

Georg Oftedal,
experienced
advisor in oil &
gas, maritime and
renewable energy



AN EXCITING AND AMBITIOUS AGENDA FOR THE OIL AND GAS INDUSTRY POST COP21

“The world’s population will reach 10 billion by 2050 and require more energy, transportation solutions, food supply and access to technology. While this opens new growth opportunities, it also creates challenges”

In 2015, during the Paris Climate Conference, for the first time in 20 years, UN negotiations attempted to establish and initiate a legally binding universal agreement on climate change, with the prevailing goal of keeping global warming below 2 degrees Celsius. This article will address the role of the global oil and gas industry following the Paris agreement.

Fossil fuels account for 60 percent of primary energy demand, and the situation is likely to remain the same until as far as 2035¹. Platforms such as COP21 offer these industries, both within the private and public sector, an opportunity to demonstrate that they can work towards tackling climate change while protecting economic development and growth. But COP21 also emphasises international collaboration as a means of combating market distortions that result in unilateral actions by different nations². There are some widely shared assumptions that help assess the future of energy:

1. Over 1 billion people do not have

access to electricity today.

2. The world’s population will reach 10 billion by 2050 and require more energy, transportation solutions, food supply and access to technology. While this opens a tremendous level of new industrial growth opportunities, it also creates challenges.
3. Population growth and human activities lead to the increase of the earth’s temperature.
4. According to the IPCC Fifth Assessment Report (AR5) the increase of global mean surface temperature by the end of the 21st century is expected to be 2.6°C to 4.8°C, whilst the Arctic region will continue to warm more rapidly than the global mean³.

If we are to provide the world with the energy it demands and address climate change, the oil and gas industry should collaborate globally to create a roadmap to reduce the consumption of energy in the production phase, replace the current energy need in production

with renewable energy, and implement a low-emission vision with a carbon capture and storage strategy⁴. This roadmap should consist of the following elements on how to⁵:

- Strengthen measures and research that provide more efficient energy consumption in oil and gas production (eg: gas turbines, subsea solutions that reduce energy)
- Achieve more efficient drilling technology
- Reduce flaring and incorporate zero-emission solutions
- Consider for prospects whether it is possible or feasible to have electrification of rigs and offshore installations
- Implement a procurement strategy gradually promoting the introduction of low-emission ships (platform supply vessel, anchor handling tug supply vessel, seismic, subsea)
- Adapt hybrid solutions such as fuel cells, wave power, offshore wind and battery solutions
- Field development with low emission energy solutions
- Consider production of hydrogen from natural gas offshore and on land with and without CO₂ storage
- Collaborate internationally in building a commercially feasible carbon capture and storage (CCS) technology solution offshore (both pre and post combustion)
- Increase oil recovery without increased emissions.

A global roadmap addressing the above points will be the first step to incorporate COP21 ambitions and brace the global oil and gas industry for the exciting period ahead. However, this requires nations to be highly flexible and adaptive, whilst also meeting their energy and economic needs. The oil and gas industry is particularly sensitive because it contributes directly to the

currently increasing levels of carbon in the atmosphere. For countries that depend on these industries, continued investment may compromise their carbon emission reduction goals, while also compromising their ability to keep to the COP21 agreement. ●

1. Source: Reference: BP Energy Outlook 2016 <https://www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2016/bp-energy-outlook-2016.pdf>. Page 5
2. Source: UNFCCC COP 21 - Adoption of the Paris Agreement: <https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf>.

Article 74 (Capacity Building).

3. Source: United Nations Intergovernmental Panel on Climate Change, The Fifth Assessment Report (AR5), Synthesis Report Summary for Policymakers, 2015: https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf. Page 10 (Projected)
4. Author's opinion.
5. Source: Author's involvement in the work with the Roadmap for Climate and the Norwegian Continental Shelf published in August 2016. Executive summary in English: www.konkraft.no/wp-content/uploads/2016/08/Klimarapport_engelsk_komprimert_web.pdf

The Arctic region will continue to warm more rapidly than the global average

