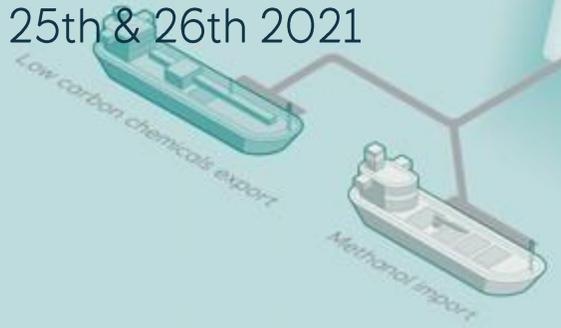
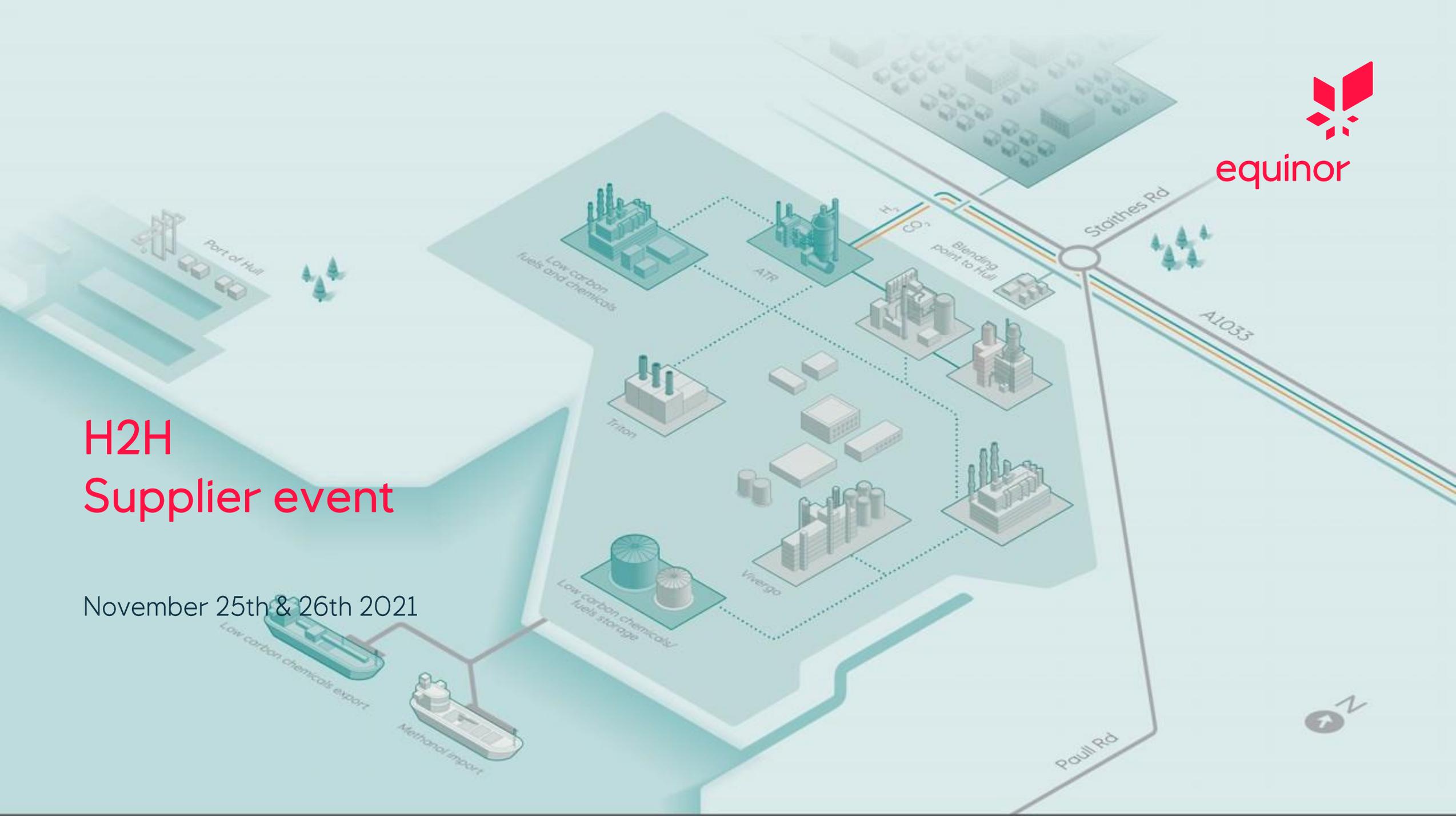




equinor

H2H Supplier event

November 25th & 26th 2021



More information

If you are a supplier seeking more information or to get involved in the supply chain, please contact:

Technip Energies/Air Products – Phil Rigby, h2hevent@airproducts.com

KBR/Tecnimont – Leonardo Tartara; L.Tartara@tecnimont.it

Linde/BOC – Stephan Zehrer; stephan.zehrer@linde.com

You may also want to contact the [Advanced Manufacturing Research Centre \(AMRC\)](#) who partner with us on developing the UK supply chain – jay.shaw@namrc.co.uk

Hydrogen to Humber Supplier Event

Hosted and supported by:



www.thesupplychainnetwork.co.uk

www.catchuk.org

Safety moment

Always Safe

High Value

Low Carbon



I AM SAFETY



Integrated in everything we do

I always put safety and security first and understand my risks.
Safety and security is what I do every day. I am a role model for safety and security.

