

# Equinor Capital Markets Update – Breakout Sessions

6 February 2020

## High value growth on the NCS

**Arne Sigve Nylund, Executive Vice President Development & Production Norway**

**Tim Dodson, Executive Vice President Exploration**

- We have a very exciting outlook on the NCS but first, safety. We see a slightly negative trend from 2018 to 2019 but I can assure you that safety remains our first priority.
- We are now taking new measures to step up our safety efforts, including a broad collaboration with operators and suppliers. We believe this will improve our safety results.
- Over the next ten years we will deliver significant high value production.
- We see strong production growth on the NCS towards 2026 with the potential for record high production.
- High value barrels coming on stream, Johan Sverdrup being the most significant.
- Ahead of schedule and below cost, with a world class ramp-up so far, Sverdrup is currently producing more than 350 000 boe pr day (100%).
- In total, NCS will deliver more than 20 USD bn in cash flow for the period 2020-2023.
- After more than 40 years of production on the NCS, we continue to identify new, material, high value resources, both from increased recovery and exploration.
- IOR is adding highly profitable barrels. We are making solid progress towards our ambition of 60% oil recovery and 85% gas recovery. During the last year we have mapped more than half a billion B.O.E of increased recovery potential.
- With respect to exploration, our results in 2019 clearly demonstrate that we are continuously adding high value resources – resources that can be tied back to existing infrastructure, extending field life and further improving recovery.
- I have to say: it's been quite a busy start to a new decade.
- Just four weeks ago, we presented our new climate ambitions for our operated activities in Norway, officially opened the Johan Sverdrup field and presented our new ambitions and unit for Late life assets on the NCS.

- Driven by our positive view on the long-term production outlook, we aim to make the NCS the most carbon efficient oil and gas producer in the world.
- We will therefore invest in profitable measures to reduce GHG emissions by 40% within 2030, 70% within 2040 and near 0% within 2050.
- The 2030 ambition will require investments of around NOK 20 billion for Equinor.
- The new unit to extend life for Late life assets aims to realize the full value potential from our producing fields on the Norwegian continental shelf.
- Statfjord is the first asset transferred to the new unit. From the Statfjord field we are able to add 200% to the existing resource base, drill more than 100 new wells by 2030 and reduce costs by 25%.
- Life-time of our installations are extended as we add additional volumes from profitable increased oil and gas recovery initiatives, and exploration (ILX).
- Almost all our exploration in Norway is infrastructure led, focused on sweet-spots in prolific basins.
- The value proposition of these resources is extremely good, typically \$4 or more per barrel of NPV.
- New high-quality seismic data sets have triggered new waves of prospectivity around Oseberg and Troll, Norne and Johan Castberg to name a few.
- Together with the 9000 NCS wells that have been lifted to the cloud, we are now able to perform big data analytics and machine learning. This data driven approach and extremely rich proprietary data base is a real differentiator for Equinor.
- We have already identified and accessed several new opportunities on the NCS. I expect that we will identify many more drilling candidates for the years ahead.
- In summary, the NCS provides very good opportunities for long term value creation with low greenhouse gas emissions.

## High value international growth

Torgrim Reitan, Executive Vice President Development & Production International

Margareth Øvrum, Executive Vice President Development & Production Brazil

- We took important steps in 2019
- In the UK, we started up both Mariner and Utgard safely and successfully extended licenses in Angola Block 15 (2032) and 17 (2045).
- And by this increased the value in the portfolio by 2 billion dollars.
- We divested Eagle Ford in US Onshore, while increasing our share in Caesar Tonga in GOM, an area where we currently are drilling a high impact exploration well - Monument
- In Argentina we are building a broad energy company – onshore production in Vaca Muerta, 8 new offshore leases across various basins and within onshore wind and solar.
- This sets us up for growing with quality for many years.
- We expect our international business to grow steadily for a long time while we return 7 billion USD in cashflow after tax and investments over the next 4 years.
- This is growing with quality.
- In a 50-dollar environment, our international business still returns cash while growing.
- In a 65-dollar environment, we are returning 7 billion dollars.
- And in an 80-dollar environment, this number is likely to double.
- All this while we are investing heavily in Brazil.
- 50% of the projects coming on stream by 2026 are outside Norway.
- We will increase our share of operated production internationally and apply the best of Equinor.
- Our projects break-even is about 40 dollars per boe.
- Our carbon intensity will be reduced across the portfolio to <10kg CO2 per boe by 2025.
- We have also significantly reduced methane emissions in US onshore, using drone technology.
- The Bacalhau FPSO is an example of project optimization while reducing carbon emissions:

