

Innovation in Carbon Capture Utilization and Storage (CCUS)
CCUSを通じたイノベーション

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Currently, innovation is driven by the petroleum context. With a low price of the barrel, renewable energies become more competitive. To mitigate energy-related CO₂ emissions, we must optimize both Energy Efficiency and the Energy Mix. As we will still need fossil energy for decades to meet the need of a growing population, CCUS becomes mandatory. The Energy business must be reshaped to limit the global temperature rise to 2° C.

We explore innovations in:

- CO₂ capture,
- CO₂ EOR while improving CO₂ storage maximization,
- CO₂ transport, to develop integrated offers,
- CO₂ conversion into chemicals / materials, to develop a new economy, extracting value from CO₂.

The Oil and Gas Climate Initiative, made up of ten O&G companies, aims to:

- show sector leadership in mitigating the climate change,
- decrease the greenhouse gas emissions from the O&G industry's operations and the use of its products, while meeting world energy needs.

Total has long been committed to developing CCUS technology and expertise:

- in the Snøhvit and Sleipner fields,
- through the Lacq pilot project carried out between 2010 and 2016 (oxy-combustion capture followed by storage into a gas depleted reservoir).

Our CCUS R&D budget has tripled in two years. Our goal is to dedicate 10% of our global R&D budget to CCUS. New partnerships must be found. In 2017, we signed an agreement with Norway's Ministry of Petroleum & Energy, Shell and Statoil to join the Technology Centre in Mongstad. Today, we also develop solutions for other sectors, such as power generation or cement manufacturing.