't want to go to university.

She initially worked as a PA to Anthony Boucher and Peter Worth, businessmen with a track record of event management and representing athletes including Björn Borg.

When Fran's brother, David, took the yellow jersey on stage one of his debut Tour de France, Anthony suggested she should consider managing him.

"He thought I was a pretty awful PA but felt I had the attitude needed to manage talent," she said.

She went on to set up her own talent and event management agency, FACE Partnership.

Within two years she was representing most of the major cycling talent in the UK, including her brother, Mark Cavendish and Geraint Thomas.

In mid-2003 she came up with a concept for a major track cycling event that would showcase the very best of international track talent in the UK's only international standard velodrome in a Saturday night format that involved live music and track centre entertainment.

"Everyone told us it wouldn't work, but in the end they had to delay the start because the queues were so big that they couldn't get everyone into the venue," she said.

Revolution went on to become the most successful track cycling event in the UK at a time when British Cycling was achieving unprecedented success – with the track team consistently dominating international competition.

The hugely successful national programme was producing talent in all disciplines of the sport under the leadership of Dave Brailsford.

In 2007 the Tour de France started in London, with five British riders in five different teams and the seed was planted that the time had come to build a British team.

Dave approached Fran to help with the project and, over the next 18 months, Team Sky took shape.

Fran, who supported Dave in the project management whilst he focused on the Beijing Olympics, was fundamental in helping to build and project manage the team's creation.

"We were working 24 hours a day, seven days a week and doing everything we could to make it successful," she said.

In the 10 years of Team Sky they won six Tours, with four different riders.

When Sky ended their involvement in cycling, INEOS and Sir Jim Ratcliffe stepped in to take over the team, which became Team INEOS in May 2019.

As part of the INEOS ownership Dave and Fran were asked to support in the concept, management and delivery of the INEOS 1:59 Challenge.

"We were being asked to do something that nobody had ever been able to do before," she said. "It was such a massive undertaking. But it would not have happened if it had not been for INEOS and Jim."

It is that INEOS spirit – and that belief that anything is possible – that Fran admires greatly.

"I believe in what the business stands for, its values, how it operates, and how it treats people," she said.

Not long after Eliud Kipchoge's historic run in Vienna, Fran was offered another challenge – as CEO for INEOS' fashion business Belstaff.

Her whole life changed in five days as she left her life in Manchester to begin a new role in London.

Looking back, despite her own personal success story, she knows that many women, women of colour and people with disabilities have struggled with the uneven playing field.

"I have had nothing but backing since I joined INEOS," she said. "INEOS doesn't care whether I am male or female."

But she is aware of the need to help where she can.

"We have a diversity panel on Belstaff, and levelling the playing field is important when you are in a position of leadership," she said.

"But getting enough women into businesses, getting enough people of colour into businesses, getting enough diversity into businesses, starts way further down the pipeline than people realise.

"It's like sport. You don't have any talent in sport if you don't start at development level and build them through the talent pathway."

ANUPRIYA GUPTA

PROCESS ENGINEER

INEOS CHOCOLATE BAYOU
TEXAS, USA

ANUPRIYA Gupta comes from a family of chemical engineers. Her father was one, so too was her grandfather. So both were supportive when she decided she too wanted to become a chemical engineer. For the past three years she has worked at INEOS O&P at Chocolate Bayou in Texas. It's an environment dominated by men.

"Frequently being the only woman in the room, I always wondered what to do," she said. "I was hesitant to speak out in case my ideas got passed up because I had a unique perspective.

"But I also thought that the only way to find out the answer would be to jump straight in."

And that's what she did, starting with asking colleagues very early on to learn how to pronounce her name, rather than giving her a nickname.

"My name is my identity," she said. "It's who I am. If you change my name, you change my identity."

As a process engineer, she is responsible for the day-to-day performance of the plant to ensure it runs smoothly and efficiently.

"Occasionally I have been on the receiving end of some strange looks," she said. "But having that pushback to some of my ideas has just made me a stronger engineer."

Over the past few years, she has witnessed and welcomed change and changing attitudes within INEOS.

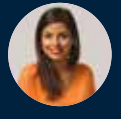
"I can see the transition happening," she said. "INEOS is definitely moving in the right direction in terms of diversity in the workplace."

Anupriya said a diverse workforce was important.