I am **accountable, visible** and **engaged!**

Safety in design

- Risk analysis in design
- ALARP
- Barrier management
- Avoid late design changes
- Good operability
- Emergency response

Closed loop learning

- Internal
- External



UK Stars are Aligning



1) Policy and Legislation

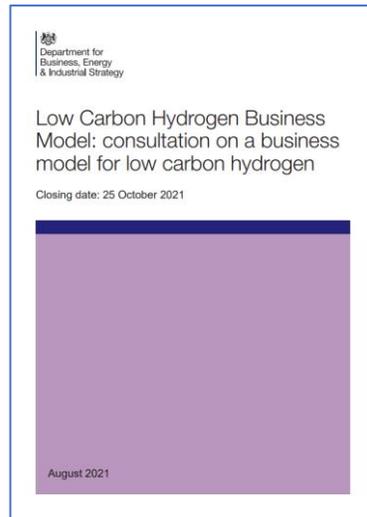
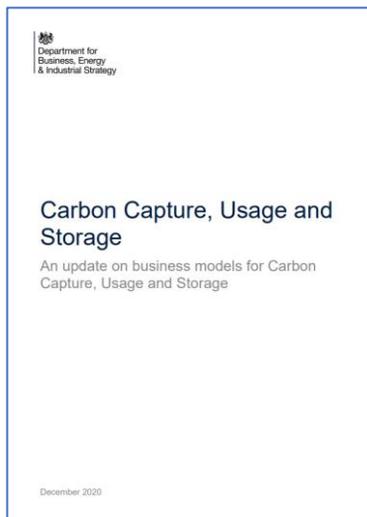
£75 MILLION BID WIN FOR ZERO CARBON HUMBER'S NET ZERO AMBITION

17/03/2021

[f](#) [t](#) [in](#) [e](#)

THE HUMBER'S AMBITION TO BECOME THE WORLD'S FIRST NET ZERO INDUSTRIAL CLUSTER HAS MOVED A STEP CLOSER WITH THE NEWS THAT THE ZERO CARBON HUMBER (ZCH) PARTNERSHIP HAS BEEN SUCCESSFUL IN ITS BID FOR GOVERNMENT FUNDING TO UNLOCK ITS MAJOR DECARBONISATION INFRASTRUCTURE PROJECT.

2) Public:Private Funding



3) Business Models and Regulation

2) Cluster Sequencing – phase 1

3) Cluster Sequencing – phase 2

Announced Late Q1 2022 (Projects pre 2027)

4) Government Selection and Negotiation

5) HMTreasury

EAST CO₂AST CLUSTER



Northern Endurance Partnership

NORTH SEA



MIDDLESBROUGH ●
DARLINGTON ●

PROJECTS IN TEESSIDE INCLUDING

Net Zero Teesside

BOC bp CFIndustries

kellas MIDSTREAM NZT Power suez

TV ERF 8 RIVERS

UP TO 10 MTCO₂E CAPTURED

● YORK
● LEEDS

HULL ●
SCUNTHORPE ●
GRIMSBY ●

PROJECTS IN THE HUMBER INCLUDING

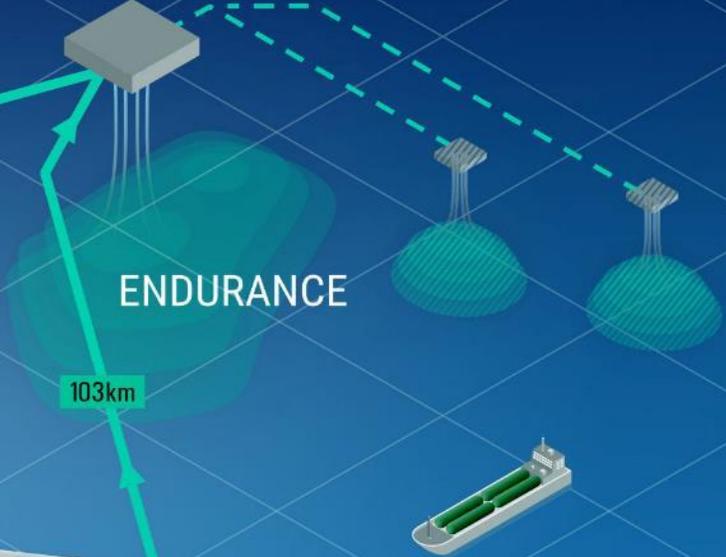
ZEROCARBON HUMBER

drax equinor MITSUBISHI POWER

sse Thermal TRITON POWER uni per VELOCYS

17+ MTCO₂E CAPTURED

● SHEFFIELD



ENDURANCE

103km

145km



EAST COAST CLUSTER

The Humber, including ZEROCARBON HUMBER

drax
Negative emissions

BRIDLINGTON

H2H SALTEND

equinor TRITON POWER MITSUBISHI POWER

Blue hydrogen production, Hydrogen-blend CCGT, Low carbon chemicals & maritime fuel

