

#### WINTERSHALL DEA

## LONG-TERM COMMITMENT AND CLOSE PARTNERSHIP

#### Gas and oil production for Europe's energy supply

Norway is Europe's most important supplier of natural gas and oil. Every year, Germany imports every third cubic metre of its natural gas from Norway. Wintershall Dea, Germany's largest internationally active producer of natural gas and crude oil, has been active in Norway for almost 50 years. Wintershall Dea is among the largest gas producers on the Norwegian Continental Shelf (NCS). Today it has about 100 licences – around a quarter of them as operator – and a production volume of 170,000 barrels of oil equivalent per day (2022). At the same time, Wintershall Dea continues to work on transferring new discoveries on the shelf into the development and production phase. Norway is a key pillar for Wintershall Dea's CCS and hydrogen projects.

The company operates the subsea fields Nova, Vega and Maria, which are tied back to existing topside facilities on the shelf and the operated Dvalin field is progressing towards start-up. The company also has interest in producing fields and developments as a licence partner, including, Skarv, Njord, Aasta Hansteen, Snorre, Gjøa and Snøhvit.



Norway is one of the core regions for Wintershall Dea. The company is exploring and producing in the North Sea, Norwegian Sea and Barents Sea.

Factsheet Wintershall Dea February 2023

# EXPLORATION

## The search for gas and oil

Wintershall Dea holds about 50 promising exploration licences on the entire Norwegian Continental Shelf. Most of them are located in the Norwegian Sea and the North Sea. In the 2022 APA round (Awards in Predefined Areas) Wintershall Dea in Norway was awarded 11 licences, three as operator. The majority of the licences are situated in core areas for Wintershall Dea, most within tie-back distance of existing infrastructure allowing for a quick value creation with potential discoveries.



A template for subsea production is loaded onto a vessel.

# DEVELOPMENTS

## Dvalin North: Efficient subsea tieback

Wintershall Dea made the largest discovery on the Norwegian Continental Shelf in 2021 with the Dvalin North gas field. It is estimated to contain around 84 million barrels of oil equivalent and will be developed as a tie back to the Heidrun platform via the Dvalin field. Dvalin North is scheduled for planned start-up late 2026.



The heavy lifting vessel Saipem 7000 lifts the Dvalin gas treatment module onto the Heidrun platform.

## Dvalin: Subsea production of natural gas

The Dvalin gas field in the Norwegian Sea, about 15 kilometres northwest of the Heidrun field, is operated by Wintershall Dea. The field is progressing towards start-up and is expected to further strengthen Wintershall Dea's position as one of Norway's leading subsea operators. At plateau production, Dvalin is expected to produce enough gas each day to heat more than two million German households. The field's estimated reserves are around 113 million boe (as per the PDO, Plan for Development and Operations). Dvalin was developed using a subsea production system including a template on the seabed with four wells, connected to the Heidrun platform. The gas will be exported via the Polarled pipeline from Heidrun and transported to the Nyhamna gas terminal, before being exported to customers in Europe.

## PRODUCTION

### Nova: Subsea installation made in Norway

The Nova field, close to Gjøa in the northern North Sea is own-operated and came on stream in the summer of 2022. The development consists of two fourslot subsea templates tied back to the Gjøa host platform which is primarily fuelled with hydropower from shore, making Nova a low carbon-intensity field. The use of existing infrastructure enables smart extraction of the resources in the reservoir at 2,570 metres below sea level. The expected recoverable gross reserves are estimated at around 90 million barrels of oil equivalent.

### Maria: Subsea installation in the Norwegian Sea

Maria is the first field that Wintershall Dea has brought from discovery to production as operator in Norway. Having been discovered by Wintershall Dea in 2010, the PDO was approved in 2015 and the field came into production in December 2017. In 2022, Wintershall Dea submitted the PDO for Maria Phase 2. It involves the installation of a new six-slot template in the southern part of the field and is expected to add around 22 million barrels of oil equivalent to the total field reserves. Expected lifetime of the Maria field is until 2040.

The field is located in the Haltenbanken area in the southern Norwegian Sea, about 200 kilometres off the coast of Kristiansund. The field was developed with two subsea templates at a depth of 300 metres tied back to the nearby Kristin,

Heidrun and Åsgard B platforms. With this development concept, Wintershall Dea is using existing infrastructure to produce hydrocarbons from Maria, while also extending the lifetime of the surrounding fields.

> Drilling rig Scarabeo 8 in the Norwegian North Sea.



## Vega: Pioneering Subsea Field

Vega is an own-operated gas and condensate field located in the northern part of the North Sea, 28 kilometres west of the Gjøa facility and was Wintershall Dea's first Norwegian subsea field in production. The field is developed with three subsea templates tied back to a single host. The production is transported to and processed at Gjøa. Wintershall Dea completed a three well infill campaign in the first half of 2022. The campaign was safely completed below budget.