- It is based on industry standards and proven digitalization from Sverdrup to accelerate schedule and reduce cost
  - and designed for lower emissions by including combined cycles technology
  - this we intend to use for all projects internationally.
- We also use exactly the same well planning and execution, reducing significantly the well cost.
- The 2019 well break-even in Peregrino was around 11 USD per boe.
- We are systematically applying our IOR expertise from Norway by mapping and maturing recovery projects
  - So far, we have identified a potential of about 500mm boe from Peregrino and Roncador – Equinor share,
  - With reference to what Eldar said, this could be the other half of Sverdrup.
- We are progressing according to 2030 plan to deliver our ambitions for Brazil.
- Our Brazilian strategy is based on 4 pillars:
  1. The starting point is to deliver on our current portfolio
    - We will start-up Peregrino Phase II, Bacalhau and BM-C-33 delivering high value barrels.
    - Five high impact exploration wells are expected to be drilled in the next years. Araucaria, is being drilled as we speak.
  2. We are pursuing different alternatives to establish a gas value chain solution to secure flow assurance and value uplift
  3. We will shape our portfolio from a value and carbon point of view:
    - Peregrino is an example. We change the power generation from diesel to gas, reducing costs and emissions.
  4. We are maturing renewables opportunities to build a position as a power supplier, aligned with Pål's presentation.
- We are on plan and utilizing the best of Equinor.
- The US business has grown to nearly 400 thousand barrels per day with an average cash margin of 21 dollars per barrel.
- Our Gulf of Mexico production delivers very high-margin barrels - more than 40 dollars.
- The US Onshore has been a bumpy road for us, as you very well know

- BUT - we have improved and high graded our business significantly
- Our current onshore portfolio is contributing positively to our bottom line, and has done so the last couple of years
- And particularly in the Appalachia basin, we are producing some of the lowest cost, lowest carbon gas we have – less than 2 kg CO2 per barrel
- The flexibility in US onshore has proven very valuable
  - Recently, we decided to stop drilling operations for the rest of the year to reduce spending and defer production
  - This is in accordance with our “value over volume” strategy
  - We are ready to ramp up again later
  - As you know this part of our business will contribute with quite a lot in a higher price environment.
- So, the US, in total, has become an important cash generator for the company
- 5 of the 7 billion dollars from the international business comes from the US.

## Digitalisation and execution excellence

**Jannicke Nilsson, Chief Operating Officer**

**Anders Opedal, Executive Vice President Technology, Projects and Drilling**

- Our speed of implementation of new digital solutions has delivered a cashflow impact of more than 400 million USD, mainly due to earlier start-up of Johan Sverdrup and increased uptime on assets connected to our integrated operations centre.
- Today, we increase our improvement ambition by 50%, from 2 to 3 billion USD by
  - scaling broader across our global portfolio
  - reducing maintenance, drilling and facility cost
  - and implementing digital solutions faster than expected, and especially IOC.
- At IOC, we are streaming operational data live from 20 fields. By end of the year, we will stream data from all our global offshore fields, as well as the first onshore plants.
- We have thousands of machine learning models using our data. As an example, a few weeks ago, a turbine break-down at Norne was avoided by predicting failure before it happened.

- In parallel, we are scaling data driven operations, subsurface analytics and digital well delivery.
- Digital is truly transforming the way we collaborate and operate.
- At center and a foundation for value creation, we have OMNIA, our cloud-based data platform which enables us to analyse and share data in radical new ways.
- But the real value is unlocked when we combine our people, innovation and change capability to transform the way we work.
- We have developed an “App store”, similar as you have on your phones, with industrial applications like our Digital Twin and Digital Field worker.
- Using tablets, workers can access operational data anywhere and anytime - to make better and faster decisions at yard, during commissioning and in operations.
- At Johan Sverdrup, these digital solutions gave a one-month earlier start-up and faster production ramp-up.
- The subsurface data lake allows seamless collaboration when we combine well, seismic and drilling data in seconds, compared to hours previously. By using AI our teams find new opportunities faster and with higher quality.
- To deliver all these digital solutions, we innovate in new ways with the external ecosystem, both with traditional suppliers and new tech companies.
- I truly believe digital will enable much closer collaboration and safer and faster execution.
- Our ambition is to be the energy company that scales the fastest and radically changes the way we work.
- As Lars Christian said earlier today, we have a world class project and well portfolio.
- We are demonstrating outstanding well cost competitiveness according to external benchmarks.
- Rushmore shows that we have approximately 50% lower average cost per meter - compared to industry average.
- Last year, our new production wells had an average break-even of around 11 USD per barrel!
- And, the hunt for the perfect well continues.
- Our performance culture, standardization, and broad implementation of Automated drilling control will enable us to accelerate improvements within safety and efficiency - with a potential to reduce well cost by 15%.
- Last year, we demonstrated the world’s first automated directional drilling - offshore.