NORTH SEA



FUTURE EXPORT PIPELINE TO STORE

BEVERLEY

HULL

Saltend Chemicals Park & Saltend Power Station

50km

Immingham/Killingholme

GRIMSBY

SCUNTHORPE

KEADBY 3 CC

sse Thermal equinor

CCGT & Carbon Capture

equinor

Blue hydrogen

LOCATION TBC

HYDROGEN HUB

uni per

Blue and green hydrogen

VELOCYS

Waste to jet fuel

DONCASTER

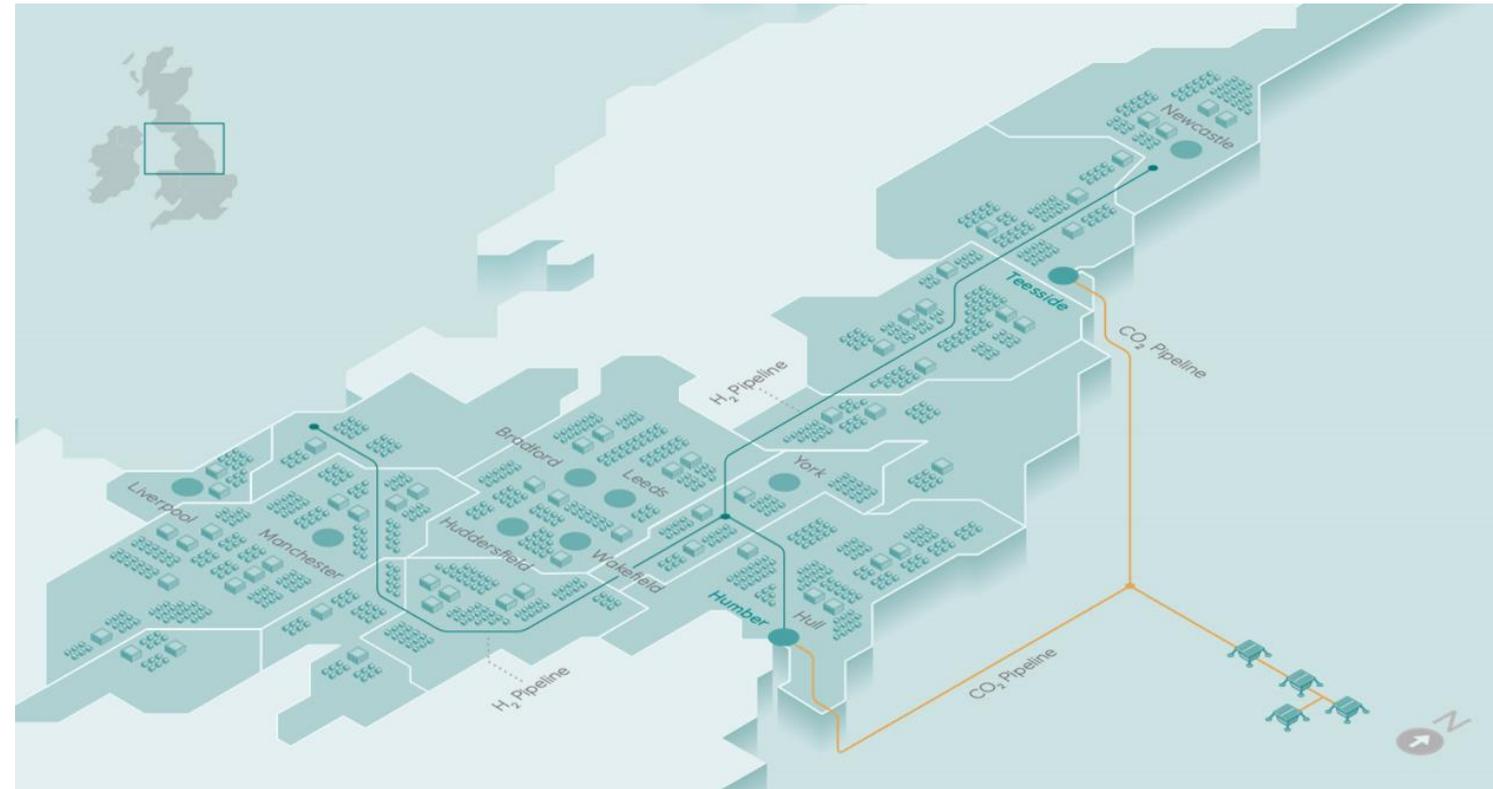
SHEFFIELD

KEY

Power generation	Biomass power	Hydrogen production	Primary emitters for ECC bid
Industry	Energy from waste	Future CO ₂ pipeline (illustrative)	Potential future emitters
Biofuels / processing	Shipping	Future hydrogen pipeline (illustrative)	Hydrogen offtaker project

Transition to a hydrogen economy across the North

- ‘Deep decarbonisation’ by converting the UK gas grid to hydrogen
- North of England as a starting point equating to 1/7th of UKs homes (12.5 GW installed capacity) with view to a UK-wide rollout





Equinor Hydrogen to Humber (H2H) 2021-2030



- Demonstrate blue hydrogen production as one viable technical and commercial solution to Net Zero 2050 ambition
- UK government climate policy ambition within a Public Private Partnership (PPP) framework
- Operationalize the H2 Equinor in Humber, through **standardization**



- A UK/local context

Demonstrate the value chain – H2H Saltend 2026/2027



- 600 MW H₂ production**
- Decarbonise Saltend Chemicals Park
 - Incl 300MW ammonia plant
 - Cost competitive and agile

Scale up the value chain – H2H Southbank 2028/2029



- 1200-1500 MW additional H₂**
- Blend H₂/gas at Keadby 2
 - Supply to new H₂ power plant run on 100% H₂
 - Alborough Hydrogen storage

100% conversion of natural gas to hydrogen



Decarbonisation heating sector

- H21 North of England project
- Developed with Cadent and Northern Gas Networks



- Large Direct Foreign Investment 2023-2029
- Job creation during construction/operation
- UK supply chain engagement

Tier-1 contractor Design Competition



Sept 2022
Selection of Tier-1 contractor

Late 2023
Final Investment Decision (FID)