"We need people looking at the same problem from a different perspective," she said. "If we don't, if we are all looking at it from the same place, how are we going to be trailblazers in our industry?"

She said she was encouraged when she attended a recent career fair with a team of engineers from INEOS.

"We did a good job of setting the standard because we were a team of mainly women," she said.



GABRIELA DE GOUVEIA

COMMERCIAL PRODUCT MANAGER

INEOS STYROLUTION
SWITZERLAND

EVIDENCE has shown that for a woman to succeed in a male-dominated industry, confidence matters as much as competence. Gabriela de Gouveia, who joined INEOS Styrolution in Switzerland in May 2022, believes that to be true. "In my career, there have been times when I have faced prejudice outside the company," she said. "But I have found it is important to manage those situations confidently." The problem is that women are sometimes less self-assured than men.

Gabriela is a commercial product manager whose job involves managing the supply and demand of a range of plastic products.

In addition to deciding the price and analysing the market, she is the intermediate between the sales and supply chain teams.

She says it is sometimes challenging to work in an industry dominated by men, but is full of praise for INEOS' approach to women in the workplace.

"Women are generally well received and encouraged to improve and grow," she said.

Her hope, though, is that more women seek jobs in the chemical industry.

"If more women join the field and break stereotypes, there will be a greater acceptance of women in the industry," she said.

"It is sometimes challenging to work in an industry dominated by men, but is full of praise for INEOS' approach to women in the workplace."

LUCY INESON

PROCESS OPERATOR

INEOS SALTEND CHEMICALS PARK
HULL, UK

LUCY Ineson had always loved science at school, but she ended up in hairdressing. For two years she learned the skills, but her head wasn't in it – and needed more of a challenge. Unsure what to do, she went back into full-time education to study A-Level maths, chemistry and biology at Wyke College in East Yorkshire in the UK – and within a year, she was a process operator apprentice at INEOS Acetyls at Saltend Chemicals Park.

"The apprenticeship gave me such a good insight into what it would be like to work in the chemical industry," she said. "I learned about communication, teamwork and working safely."

The 22-year-old is now working full-time at the plant as a shift technician.

Her role involves monitoring the plant, alongside her colleagues, to ensure it runs as it should within strict parameters and guidelines.

INEOS Acetyls at Saltend is the largest producer of acetic acid, acetic anhydride and ethyl acetate in Europe. The chemicals are used in everyday products and items ranging from detergents and paracetamol to paints and nail varnish remover.

She is one of only a handful of female operators at the plant near Hull.

"I was a bit nervous about going into a male-dominated workplace, but everyone is so helpful if I ever have any questions," she said. "It's a great place to work and I love it."

LISA WIEDENHAUS

ENERGY BUSINESS CONTROLLER

INEOS KÖLN
GERMANY

LISA Wiedenhaus has no qualms about working in a male-dominated industry because, at INEOS Köln in Germany, the fact she is a woman is irrelevant. Everyone, she says, is treated equally. "Sometimes I realise that I am the only woman in a meeting, but nobody makes me feel as if I am," she said. "It makes no difference to them. We all get the same chances, are appreciated and taken seriously."

Lisa officially joined INEOS in October 2016 after graduating from the European University of Applied Sciences in Brühl, Germany.

But by then, she had actually been working for the company for three years as part of a dual-study programme after finishing school at 19.

"The programme allowed me to study and work at the same time," she said.

Today, she is an energy business controller, with responsibility for reviewing the monthly results of the Köln energy business, and providing business analysis to the Energy Commercial Manager to enable him to deliver business targets.

She also produces management reports that are used to make economic decisions.

It is a job she loves. "I cannot think of any aspect or situation in which being a woman would be disadvantageous," she said.

"Even after maternity leave, most women come back to either the same job, or at least a very, very similar job which makes it easy to return to work."

Although she feels confident and supported at work, she values the opportunity to meet other women working in INEOS.

"It is always good to share experiences and listen to each other's problems, but it is equally important to hear about each other's successes," she said.

CIRCLE OF IDEAS

INEOS' WOMEN START TO JOIN GROWING NETWORK FOUNDED BY FACEBOOK'S FORMER CHIEF OPERATING OFFICER

AN ORGANISATION, which was founded by Facebook's former chief operating officer to empower women at work, continues to spread its wings. More and more women around the world are now setting up their own Lean In Circles so they can share their struggles, get and give advice and celebrate their achievements.