- It will be broadly implemented in 2020, increasing consistency and predictability in our drilling operations.
- And through digital well planning, we aim to reduce well planning time by 50%.
- According to Independent Project Analysis benchmark, we continue to perform better than industry average, and one of few achieving a step-change in project performance.
- Johan Sverdrup was delivered more than two months ahead of time, and 30% below budget.
- Last year, we delivered projects to an average break-even of around 30 USD per barrel.
- Our non-sanctioned portfolio is competitive and robust, and we are not done improving.
- We are implementing learnings from our best projects, like Sverdrup and Utgard.
- Developing and optimizing new concepts – both for oil and gas and renewables.
- We are scaling-up and implementing digital technology such as digital twin, underwater intervention drones and automated production optimisation.
- Technology will be a key enabler.
- Our remotely operated factory<sup>TM</sup> has been further matured - in collaboration with our suppliers.
- Seven main technologies are now ready for use.
- The benefit is that these technologies can be combined in different ways and used anywhere.
- We will always hunt for the perfect project!

## Driving the energy transition: Natural gas and low carbon solutions

Al Cook, Executive Vice President Global Strategy and Business Development

Irene Rummelhoff, Executive Vice President Marketing, Midstream and Processing

- We believe that the customers for our oil and gas, especially in Europe, will care more and more about the carbon intensity of the molecules they purchase.
- This slide examines our low carbon advantage in 3 ways
- First of all, as Eldar said, our upstream CO<sub>2</sub> intensity is already around half of the industry average. In 2019, it rose briefly to 9.5 kg / boe, but this was because of a temporary reduction in sales of gas from Troll and other fields.
- We have now accelerated our target for bringing our emissions down to 8kg / boe from 2030 to 2025.
- Second, we have near zero upstream methane emissions. The second graph shows that we have emissions in Norway that are a tiny fraction of the European average of 0.4%.
- Finally, the right-hand graph sets out how much of a carbon advantage we have over our competitors for the European gas market. If Europe needs gas, it can obtain it from Norway at just 20% of the carbon emissions of other piped gas and LNG sources.
- A strong starting point is great, but we aim to do much more to reach our climate ambitions
- Eldar ran through our package of new climate metrics. I would like to focus now on net carbon intensity. This is the broadest of our new ambitions, and arguably the one that has the most potential to shape the future of Equinor.
- Net carbon intensity is a metric that addresses both the need for energy and the need to reduce emissions. It describes the lifecycle emissions per unit of energy produced.
- The numerator includes scope 1, 2 and 3 emissions, net of “negative emissions” such as CCS for third parties and carbon sinks.
- The denominator includes all energy we produce, on an equity basis.
- We believe that the metric addresses the needs of society – more energy, fewer emissions.
- It also allows us to demonstrate that Equinor will develop in line with the Paris Agreement.
- We take 2020 as our baseline, with an intensity of 68 g CO<sub>2</sub>e/MJ, and will aim to reduce this by at least 50% by 2050.



- It gives us a number of levers to address climate change:
  - the composition, scale and operational efficiency of our oil and gas volumes
  - the amount of renewable energy we generate
  - how we use low carbon technologies such as CCS and hydrogen.
- We believe natural gas will play an important role in mitigating the climate change trends we are currently observing.
- In the short term as a substitute for coal in the power segment.
- Medium term as an enabler for more renewable energy.
- And longer term in the form of Hydrogen combined with CCS as an emission free gas that can re-use existing infra structure.
- As a global leader in CCS and the 2<sup>nd</sup> largest supplier of gas to Europe, we have, over some time now, developed a significant pipeline of CCS and Hydrogen project.
- The most mature is the Northern Lights CCS value chain in Norway where we intend to store CO<sub>2</sub> from two Norwegian industrial sources of CO<sub>2</sub>.
- It is however worth noting that we have received significant industry interest in utilizing the additional storage potential that will be made available for third party customers.
- With respect to Hydrogen we believe it will play a vital role in decarbonizing energy segments beyond power and industrial processes.
- So, we have projects aiming to substitute gas in flexible power and heat segments, to substitute diesel and fuel oil in the transport segments and to replace coal in industrial processes such as steel making.
- We expect that the ongoing global supply build-up on LNG will keep gas prices under pressure this year and also into the next year.
- However, we see significantly less new LNG entering the market as we head towards 2022. In combination with continued global gas demand growth, the global gas balance is therefore expected to gradually improve and contribute to a recovery in prices.
- In such a low-price environment it is however worth noting that over the last year we have achieved significant higher prices than the spot market and as Lars Christian said our cost of supply is less than 2USD/mmbtu, well below other sources of gas import to Europe.