## Njord: New lease of life

Production on the Equinor-operated Njord oil field, which is 50 per cent owned by Wintershall Dea, started in 1997. After it was shut in for extensive onshore upgrades in 2016, production resumed in late 2022. The re-development project prolongs the life of the field for another 20 years. The majority of the future production from Njord will be gas. The field consists of Njord A, a floating integrated steel platform, and Njord B, a floating storage vessel (FSU).

## Aasta Hansteen: Norway's largest floating SPAR platform

With the production start of the Equinor-operated Aasta Hansteen gas field at the end of 2018, Wintershall Dea further strengthened its position as one of the largest producers in Norway. Aasta Hansteen is the deepest field in Norway, and one of the most technically advanced projects on the shelf. The operator together with the licence partners successfully developed the first floating SPAR platform in Norway – the largest of its kind in the world.

The field is making a significant contribution to Norway's overall annual gas production – further securing Europe's energy supply. Over its lifetime, Aasta Hansteen is forecast by the Norwegian Petroleum Directorate to deliver 58 billion standard cubic metres (Sm<sup>3</sup>) of natural gas and 0.6 billion Sm<sup>3</sup> of condensate (369 million barrels of oil equivalent). Wintershall Dea is the second largest shareholder in Aasta Hansteen with 24 per cent.

## Skarv: Major production from the Norwegian Sea

The Skarv field was discovered in 1998 and is located just south of the polar circle, 210 kilometres off the coast of Sandnessjøen. Wintershall Dea is one of the main owners of the field, and production from Skarv and the nearby reservoirs plays an important part of the company's diversified portfolio. The Skarv FPSO serves as a hub for other developments in the area, and two recently sanc-

tioned fields, Idun North and Alve North, will strengthen Wintershall Dea's position in the area. With several recent partner-operated discoveries in the Skarv-area, such as Storjo, Wintershall Dea is strengthening its strategy of participating in exploration wells near existing infrastructure in which the company has a stake.

The floating Njord A platform in the Norwegian Sea.



## Carbon Management and Hydrogen

Norway is a core region for the implementation of Wintershall Dea's Energy Transition Pathway and its ambitious plan to abate up to 30 million tonnes of CO<sub>2</sub> per year globally by 2040. Political and societal support for the technology, excellent infrastructure, a highly skilled industry base, and the strength of the German-Norwegian Energy Partnership make Norway an attractive focus for Wintershall Dea's plans.

Carbon Capture and Storage (CCS) and low carbon hydrogen from natural gas play a key role in Europe reaching its climate goals and net zero target. Wintershall Dea plans to take CO<sub>2</sub> from Europe's industrial heartland and safely store it in underground reservoirs in the Norwegian North Sea. The company also plans to use Norwegian natural gas to create low carbon hydrogen that will power the European industry of the future.

In 2022, Wintershall Dea was awarded its first CO<sub>2</sub> storage licence in Norway, Luna. It is located 120 kilometres west of Bergen and is estimated to hold a CO<sub>2</sub> storage injection capacity of up to five million tonnes per year. Further, Wintershall Dea and Equinor entered into an agreement to pursue the development of an extensive and safe Carbon Capture and Storage (CCS) value chain connecting continental European CO<sub>2</sub> emitters to offshore storage sites on the Norwegian Continental Shelf. A first phase is envisaged with transport by ship and later by piepline which could serve capacity of 20 to 40 million tonnes of CO<sub>2</sub> per year from 2037.

With the BlueHyNow project Wintershall Dea plans to use Norwegian natural gas to produce blue hydrogen and helps to shape the Wilhelmshaven energy hub. There, the company aims to produce over 200,000 cubic metres of hydrogen per hour.

## Wintershall Dea in Norway: at a glance

- Country entry: 1973
- Operated fields: Nova, Dvalin, Maria, Vega
- Key partner operated: Njord, Aasta Hansteen, Skarv, Gjøa, Edvard Grieg
- Production (2022): 170 mboe per day
- Licences: about 100
- Norway's hydrocarbon recoverable resources\*: 8.3 billion Sm<sup>3</sup>
- Norway's total recoverable resources\*: 15.86 billion Sm<sup>3</sup>, including quantities already produced
- Roughly half of Norway's total discovered resources lie in the North Sea, just under a third in the Norwegian Sea and about a fifth in the Barents Sea.
- Source: The Norwegian Petroleum Directorate Resource Report 2022 (https://www.npd.no/en/ facts/publications/reports/resource-report/ resource-report-2022/2-remaining-petroleumresources/)

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#### Questions?

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