4Q2026
Start-up



Site Selection



2026/2027

2028/2029

Consent and Permitting



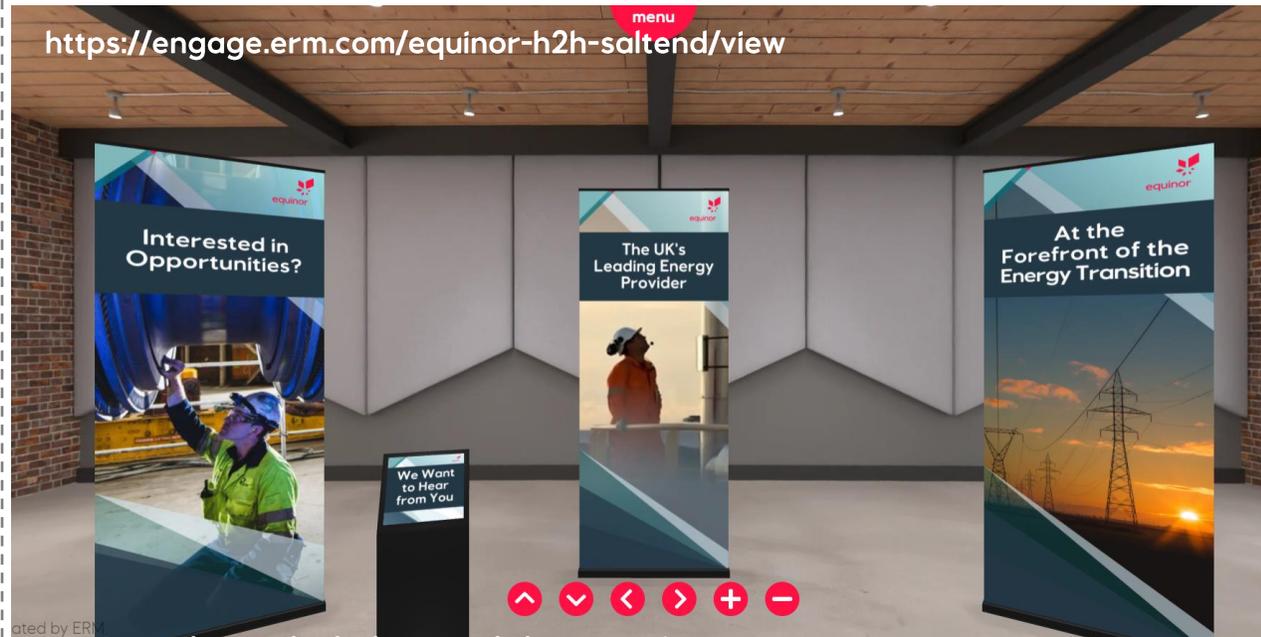
Local public engagement/community

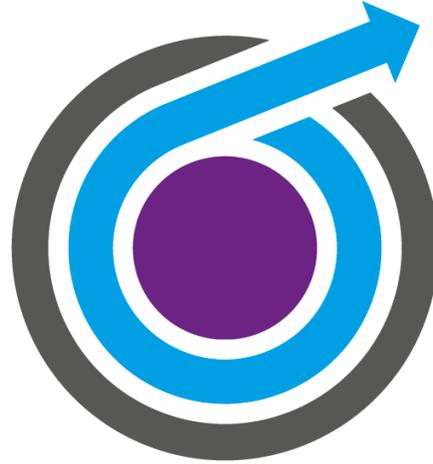
CO₂/H₂ infrastructure



Value chain deployment

<https://engage.erm.com/equinor-h2h-saltend/view>





NUCLEAR AMRC

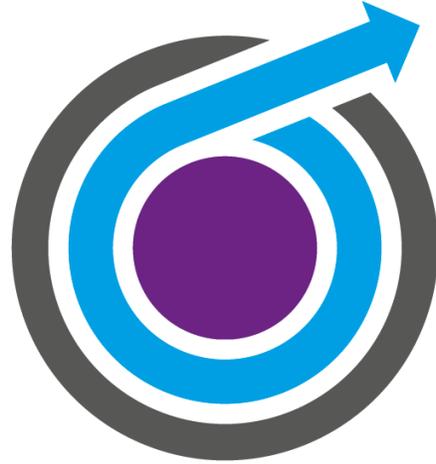
ADVANCED MANUFACTURING RESEARCH CENTRE

Advancing UK manufacturing



The University
Of
Sheffield.





NUCLEAR AMRC
ADVANCED MANUFACTURING RESEARCH CENTRE

Building the supply chain for H2H Saltend

Jay Shaw, Programme Director

25/26 November 2021



Our mission



To help UK companies win work in nuclear and other high-value manufacturing sectors.

Manufacturing innovation:

- Applying innovation.
- Increasing productivity.

Supply chain development:

- Increasing capability & capacity.
- Fit For... sector programmes



Supply chain development

Targeted support for manufacturers

Helping suppliers raise quality and develop capabilities to meet sector needs.

Building links between manufacturers and the top tier.

- Fit For Nuclear.
- F4OR and other sectors.
- Nuclear Sector Deal delivery.
- Demand modelling.



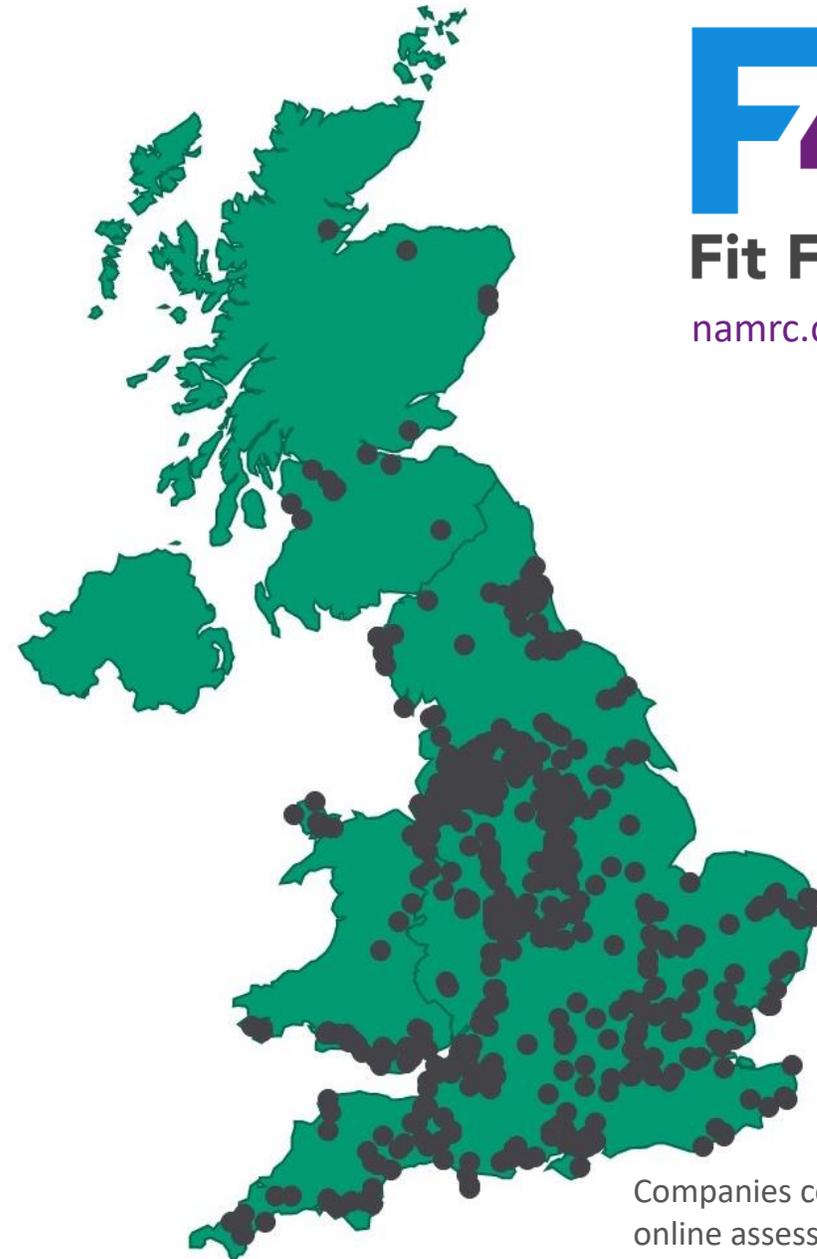
Fit For Nuclear

Test and develop your nuclear readiness

- Free online self-assessment.
- Site visit.
- Expert analysis and action plan.
- Ongoing support.