"Just hearing how somebody else went through a battle can be so encouraging and spark new ideas for you," said Cassie Bradley, a sustainability commercial manager who set up a Lean In Circle for her female colleagues at INEOS Styrolution in Illinois in America. The small group of women now meet regularly.

"Lean In Circles are all about peer mentoring," she said. "We share experiences and ideas, and give feedback when we succeed and when we fail."

Lean In was founded by Sheryl Sandberg, a Harvard-educated mother of five who stepped down as Facebook's chief operating officer last year to focus on her philanthropic work.

In 2010, she gave a TED talk in which she called on women to believe in themselves and their own success.

"Women systematically underestimate their own abilities," she said. "Men will attribute their success to themselves. Women will attribute it to other external factors. If women do a good job, they will say someone helped them, they got lucky and worked really hard."

INEOS Köln in Germany has also recently introduced a Lean In Circle.

"I really hope this will help my female colleagues to develop their communication and leadership skills and stand up for their needs," said Anja Hilden, who has worked for the chemical industry for more than 30 years.

"I was very often the only woman in the department which was challenging because you didn't have role models, so you had to invent yourself."

LEANIN.ORG

Sustainability

The journey to net zero is not going to be an easy one for INEOS, but it knows that. Despite the challenges – and there are many – INEOS remains focused on the future and is prepared to invest billions to ensure it hits net zero by 2050.

INEOS' achievements and ambitious goals are set out in its latest sustainability report:

INEOS.COM/SUSTAINABILITY

TRANSITIONING to net zero by 2050 will not be an easy journey for industries that rely heavily on the earth's precious resources.

But INEOS has been making – and continues to make – huge strides so it can continue to provide modern society with what it needs without damaging the planet.

Its achievements and ambitious goals are set out in its 2022 sustainability report, which has been prepared in accordance with Global Reporting Initiative Standards and externally assured by KPMG.

"Sustainability is fundamental to how we do business," said Tobias Hannemann, CEO of INEOS Oxide.

Despite the challenging market conditions, INEOS' ambition refuses to be dampened.

Despite the many distractions, momentum continued – with bold new projects, continued investment, and steady progress towards net zero.

All INEOS' businesses have developed – or are finalising – workable roadmaps to ensure all its operations are net zero by 2050, while still remaining profitable and ahead of evolving regulations.

Based on the roadmaps developed to date, it has set a reduction target of 33% by 2030. INEOS will spend over €6 billion to back its plans.

In addition to investing over €3 billion in a wide range of projects that will reduce the company's footprint, it has announced ambitious plans to harness its expertise and technology to drive the development of a new hydrogen economy.

In addition to a €1.2 billion investment in blue hydrogen in carbon capture technology at Grangemouth in Scotland, it has also announced a further €2 billion in a series of green hydrogen plants throughout Europe.

INEOS intends to play a full and active part in the transition to net zero and in doing so, it will not only reduce the impact of its own operations, but will be able to provide the products that support other industries and individuals to reduce their own impact on the climate.

INEOS has always seen opportunities where others see issues.

"The entrepreneurial foundation of INEOS has fostered a culture where anything is possible, where ownership is for everyone and where change is to be embraced," said Alison Mills, HR Director INEOS Acetyls and Nitriles. "This is the key to our continued success." Doing well by doing good not only drives innovation, though. It also matters to INEOS' employees, customers and investors all over the world. Last year alone INEOS signed three major agreements with offshore Belgian wind farms which will reduce its emissions by more than three million tonnes of CO_2 over 10 years – and it is at the heart of several major projects to capture and permanently store CO_2.

It also helping to push the circular economy, where nothing is wasted, by introducing new products made from waste materials and investing in advanced recycling technologies. Most nation states have agreed to achieve net zero emissions by 2050. But INEOS believes this will only be achieved through the concerted efforts of governments, industry and the public.

"INEOS is fully committed to playing a key role in this transition," said a spokesman. The 130-page 2022 sustainability report, which can be viewed in full on INEOS' website, details INEOS' progress.

INEOS

This is not a gas platform...

... this is carbon capture & storage

PROJECT GREENSAND DENMARK • INEOS LED • GOVERNMENT BACKED

MORE DETAILS: PAGE 8

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