
TECHNICAL NOTE

CLIENT:	IET
PROJECT:	OFFSHORE ENERGY INFRASTRUCTURE LANDSCAPING REPORT MARKET WATCH UPDATE
DATE:	14/09/2021
TITLE:	RELEVANT REPORTS, INITIATIVES AND MAJOR EVENTS ANNOUNCED DURING Q3 2021
REF:	J000698-TNO-Q2 LANDSCAPING REPORT UPDATE

On 8 March 2021 the IET published the Offshore Energy Infrastructure Landscaping Report, to provide input on how we can better understand and coordinate our national interests in offshore energy. The report found that whilst there are multiple stakeholders across various energy sectors in the UK actively engaged in energy integration projects, there are gaps in coordination between different stakeholder groups. Furthermore, the report identified key barriers to energy integration in the UK that must be addressed enable the energy sector to support the national target of net zero carbon emissions by 2050.

The Renewables Consulting Group, who supported the IET in the authorship of the Offshore Energy Infrastructure Landscaping report, has tracked notable new updates and coordinated activity pertinent to integrated offshore energy development in the UK and neighbouring waters since the final publishing of the report. This update provides a breakdown of key government activity relating to integrated energy development since June, an appraisal of newly identified groups progressing stakeholder coordination and major news updates on integrated energy projects in the UK and Northern Europe.

1 UK GOVERNMENT STAKEHOLDER REPORTS AND POLICY UPDATES

1.1 UK HYDROGEN STRATEGY

Published: 17/08/2021

Publisher: UK Government / Department of Business, Energy & Industrial Strategy (BEIS)

Topic: National government strategy to promote hydrogen development, with reference to integration with other technology sources.

In August the UK government presented its national hydrogen strategy, outlining potential support mechanisms and development frameworks to promote the long-term delivery of hydrogen generation projects in the UK. Under the plan, the government aims to support over 9,000 jobs through the hydrogen sector and unlock £4 billion in investment by 2030. Furthermore, £105 million in funding will be provided supporting heavy polluting industries to reduce emissions by adopting more hydrogen technology and phasing out fossil fuels. The strategy is founded on the success of government support for offshore wind in the UK, citing the Contracts for Difference (CfD) subsidy scheme. Alongside the strategy publication, a consultation has been opened on proposed support mechanisms for hydrogen production, based around a CfD model.

More information: <https://www.gov.uk/government/publications/uk-hydrogen-strategy>

1.2 SECTORAL MARINE PLAN (SMP) FOR OFFSHORE WIND FOR INNOVATION AND TARGETED OIL AND GAS DECARBONISATION (INTOG)

Published: 25/08/2021

Publisher: Marine Scotland

Topic: Planning specification and context report for an offshore wind power to platform leasing and allocation mechanism.

On 25 August Marine Scotland published the INTOG Planning Specification and Context Report. The INTOG SMP will act as a leasing mechanism specifically aimed at innovative projects under 100 MW (capped at 500 MW) and projects designed to support oil and gas projects reach decarbonisation goals. Following the initial round for projects under 100 MW, leasing would be opened up to larger projects, with a second cap of 3,500 MW (amounting to 4 GW across both rounds) document states that Crown Estate Scotland expects to be in a position to open the INTOG leasing round in H1 2022, with option agreements awarded in Summer 2023.

More information: <https://marine.gov.scot/data/sectoral-marine-plan-offshore-wind-innovation-and-targeted-oil-and-gas-decarbonisation-intog>

1.3 BACTON ENERGY HUB REPORT

Published: 09/06/2021

Publisher: Oil and Gas Authority (OGA)

Topic: Area plan for an Energy Hub at Bacton, assessing the potential of energy technology integration, particularly between natural gas, offshore wind, hydrogen generation and nuclear power.

The OGA published in June a report primarily outlining the market potential for hydrogen production, the role of hydrocarbons in and around the Bacton Energy Hub area and the opportunities and limitations for integrating offshore wind with hydrogen production. Specifically the potential to utilise excess energy from offshore wind farms to power hydrogen production was highlighted as an effective deployment solution for energy that would otherwise be wasted if not delivered to the onshore grid network.

More Information: <https://www.ogauthority.co.uk/news-publications/publications/2021/bacton-energy-hub/>

2 MAJOR ENERGY INTEGRATION PROJECT UPDATES

In the UK and Europe more projects continue to be announced integrating offshore energy networks, particularly offshore wind and clean fuel production. The ongoing development of multi-technology project will expose barriers to network integration in the UK and Europe, as well as identify practices project developers favour in establishing integrated networks.