Reach and impact

- c860 companies taken self-assessment.
- c120 currently granted F4N.
- £1.4 billion of new contracts won.



Companies completing
online assessments



Zero Carbon Humber



Understanding the opportunities

- Develop & analyse demand data.
- Focus on high-value components.
- Assess supply chain readiness.
- Match to potential suppliers.

Sector-focused supply chain support

- Targeted support for hydrogen & CCUS.
- Developing business capabilities.
- Removing barriers to entry.



Two new sector-specific programmes

F4H₂
Fit For Hydrogen

Launching summer 2022

- 20 companies in pilot.
- Recruitment early 2022.
- 12-18 month journey.

To register interest:

anna.boland@namrc.co.uk

F4CCUS
Fit For Carbon Capture,
Usage & Storage





NUCLEAR AMRC
ADVANCED MANUFACTURING RESEARCH CENTRE

web: namrc.co.uk

email: jay.shaw@namrc.co.uk / t.Robinson@amrc.co.uk

tel: 0114 222 9900

Twitter: [@NuclearAMRC](https://twitter.com/NuclearAMRC)



H2H Supplier Event

Hull - November 25th & 26th 2021

Proud history, bright future.



KBR

Process Licensor and Engineering Designer



Revenue
Full year 2020

\$5.8 B



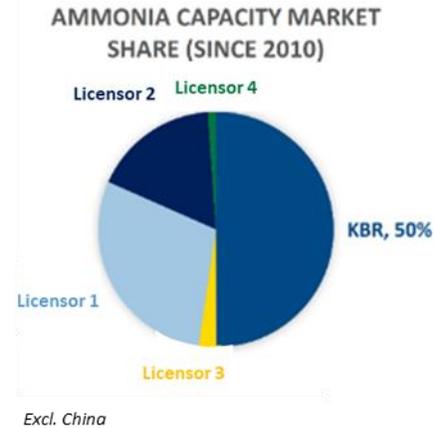
Employees

29,000+



Global
Presence

80+ Countries



- Delivering Sustainable Technology Solutions to UK Government and Companies
- Designed and licensed 262+ grassroot hydrogen, syngas, ammonia plants since 1943:
- 250 syngas (H₂ & CO) generation from hydrocarbon reforming – including process CO₂ capture
- 244 ammonia production, ~50% of world's ammonia
- Technology evaluation, concept and feasibility studies, FEED and Detailed Designs on CCUS for over 60 years
- Hub office in Leatherhead, UK - capacity 1,000+; Full project lifecycle capability

Tecnimont

Process Licensor and EPC Contractor

MAIRE TECNIMONT GROUP is present worldwide in the following business:

PETROCHEMICALS | FERTILIZERS | OIL & GAS REFINING | ENERGETICS & NEW POWER | GREEN CHEMISTRY & RENEWABLES



Revenue
Full year 2020

€2.6 B



Employees

9,000+



Global
Presence

45+ Countries

- Over **50 operating companies** worldwide (I.e. MET T&S, UK)
- Over **1,500 successfully delivered projects**
- Over **9,000 people** in the overall group with 3,000 professionals in E&I



- KBR leading pre-FEED and Tecnimont leading FEED and EPC phases
- Technology being delivered out of KBR UK “Centre of Excellence” in UK
- KBR / Tecnimont have successfully executed and delivered multiple similar projects together (pre-FEED, FEED, EPC and O&M). Tried and tested delivery model
- KBR / Tecnimont know UK supply chain well and will seek to give UK service companies maximum opportunity
- It is important to register on the Tecnimont system as Tecnimont will lead EPC
- Main opportunities for UK suppliers will be in EPC project execution and O&M phase. This will be in circa 2023



A

SUPPLY OF MATERIAL

About 200 Purchase Orders to be awarded

Material required during Construction 2023-2026

B

CONSTRUCTION WORKS SUBCONTRACT

Subcontract/s Direct award by Tecnimont 2023

Subcontracts Award by Tecnimont subcontractors 2023-2026

C

AFTER SALES OPPORTUNITIES WITH AWARDED VENDORS

Local services for Original Equipment Manufacturers

Italy-UK cooperation

D

MAINTENANCE SERVICES

Routine maintenance and shutdown services

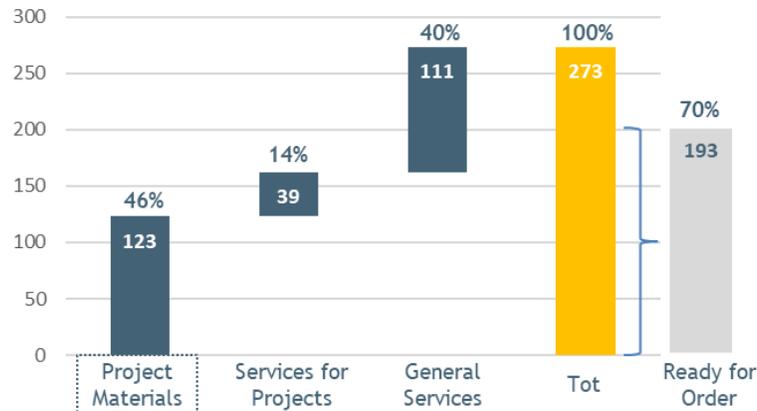
2026 onwards



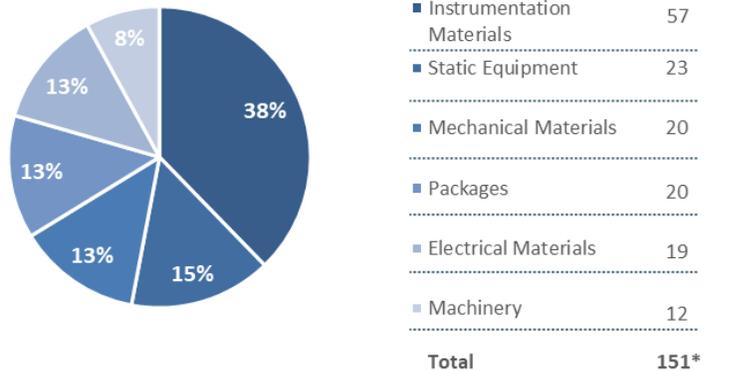


CURRENT MET RELATIONSHIP WITH UK SUPPLY CHAIN

How Many Suppliers does Maire Tecnimont have in UK?



