



Independent Statistics & Analysis

U.S. Energy Information
Administration

Country Analysis Executive Summary: Norway

Last Updated: January 7, 2019

Overview

- Norway was the third-largest exporter of natural gas in the world after [Russia](#) and [Qatar](#) in 2017.
- In 2017, the petroleum and natural gas sector accounted for more than 40% of Norway's export revenues and more than 15% of the country's gross domestic product (GDP).¹
- Total investments in oil and natural gas extraction and pipeline transport in 2017 were Norwegian kroner (NOK) 146 billion (US \$18 billion), NOK 17 billion (US \$2 billion) lower than in 2016.

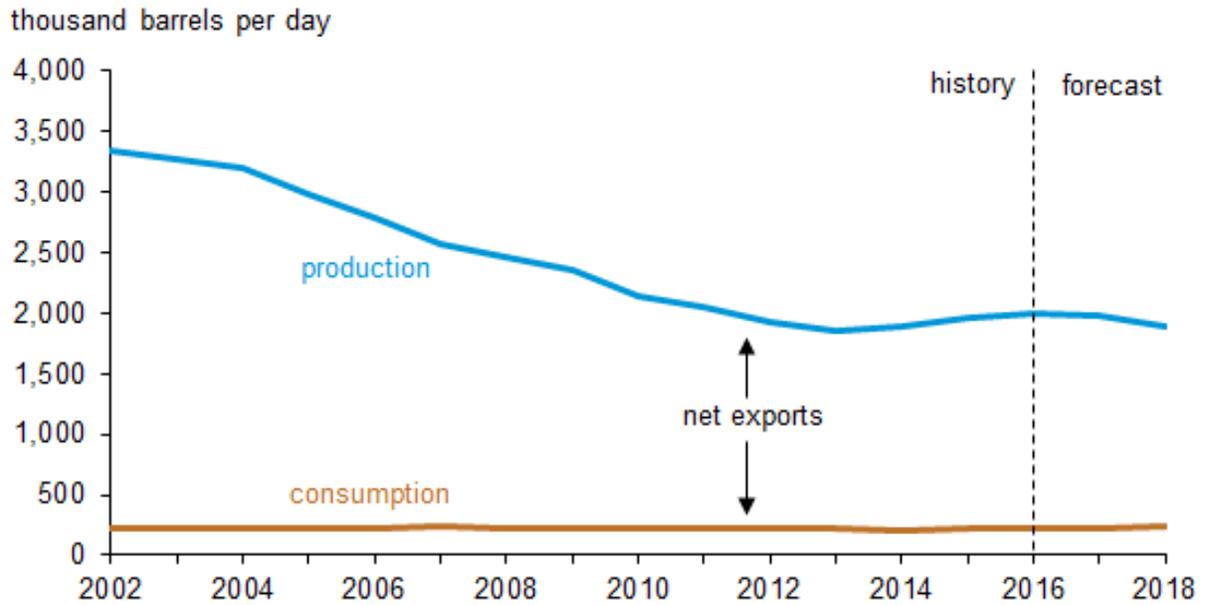
Petroleum and other liquids

- According to the *Oil & Gas Journal*, Norway had 6.37 billion barrels of proved crude oil reserves as of January 1, 2018, the largest oil reserves in Western Europe.²

Exploration and production

- In 2017, Norway produced about 1.98 million barrels per day (b/d) of petroleum and other liquids (Figure 1), 1.5% lower than in 2016.
- The National Petroleum Directorate expects that petroleum production will continue its slow decline through 2019 and then grow again in 2020 as the major Johan Sverdrup field ramps up production.³
- The three largest producing crude and condensate fields in 2017 were Troll (125,000 b/d), Ekofisk (108,000 b/d), and Grane (100,000 b/d).⁴ All three fields are located in the Norwegian portion of the North Sea, where most of Norway's current production occurs.
- As of August 2018, total investments in liquids exploration and production in 2019 are estimated to be more than 7% higher than investments in 2018.⁵ The higher levels of investment are the result of increased activity and costs.