2.1 NORTH SEA WIND POWER HUB – PROJECT UPDATE

In May the North Sea Wind Power Hub, a consortium led by Energinet, Gasunie and TenneT published a concept paper covering the pre-feasibility phase of the North Sea Wind Power hub development. The project will see offshore wind farms and other marine energy technologies across multiple countries connect to a shared energy hub, and was referenced in the landscaping report published by the IET in March 2021. The concept paper outlines development processes and technical parameters of the project, covering a regulatory and route to market approach that would conform with legislation from multiple governments, as well as high-level technical configurations of the project. Approaches to stakeholder outreach and cost benefit analysis was also addressed.

More information: <https://northseawindpowerhub.eu/knowledge/towards-the-first-hub-and-spoke-project>

2.2 NETHERLANDS – NEW OFFSHORE WIND ENERGY ROADMAP

In June the Netherlands Enterprise Agency (RVO) outlined a provisional roadmap for offshore wind energy through to 2040. The RVO is a key proponent of coordinated marine energy planning and has expressed interest in greater integration between offshore wind and other energy platforms for the next phase of development in the Netherlands. The RVO aims to facilitate an additional 27 GW of offshore wind power by 2040 beyond the current national energy roadmap, recognising the need to alter the development process for offshore wind to support greater system integration. The RVO will review the roles of key stakeholders in policymaking on offshore energy, namely the government, transmission system operator and market players. Preparation of offshore wind transmission landfall for projects through to 2040 will also be considered amongst other work streams.

More information: <https://offshorewind.rvo.nl/file/view/55040926/Webinar+Offshore+Wind+Energy+2040+-+June+3rd%2C+2021>

2.3 DOLPHYN

Environmental Resource Management (ERM), the developers of the Dolphyn offshore wind and integrated hydrogen production technology signed an MoU with Simply Blue Energy and Subsea 7 to deploy the Dolphyn concept at the 200 MW Salamander offshore wind farm off the coast of Scotland. As part of the MoU announcement, ERM also stated it is in discussions with Scotland Gas Networks (SGN) to potentially integrate with and connect into future 100 % hydrogen infrastructure or as a blend with existing gas infrastructure. The Dolphyn concept features a unit conducting electrolysis, desalination and hydrogen production, all on a single floating wind foundation.

More information: <https://ens.dk/en/our-responsibilities/wind-power/energy-islands/denmarks-energy-islands>

2.4 POSHYDON

The RVO awarded a subsidy of €3.6 million to the to the PosHYdon offshore green hydrogen pilot project in July, allowing for the start of activities to bring the project to life. The PosHYdon project will integrate offshore wind and offshore gas infrastructure to produce hydrogen at Neptune Energy's Q13a-A platform in the Dutch North Sea.

More information: <https://poshydon.com/en/dutch-government-grants-dei-subsidy-to-poshydon-worlds-first-offshore-green-hydrogen-production/>

2.5 CONTINENTAL LINK

In June National Grid began the planning process for the 1.8 GW Continental Link interconnector with Norway. The project would also connect and deliver power from offshore wind farms in the North Sea. The interconnector would support offshore wind projects with a combined capacity of 3.6 GW. Norwegian transmission system developer Statnett has stated it is not involved in the project at this time.

More Information: <https://www.gov.uk/government/publications/national-grid-ventures-ngv-continental-link-multi-purpose-interconnector-section-35-direction-planning-act-2008>

2.6 OFGEM STRATEGIC INNOVATION FUND

On 31 August, Ofgem opened applications to apply for funding through the Strategic Innovation Fund. The fund will provide up to £450 million in support to innovative projects targeting the whole system integration, data and digitalisation, heat and zero emission transport for the electricity system operations, electricity transmission, gas transmission and gas distribution sectors from 2021-2026.

More information: <https://www.ofgem.gov.uk/publications/strategic-innovation-fund-innovation-challenges>

2.7 OYSTER PROJECT

OYSTER, a marinised electrolyser project for renewable hydrogen production in September selected the port of Grimsby as the location for the project site. OYSTER is backed by a consortium comprised of ITM Power, Ørsted, Siemens Gamesa and Element Energy. The OYSTER system will be integrated with offshore turbines at projects off the coast of Grimsby using electrolysers only requiring water and renewable energy. The project will also explore options to use pipelines to deliver the hydrogen produced by OYSTER to shore.

More information: <https://orsted.com/en/media/newsroom/news/2021/09/862313889301790>