NEW FUELS AND PIPELINES

An environmental and social perspective

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RSK

Today’s agenda

- A little bit about RSK
- What are the drivers for change?
- Renewable energy projects and pipelines
- Environmental and social aspects of the new projects and pipelines
- Wider sustainability issues

Responsible.
Sustainable.
Knowledgeable.

RSK is a global leader in the delivery of sustainable solutions. Our family of over 150 environmental, engineering and technical services businesses works together to provide practical solutions to some of the greatest challenges societies have ever faced.

RSK

RSK today, in numbers

10000+

Employees

150+

Businesses operating through 7 divisions

8000+

Active Clients

£940m

Proforma Sales

c£75m

Proforma EBITDA

9%

Average annual organic growth since 2011

6

Continents

40+

Countries

200+

Offices

What we do for you

Help you consent, construct and manage energy projects

Help you meet client, regulatory and lender requirements

- Environmental and social (E&S) impact assessments
- Carbon accounting, risk assessment, mitigation and adaptation
- E&S due diligence for lenders and companies
- E&S management systems and plans
- E&S teams
- Surveys and detailed plans
- Ground investigation and remediation
- Professional training and support on sustainability

Pipelines, Renewables, Integrated energy transition projects

Drivers for change

Drivers for change

Climate and war

Residents evacuated as wildfire on outskirts of Athens threatens homes

Clouds of thick smoke build over Greek capital's southern suburbs as more than 100 firefighters fight blaze

A fireman at the scene of a wildfire in the suburb of Voula, south of Athens, Greece, which is threatening power lines and infrastructure. Photograph: Yannis Kolesidis/EPA

Pressure

Response

- Paris agreement
- Government policies, legislation and subsidies
- Lenders and banks
- Companies

Renewable energy projects and pipelines

Projects to decarbonize industry

Hydrogen production to power industry, transport and homes

Carbon capture removal, transport and storage

UK examples:

HyNet North West

East Coast Cluster, including Net Zero Teeside, ZeroCarbon Humber and the Northern Endurance Partnership

Humber Zero

South Wales Industrial Cluster

Acorn project

….similar projects in Netherlands, Denmark, Germany…

Northern Lights project in Norway

Include hydrogen and CO_2 pipelines, both new and existing

HyNet North West

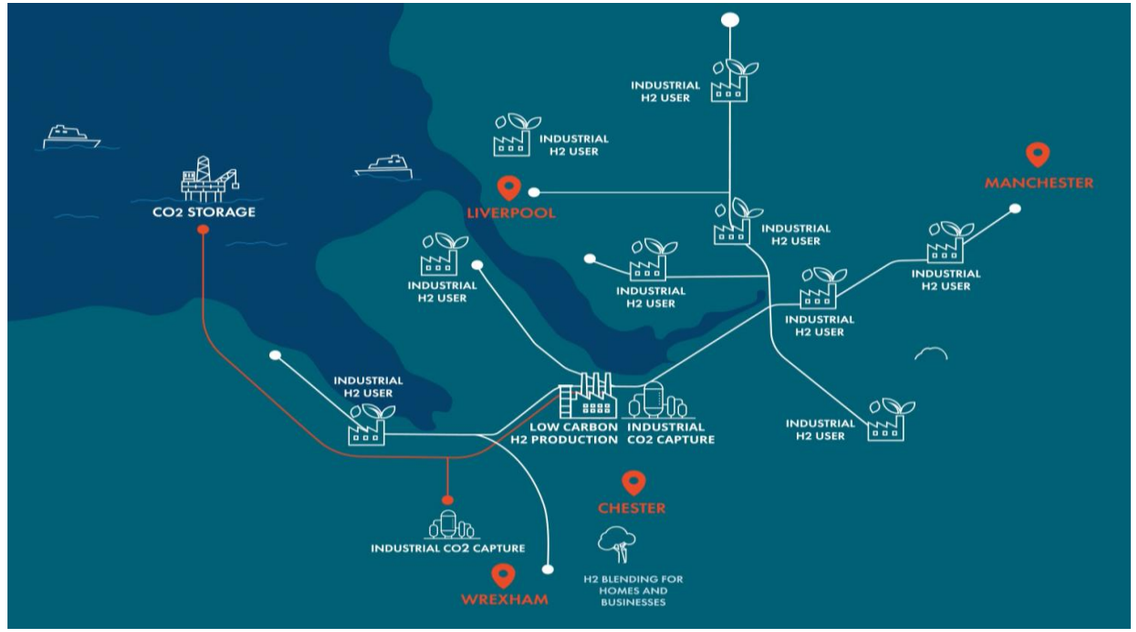
Northwest England and North Wales

Project description

Project seeks to establish a network of infrastructure for producing and supplying low carbon hydrogen gas from natural gas. Natural gas will be split into H_2 and CO_2 molecules. Separate networks of pipelines will then supply the hydrogen to industrial users and homes, whilst the CO_2 is transported to bedrock beneath Liverpool Bay for long-term storage.