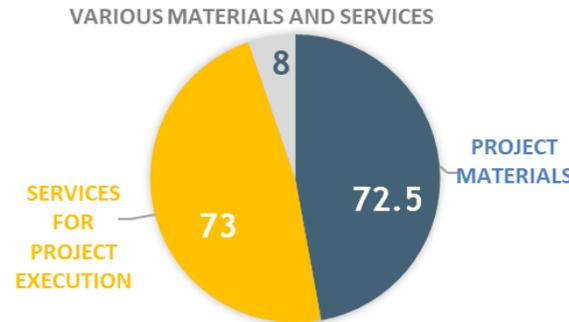
Split of Project Material Suppliers By Discipline*



*One vendor can supply more than one discipline

Maire Tecnimont booking with UK Suppliers in MEUR

Total UK Project Material booking: 135 M€



Project Material booking by discipline

Discipline	Millions €
ELECTRICAL COMPONENTS & SYSTEM	€ 1,5
INSTRUMENTATION	€ 6,5
PACKAGES	€ 40,0
ROTATING EQUIPMENT	€ 10,0
STATIC EQUIPMENT	€ 13,0
MECHANICAL	€ 1,5
Total	€ 72.5

POTENTIAL OPPORTUNITIES

1 SUPPLY OF MATERIAL

- About 200 Purchase Orders to be awarded
- Material required during Construction 2023-2026

2 CONSTRUCTION WORKS SUBCONTRACT

- Subcontract/s Direct award by Tecnimont 2023
- Subcontracts Award by Tecnimont subcontractors 2023-2026

3 AFTER SALES OPPORTUNITIES WITH AWARDED VENDORS

- Local services for Original Equipment Manufacturers
- Italy-UK Cooperation

4 MAINTENANCE SERVICES

- Routine maintenance and shutdown services
- 2026 onwards





Contact us

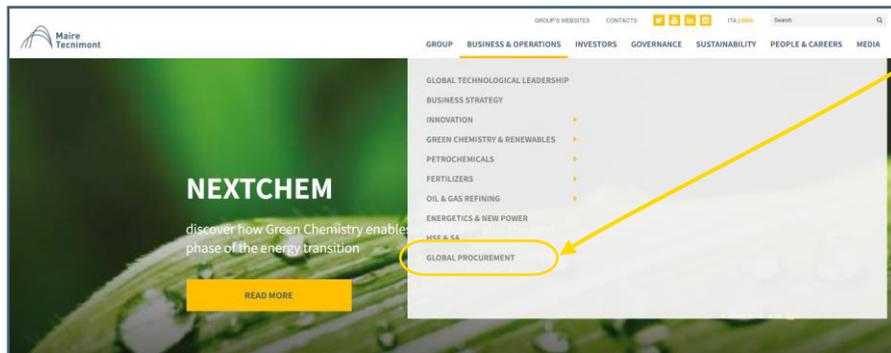
If you are interested to be part of H2H Project as Supplier or Sub-Contractor drop your Business Card and you will be contacted by Tecnimont staff

Or else, for spontaneous application please:

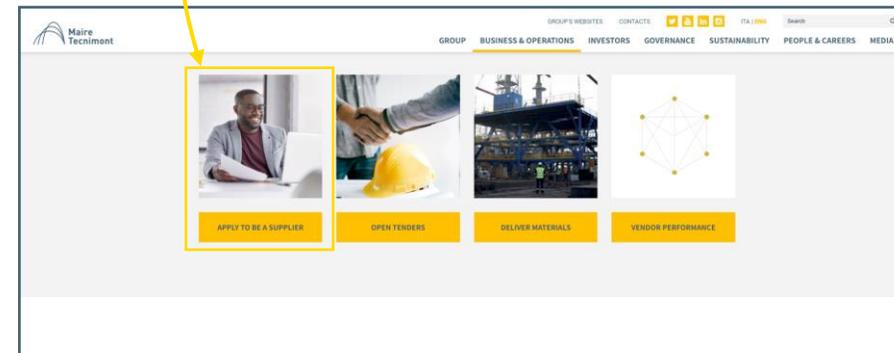
→ Complete the Qualification process on SupplHi platform at the address <https://vendor.supplhi.com> or visit our corporate site: www.mairetecnimont.com



BUSINESS & OPERATION → GLOBAL PROCUREMENT



APPLY TO BE A SUPPLIER



Project Vendor List

→ For any other issue write email

To: L.Tartara@tecnimont.it



Balfour Beatty

Joining forces for long lasting relations in the UK Energy Transition journey

Marc Bouchez, Consortium Project Director
Barry Goldsworthy UK Interface Manager
Richard Beament, Dpty Consortium Project Director
Iain Wilson , Balfour Beatty Major Projects