Figure 1. Norway petroleum and other liquids production and consumption

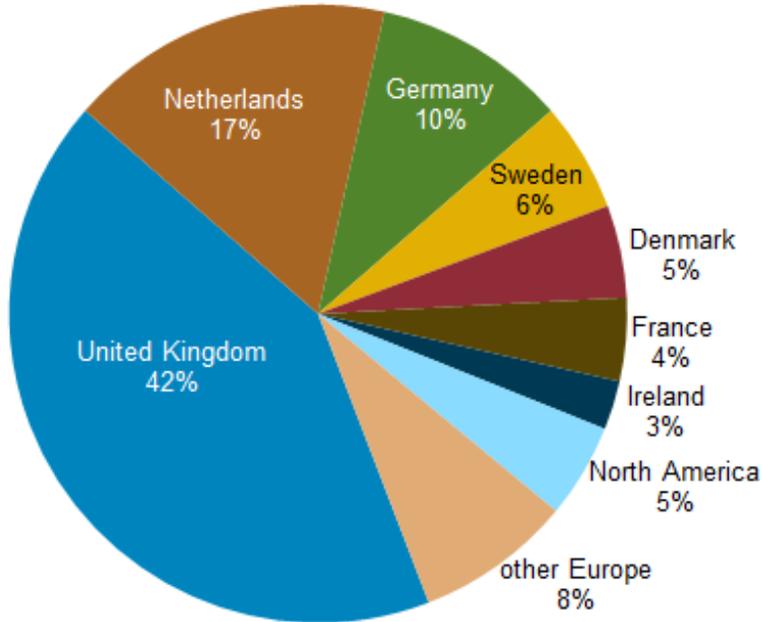


 Source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2018

Trade

- According to Statistics Norway, Norway exported an estimated 1.37 million b/d of crude oil in 2017, of which 95% went to European countries (Figure 2).⁶

Figure 2. Norway, crude oil exports by destination, 2017



Source: U.S. Energy Information Administration based on Statistics Norway

Refining

- As of the end of 2017, Norway had about 360,000 b/d of crude oil refining capacity.

Natural gas

- As of 2017, Norway was the world's third-largest exporter of natural gas after Russia and Qatar and the seventh-largest producer of dry natural gas.
- According to the *Oil & Gas Journal*, Norway had 63 trillion cubic feet (Tcf) of proved natural gas reserves as of January 1, 2018.⁷

