



Realising Norway's offshore wind ambitions

Norway's burgeoning offshore wind ambitions may have been curtailed by the continuing dominance of oil and gas and delays in licensing, but local experience to support innovation remains crucial for tapping into the North Sea's potential for renewable energy.



There have, however, been challenges, not least due to delays in impact assessments and licensing from the Norwegian government. These have raised concerns around the commercial viability of offshore wind in Norway's wider energy supply and the country's longer-term ability to become a major exporter of green energy amid intense competition from experienced players in Europe with already-built infrastructure.

Offshore innovation

Norway has been testing the waters for potential offshore wind turbine infrastructure, and the successful commissioning of the world's first industrialised offshore foundation TetraSpar Demonstrator is an exemplary example of this.

The 166 metre-tall floating wind turbine was assembled in a flat, open area at the Port of Grenaa in Denmark before being towed to the Marine Energy Test Centre (METCentre) off the coast of Norway using standard tugs and anchor handlers in July 2021. The quayside assembly was fast and robust as it did not require any special port facilities or welding. TetraSpar is now fully operational at a water depth of 200 metres.

The location is home to a number of innovative offshore development projects, including SeaTwirl, FLAGSHIP and Makani. It demonstrates Norway's commitment to renewable offshore energy and positions it as a leading player in the development of offshore technology, from planning and logistics to installation and maintenance.

'The METCentre gives offshore players the scope to test their technologies in a region renowned for high wind levels and deep water depths, ensuring their systems can be put through their paces ahead of wide-scale deployment,' said GAC Norway's Managing Director, Mikael Rodseth.

Heine Hovda, the company's Business Development Manager, adds: 'As an early member of Norwegian Offshore Wind, a specialised cluster of leading supply chain companies and developers for floating wind in the country, GAC Norway has been involved in the pre-construction surveys and installation of offshore wind turbines at the METCentre.

'We hope to continue drawing on our experience, knowledge and network to help our country achieve its goal of becoming a green energy powerhouse.'

Remaining flexible

For one of its key projects, the company provided a wide range of services for the mobilisation and demobilisation of vessels, obtaining the necessary licenses from government agencies, assisting with procurement and ship spares services, and facilitating crew changes.

Norway has long been a proponent of renewable and green energy, with hydropower playing a critical role in Norwegian energy production and industrial progress. Now, after decades as a major exporter of oil and gas to mainland Europe, it is looking to offshore wind in its drive to transition to cleaner energy sources.

Its neighbours Denmark, Germany, the Netherlands and the United Kingdom (UK) have made their mark by building offshore wind farms that continue to grow in size and scope. And a consortium of European Union countries has committed to developing 150 GW of offshore wind in the North Sea, to include innovative grid solutions such as hybrid offshore wind farms and energy islands.

With immediate access to the North Sea, Norway is geographically fit to tap into the region's vast offshore wind energy potential. In mid-2022, the government announced plans to expand its infrastructure to develop 30 GW of offshore wind capacity by 2040, double the country's total power production that year. Achieving such a feat, according to Norwegian Prime Minister Jonas Gahr Støre, would require more than 1,500 offshore wind turbines to be constructed and operated over the next two decades.

Almost 10 months after the announcement, in March this year, Norway opened its first offshore wind tenders for two areas on the Norwegian continental shelf: Sørilige Nordsjø II and Utsira Nord. Plans for the next round of licensing are scheduled in 2025.



Mikael Rodseth

As the major aspects of the project took place in early 2021, GAC Norway also had to contend with Covid-related challenges.

'The pandemic threw a major spanner in the works for this project. Travel restrictions and office closures meant that we had to adapt to changing regulations, locally and globally, while ensuring that all personnel involved were properly vaccinated, tested and taken care of, alongside submitting the necessary paperwork,' says Heine.

'It was an incredibly complex task dealing with about 100 changes to crew regulations during Covid-19, with new rules every week. Thankfully, the Group's long-standing experience in the energy sector meant that we were in a good position to stay flexible, come up with decisive actions to tackle the issues and support our customers through uncertainties.'

GAC Norway is the leading offshore ship agent in the North Sea and has wide experience supporting the country's offshore development projects. Further, drawing on the experience of the business gave it a deeper understanding of the complexities involved with wind farms.

In 2017, GAC UK supported the world's first floating wind farm, the Hywind Scotland project. Its turbines were built in Norway before being towed to the northeast of Scotland, with the project overseen by Norwegian firm Equinor, a major homegrown developer of renewable technology.

Being part of such projects enables the company to share expertise across offices to support upcoming turbines and offshore projects. And in Norway, that early involvement in offshore installation projects even before Oslo hands out its

first licence has put it a step ahead of the curve.

Reaching potential

Norway's ambition to become a green energy powerhouse appears to be picking up steam. Its long North Sea coastline offers great potential for sophisticated and innovative infrastructure to revolutionise its offshore wind capabilities.

However, the journey is not without its challenges, and offshore stakeholders, from regulatory authorities to supply chain stakeholders, must collaborate closely in this delicate balancing act. For the country to become a net exporter of offshore wind energy, it must start to look ahead and think about how it can build upon the experience it already has at home.

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