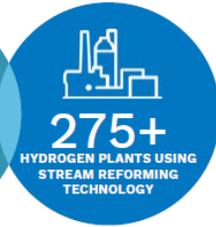
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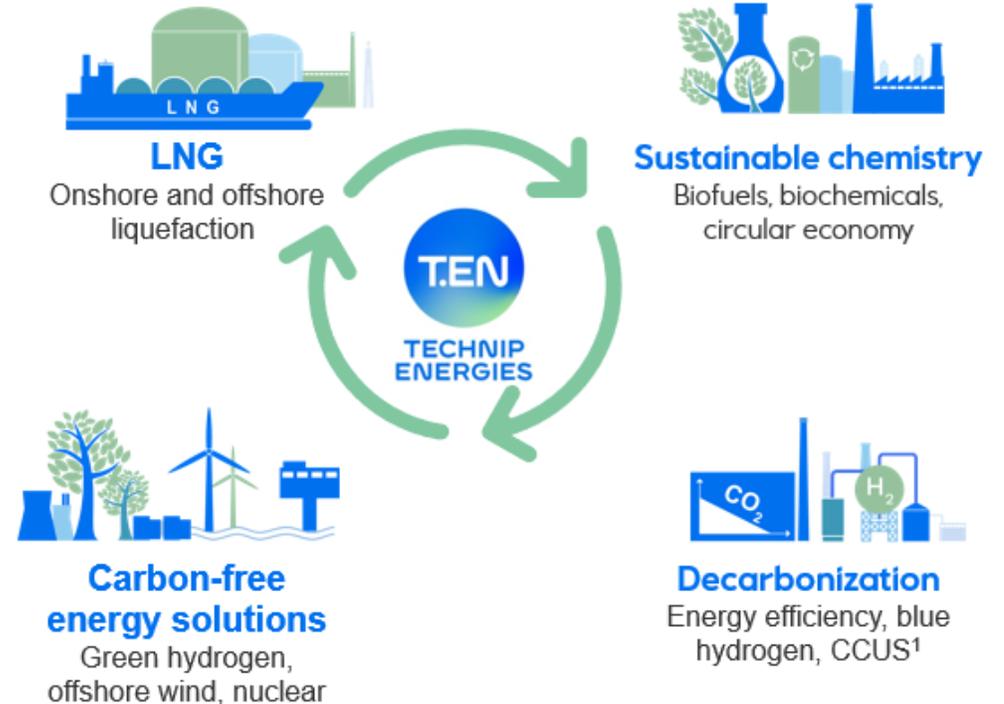
TECHNIP
ENERGIES

Hydrogen industry's global leader



Energy transition is our business

- Applying our core capabilities to today and tomorrow's key energy challenges
- 6Bi€ revenue
- 16.5Bi€ backlog
- 15.000 employees in 34 Countries
- 25+ leading proprietary technologies
- 450 projects under execution, EPC skills
- 60+ years of operations experience



Technip Energies and Air Product, in Alliance since 1992, have formed the TENAP Consortium for H2H

Air Products Global HyCO Presence



• Think Global, Act Local

Air Products is a leading global industrial gas company, built on deep experience, strong performance and high ambitions



... and committed to invest > \$30 bn in capital for the 10-year period to 2027

Air Products Operational Experience in the UK



A strong local presence

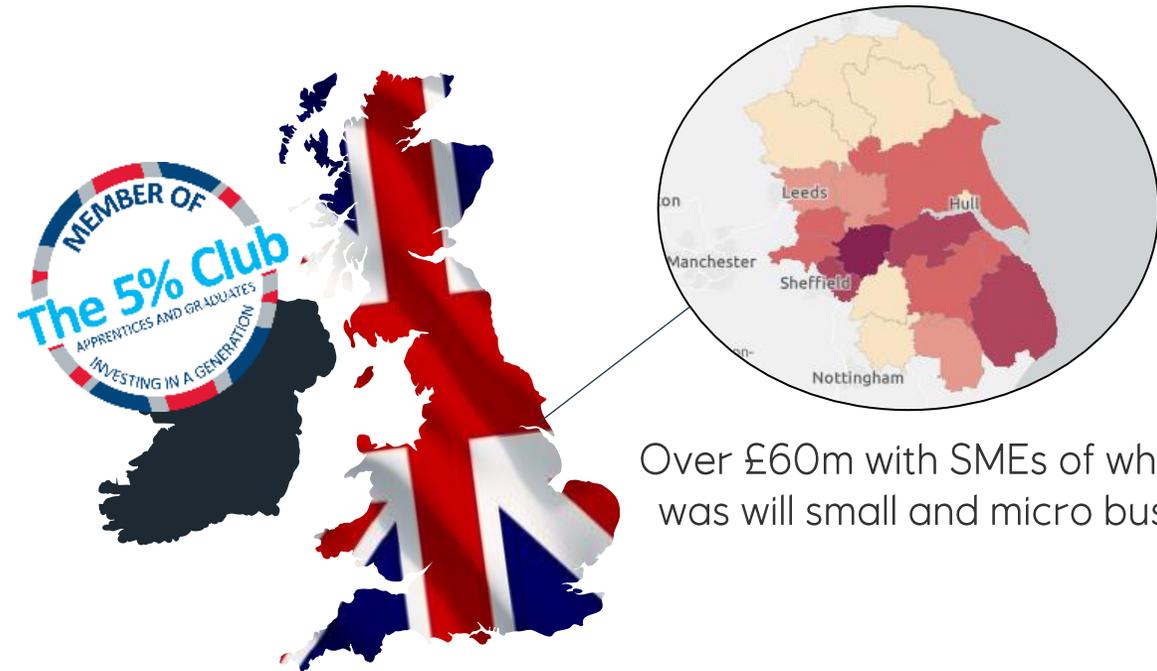
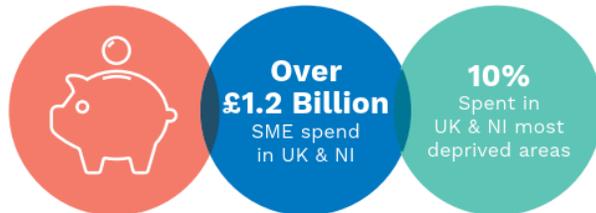
in 2020 we had 59 live contracts within a 50 miles radius of site

A proud British business

12,000 employees across the UK with over 6% in earn & learn roles

First UK contractor to commit to a specific target spend with SMEs

We exceed the Government's target for SME supply chain spend at 40%, and can track our spend by location to support the Levelling Up agenda



Over £60m with SMEs of which £21m was will small and micro businesses

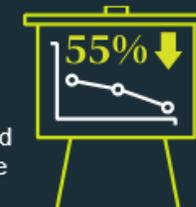
Strong safety record

For six consecutive years, we've improved our Lost Time Injury Rate **66% improvement since 2014**



Clear carbon and waste targets

We've seen a 55% reduction in carbon since 2010 and have bold targets and ambitions to go Beyond Net Zero and Generate Zero waste by 2040



How the TENAP Consortium will engage on the H2H Journey?