Key aims

- Provide nearly 50% of the total hydrogen needed to meet the UK's net zero target.
- Reduce carbon emissions by 10 million tonnes a year by 2030 – the equivalent of taking four million cars off the road.
- Provide 80% of the UK's clean power target for transport, industry and homes



Proposed elements

- Hydrogen production plant (Stanlow Manufacturing Complex), allowing production of low carbon hydrogen, alongside CO_2.
- New hydrogen and existing blended gas pipelines to industrial users, homes and (later) transport.
- Hydrogen storage facility, to balance supply and demand.
- New and repurposed pipeline to transport CO_2 for long-term storage in Liverpool Bay.

Mega projects to generate power, H and ammonia

Renewable energy production

Hydrogen production

Ammonia production

Examples:

West coast of Australia

West Coast of Africa (Mauritania, Namibia)

West coast of South America

Oman

…. locations characterized by good potential for both solar and wind generation and few opportunities for local use of the power.

Include new hydrogen and water pipelines

Aman Project

Mauritania

Project description

The central premise is to generate renewable energy from arrays of wind turbines and solar panels. The generated energy will then be used to produce green hydrogen (hydrogen created by the electrolysis of water) and green ammonia (ammonia made from green hydrogen). A marine export facility will export the green ammonia to the global market.

Pipelines

- Water pipelines from desalination plant to hubs
- Hydrogen pipelines from hubs to ammonia plant

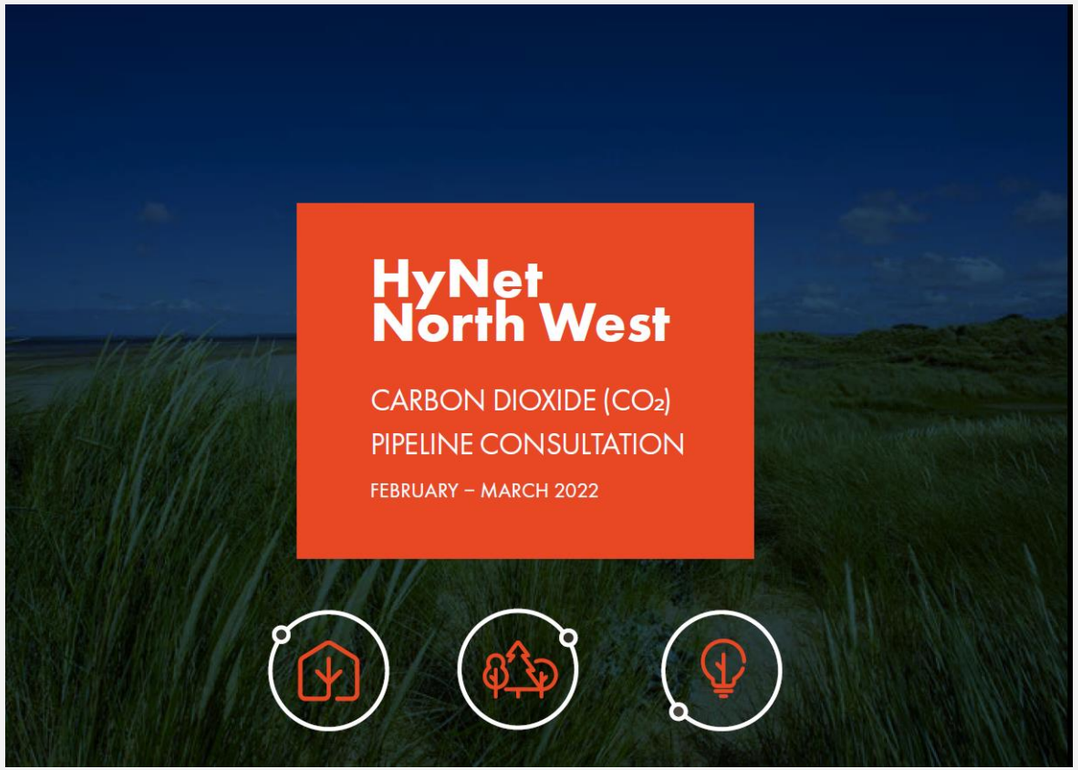
Proposed elements

- 975,490 ha of onshore wind and solar energy
- Hubs to generate hydrogen by the electrolysis of water
- Desalination plant
- Production of green ammonia
- Marine export facility
- Clean water and renewable electricity to local communities