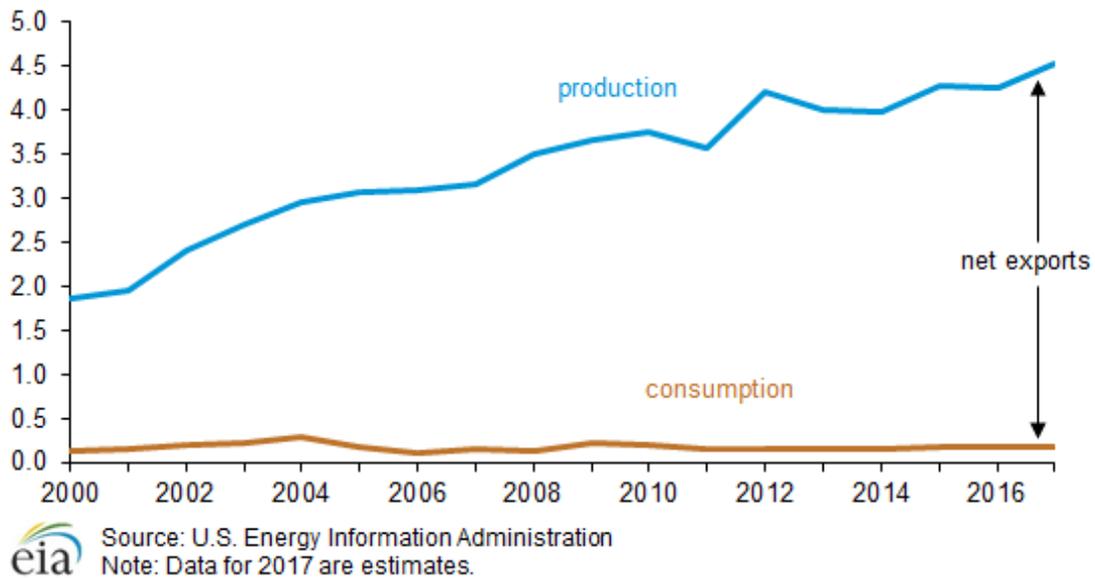
Exploration and production

- Norway produced 4.5 Tcf of dry natural gas in 2017, a significant increase from the 2016 level (Figure 3).
- Norway's largest producing natural gas field is Troll, which produced 1.3 Tcf in 2017, representing almost 30% of Norway's total natural gas production that year. The four next-largest producing fields in 2017 were Ormen Lange (0.57 Tcf), Åsgard (0.36 Tcf), Kvitebjørn (0.2 Tcf), and Gullfaks Sør (0.2 Tcf). These five fields accounted for 60% of Norway's total dry natural gas production in 2017.⁸
- Five new oil and natural gas fields in Norway began production in 2017: the Gina Krog, Flyndre, Sindre, Byrding, and Maria fields.⁹
- One field slated to come online in the fourth quarter of 2018 has significant natural gas reserves. The Aasta Hansteen field is located in the Norwegian Sea, north of the Arctic Circle and more than 180 miles from land. The development plan for the field included building a

nearly 300-mile undersea pipeline to transport natural gas from the field to the Nyhamna natural gas processing plant. Aasta Hansteen holds an estimated 1.7 Tcf of recoverable natural gas as well as a small volume of liquids.

- The Martin Linge field in the North Sea holds an estimated 0.7 Tcf of recoverable natural gas and about 66 million barrels of petroleum liquids and is expected to come online in 2019 following schedule delays. Equinor is the main shareholder and operator of both the Aasta Hansteen and the Martin Linge fields.

Figure 3. Norway dry natural gas production and consumption
trillion cubic feet



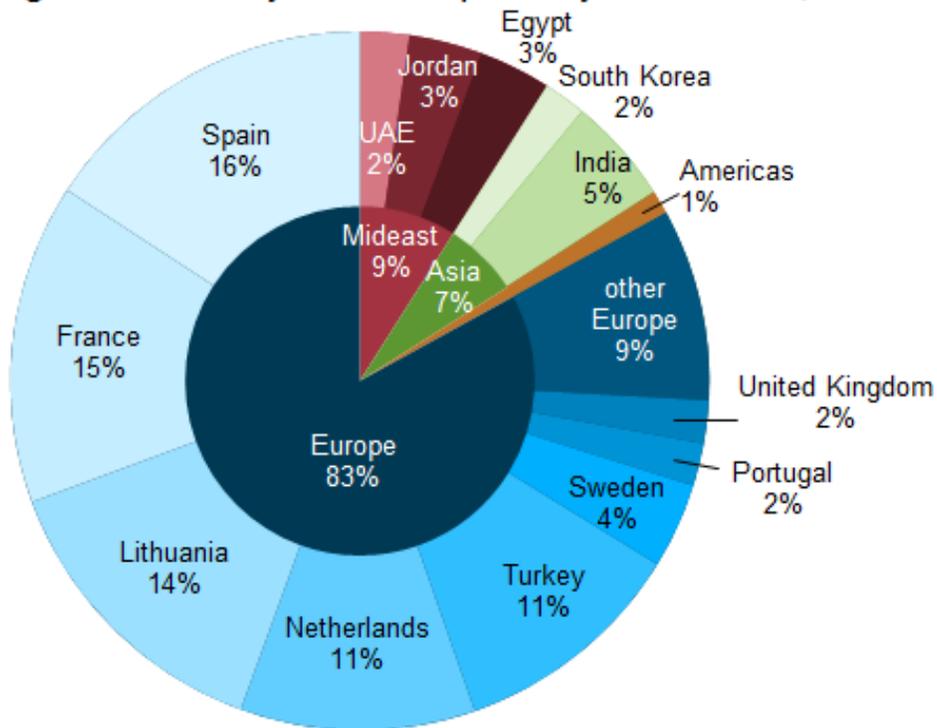
Trade

- Norway exported about 96% of its natural gas production in 2017, mostly to European Union (EU) countries via Norway’s extensive export pipeline infrastructure.

