Decarbonisation – role of oil and gas

Bjørn Otto Sverdrup
Senior vice president, Corporate sustainability
Venice February 7, 2019
We are Equinor

**OUR PURPOSE**

Turning natural resources into energy for people and progress for society

**OUR VISION**

Shaping the future of energy

**OUR STRATEGY**

Always safe,
High value,
Low carbon

A broad energy company
1972: 331 ppm of CO₂
January 2019: 412 ppm of CO₂
Energy systems are changing
Energy systems are changing

- Population
- Welfare
- Technology
- Behaviour
- Costs
- Regulations
- Climate change
Our climate roadmap:

**Reduce emissions**
- Reductions of 3 million tonnes
- Carbon intensity of 8 kg CO₂/boe

**Grow in new energy solutions**
- 15-20% of investments in 2030
- 25% of research funds by 2020

**Climate part of decision-making**
- Carbon price
- Portfolio stress-testing
- Transparent reporting
- Climate part of strategy, decision-making and incentives

---

1. We aim to achieve, by 2030, annual CO₂ emissions that are 3 million tonnes less than they would have been, had no reduction measures been implemented between 2017 and 2030.
World leading carbon efficient oil and gas operations
On track to meet ambitious new targets

**Upstream CO₂ Intensity**

kg CO₂ per boe

- 2014: 18
- 2015: 17
- 2016: 17
- 2017: 11
- 2020: 10
- 2030: 9

**Upstream flaring intensity**

Tonnes gas flared per thousand tonnes of hydrocarbon produced

- 2014: 15
- 2015: 14
- 2016: 13
- 2017: 4
- 2020: 3
- 2030: 2

Sources: IOGP/Equinor
What if we could run the world's newest large platform on renewables?
Natural gas and CCS: Key climate solutions

During energy production, gas emits only half of the CO₂ of coal.¹

A significant, reliable provider of natural gas to Europe

Gas provides stable base load to support new renewables

Decarbonising industries

Reduced CO₂ emissions by 25% since 2011¹

- Hybrid battery technology
- Electrification
- LNG and LPG as fuel

¹ Activity-based CO₂ emissions reduced by 25% and total emissions reduced by 35%
Long term potential: CCS as enabler for hydrogen production

- **CO₂ Capture**: Capture from industrial plants. Compressed and temporarily stored.
- **Transport**: Compressed CO₂ transported by ship.
- **Permanently stored CO₂**: Received and temporarily stored. Export via pipeline offshore. Permanently stored in reservoir (1000-2000 meters below sea bed).
- **H₂ - Hydrogen**: for power generation, for heat, for maritime transport.
15-20%
Share of investments in new energy solutions by 2030*

*Indicative
Dialogue, partnerships and collaboration