Behavioral | Holistic
Safety



Performance | Local partnership
Project economics



Quality | Robustness
Certainty / Product delivery



Integrated | Cooperation
Trust | Extended Supply Chain
Partnership



H2 & Carbon Capture
best in Class proven Tec
Background Expertise

Cementing fundamental foundations for common success

Technip Energies contact point:

Philippe Deschamps

Global Sourcing & Procurement

philippe.deschamps@technipenergies.com

Air Products contact point:

Phil Rigby

Director Procurement & Contracts EMEA

H2HEVENT@airproducts.com

Balfour Beatty contact point:

Sarah Jennings

Procurement

Sarah.jennings@balfourbeatty.com



Now starting the Pre-qualification phase to assess the local market

Making our world more productive

Introduction to Linde

Hydrogen to Humber (H2H)
Supplier Event

25th and 26th November 2021

Mark Finney – Lead RUK Project Execution



Linde is a leading industrial gas and engineering company

Synergies are Built on Strong Engineering Foundations



Gases

Engineering

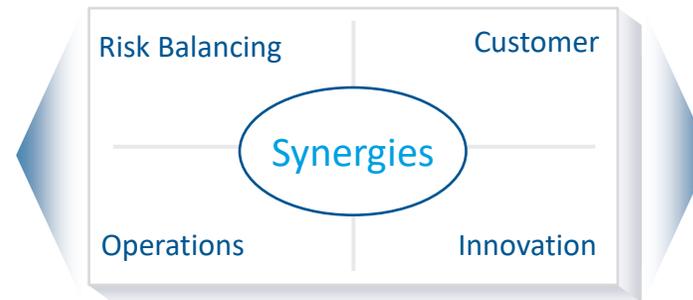
2020 Sales⁽¹⁾
USD 24,392 million

World-class operations of over 1,000 plants



BOC (British Oxygen Company) is the largest provider of industrial, medical and special gases in the UK and Ireland

BOC operates and maintains several major air separation and hydrogen plants across the UK and Republic of Ireland (~200 employees in O&M)



2020 Sales
USD 2,851 million

Technology-focused with more than 4,600 plants built

Four technology fields (Air Separation | Hydrogen & Syngas | Natural Gas | Petrochemicals)

(1) Combined sales of business segments Americas, EMEA and APAC and Other



For Linde and for Third-party Customers

Air Separation



For the Chemical and Energy-related Industries

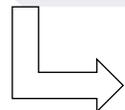
Petrochemicals



Hydrogen and Syngas



Natural Gas



600 Hydrogen and Syngas plants built worldwide by LE, more than 150 plants operated by Linde Gas

Linde Engineering: Supplier/Subcontractor Qualification Process



Suppliers/Subcontractors can contact Linde via the following email addresses:

- **Procurement**
(Static/Rotating Equipment, E&I, Steel Structure, Piping & Bulk)
SALTEND.SD_PROCUREMENT@PROCORR.LINDE.COM
- **Construction, Civil, Fabrication**
SALTEND.SD_CONSTRUCTION@PROCORR.LINDE.COM
- **Services**
(Accommodation, other site related services)
SALTEND.SD_SERVICES@PROCORR.LINDE.COM



Steps:

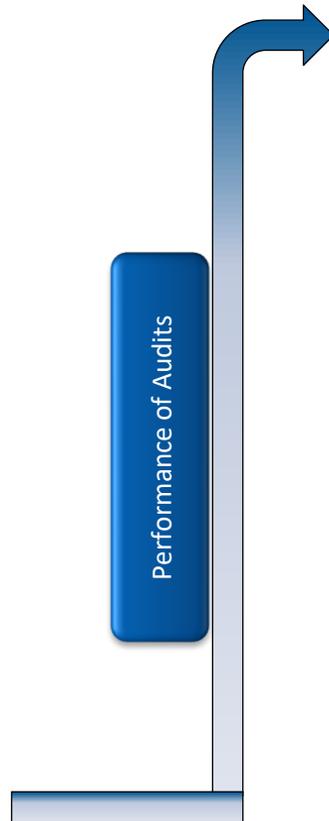
1. Potential Supplier/Subcontractors contact Linde.
2. LE will issue specific questionnaires.
3. Submit questionnaire to contractors.
4. Contractors fill out questionnaire.
5. Contractors submit questionnaire to Linde.
6. PQ team starts parallel evaluation.
7. Final evaluation and recommendation of each discipline.
8. Add Supplier/Contractor to Linde project specific Vendor List.
9. Participation in bidding phase (next slide).
10. Performance of audits for competitive suppliers.



Pre-FEED/Proposal Phase:



Project Execution Phase:



Timeline:

- Overall timeline given by Equinor.
- Issue of Inquiries to pre-selected suppliers for EPC bidding phase expected in Q1/2022 based on current Equinor timeline.

Making our world more productive

**Thank You
for Your Attention**





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ORGANISED BY:



equinor

PROGRAMME

10:00am

Introductions with

- The Supply Chain Network & CATCH
- Dan Sadler - Vice President, UK Low Carbon Solutions, Equinor
- Tanguy Cosmao - Project Director, H2H Saltend, Equinor
- AMRC

Tier 1 Contractors

- KBR & Tecnimont
- Technip Energies & Air Products
- Linde

10:45am - Questions

11:30-12noon - Networking

- ✓ Meet our potential Tier 1 Contractors
- ✓ Hear about the Humber regions ambitions
- ✓ Learn about Zero Carbon Humber
- ✓ Discuss opportunities



Key messaging – aligned Equinor and pre-FEED contractors (internal)

- Key purpose of this first Equinor H2H supplier event - present high level H2H Saltend project and Equinor in UK, and the 3 pre-FEED contractors
- Pre-FEED contractors to present themselves, who they are, how they will work with this project, how to contact them
- This project are 2 years ahead of taking an FID (Final Investment Decision) so it's still early days
- The procurement process for selecting the contractor for FEED (Front End Engineering Design) and option for EPC and O&M will take place from June 2022. Up to then the 3 pre-FEED contractors will engage with the market for special services like construction, scaffolding etc.
- Leveraging mainly chemical industry/supply chain - the pre-FEED contractors will do an assessment of the capability and capacity of supply chains to deliver required materials, goods and skills. AMRC will connect the dots
- This is the first project of a kind and will be a catalyst for UK supply chain if the project is realized, shaping the ground for future opportunities for the region
- Looking at the production technology – understand possibilities in the whole value chain
- There will be more supplier events!