Liquefied natural gas

- Shipments of Norwegian LNG totaled approximately 194 billion cubic feet (Bcf) in 2017, down from 214 Bcf in 2016.¹⁰
- European countries received 83% of Norway’s LNG exports in 2017, most of which went to Spain, France, and Lithuania (Figure 4).¹¹

Figure 4. Norway's LNG exports by destination, 2017



Source: U.S. Energy Information Administration based on Statistics Norway

Hydrocarbon gas liquids

- As natural gas production has grown in Norway, the quantities of recovered natural gas plant liquids (NGPL) have increased significantly, from 124,000 b/d of oil equivalent in 2000 to 350,000 b/d of oil equivalent in 2017.¹²
- As of mid-2018, Ineos had eight specially built ethane carriers under long-term charter. The ships transport ethane to its Rafnes plant in Norway and to other plants in the North Sea from Sunoco Logistics' export terminal at Marcus Hook, Pennsylvania, and Enterprise Product Partners' terminal in Morgan's Point, Texas.

Electricity

- Electricity generation in Norway in 2016 was 149 billion kilowatthours (BkWh), of which 143 BkWh came from hydropower.
- According to Statistics Norway, total net consumption of electricity in 2016 was 123 BkWh, about 2.8% higher than in 2015.¹³
- In 2016, Norway imported almost 6 BkWh of electricity and exported 22 BkWh. Most of the imports and exports went to or came from Sweden. Trade with the Netherlands and Denmark accounted for most of the remaining imported and exported electricity, and only small amounts were traded with Finland and Russia.

Notes

- In response to stakeholder feedback, the U.S. Energy Information Administration has revised the format of the *Country Analysis Briefs*. As of December 2018, updated briefs are available in two complementary formats: the Country Analysis Executive Summary provides an overview of recent developments in a country's energy sector and the Background Reference provides historical context. Archived versions will remain available in the original format.
- Data presented in the text are the most recent available as of December 2018.
- Data are EIA estimates unless otherwise noted.

Endnotes

¹ Statistics Norway, National accounts and business cycles, [Annual national accounts 2016–2017](#), accessed August 1, 2018.

² *Oil & Gas Journal*, "Worldwide Look at Reserves and Production," (December 4, 2017) p. 20.

³ Norwegian Petroleum Directorate, [The shelf in 2017—Petroleum production](#), (January 11, 2018).

⁴ Norwegian Petroleum Directorate, [Fact Pages](#), Yearly Production—by field, accessed August 7, 2018.

⁵ Statistics Norway, [Investments in oil and gas, manufacturing, mining and electricity supply, Q2 2018](#), accessed August 7, 2018.

⁶ Statistics Norway, [External trade in goods](#), accessed August 8, 2018.

⁷ *Oil & Gas Journal*, "Worldwide Look at Reserves and Production," (December 4, 2017) p. 20.

⁸ Norwegian Petroleum Directorate, [Fact Pages](#), Monthly Production – by field, accessed August 8, 2018.

⁹ Norwegian Petroleum Directorate, [Development and Operations](#), Reserves in fields under development (pdo approved fields), accessed August 8, 2018.

¹⁰ Norwegian Petroleum, [Exports of Oil and Gas](#), Norwegian natural gas exports in 2013–2017 by first delivery point, accessed August 15, 2018.

¹¹ Statistics Norway, [External trade in goods](#), accessed August 10, 2018.

¹² Norwegian Petroleum Directorate, [Facts—Production](#), Annual Production, 1971-2018, accessed August 10, 2018.

¹³ Statistics Norway, [Electricity, 2016](#), Table 3: Generation, imports, exports and consumption of electricity (November 24, 2017).