Environmental and social impacts of the new projects and pipelines

Major energy / infrastructure projects with multiple elements

- Full ESIAs needed
- International E&S lender standards
- Different safety issues - major stakeholder engagement exercise
- Routing new pipelines in congested industrial/urban areas is a challenge
- Larger/more compression stations for H pipelines
- Land access and resettlement planning
- Operation - reduce carbon / carbon net zero / carbon negative (subject to accreditation)
- Construction – many of the same impacts as “old” hydrocarbon projects



Construction environmental and social impacts

Look familiar?!

Sustainability

The wider global crisis and drivers for change

More requirements!

- Climate change risk assessment
- Best available techniques
- No net loss / net gain for biodiversity
- Human rights impact assessment
- Gender
- Supply chain assessment
- Climate-related financial disclosure
- Local content and employment

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UN Sustainable Development Goals

Example: SDG 3 Good health and wellbeing

Relevant targets

Relevant SDG targets

3. End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

4. Reduce premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing.

5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.

6. Halve the number of global deaths and injuries from road traffic accidents.

7. Improve access to health care

8. Reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

Potential actions

- Pollution control and chemical handling plans and procedures
- Traffic management and education
- OHS campaigns
- Camp design and management
- Access to general health care for workers and their families
- Support to local health initiatives
- Health impact assessment for major projects
- In-migration strategy for major projects

…build on existing initiatives but also measure, improve and report

Come to the IPLOCA Workshop

INTERNATIONAL PIPELINE AND OFFSHORE CONTRACTORS ASSOCIATION (IPLOCA)

IPLOCA WORKSHOP on sustainable projects, portfolios and businesses
Fall Sessions: Tuesday, 18 October 2022
Hotel Catalonia Plaza
Pl. Espanya, 6-8, 08014 Barcelona, Spain
Tel. +34 934 26 26 00

AGENDA

09:00 – 09:30	Registration
09:30 – 09:40	Welcome to the attendees *Juan Arzuaga, IPLOCA*
09:40 – 10:00	IPLOCA HSE & CSR Committee activities update *Bruno Pomaré, Chair of the IPLOCA HSE & CSR Committee*
10:00 – 10:45	Presentation on Sustainability, Environmental and Social Governance (ESG) and the Sustainable Development Goals (SDGs) - how they apply to the pipeline industry widely and to our organisations and projects (the G of ESG)
10:45 – 11:15	Coffee break
11:15 – 12:00	Presentation on Environmental sustainability for pipeline and offshore projects (including decarbonization, natural capital and biodiversity gain). How does the ESIA process feed in to our overall sustainability performance: *presentation followed by panel mini-presentations from 2 - 3 IPLOCA members and discussion*
12:00 – 12:45	Presentation on "Social sustainability for pipeline and offshore projects (including delivering social value). How does the ESIA process feed in to our overall sustainability performance: *presentation followed by IPLOCA member case study and discussion.*
12:45 – 13:00	Presentation of the 2021 H&S Award Winner
13:00 – 14:30	Lunch / Networking
14:30 – 14.45	Introduction to the Workshops
14:45 – 16:15	Workshop breakout sessions Five groups, each working with on the question: "Where can we have the most positive impact on sustainability across the life cycle of a project". Groups will be encouraged to use the SDGs and to think about how this will also affect sustainability at the portfolio and organizational levels.
16: 15 – 16:45	Coffee break
16:45 – 17:45	Feedback presentations from workshops (10 mins each plus summing up from chair) to present their key findings and to suggest themes to be considered by IPLOCA in developing their own sustainability strategy
17:45 – 18:00	Close out and discussion on next steps
18:00	Wrap-up and seminar closes
19:30	Meet in the hotel lobby
	Dinner in the restaurant XXXXX (Address : XXXX , Barcelona)

We can make a difference!

Good for the environment, people and business

….and it’s not rocket science!





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