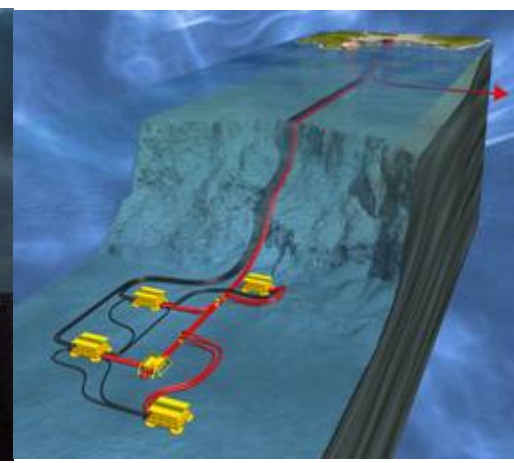
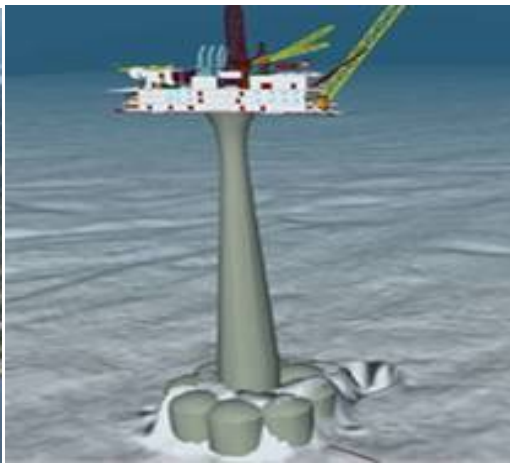


Ground-breaking industry and environment project

An industrial model for a CO₂ value chain in Norway



Geir Vollsæter

General Manager - CO₂ Assets

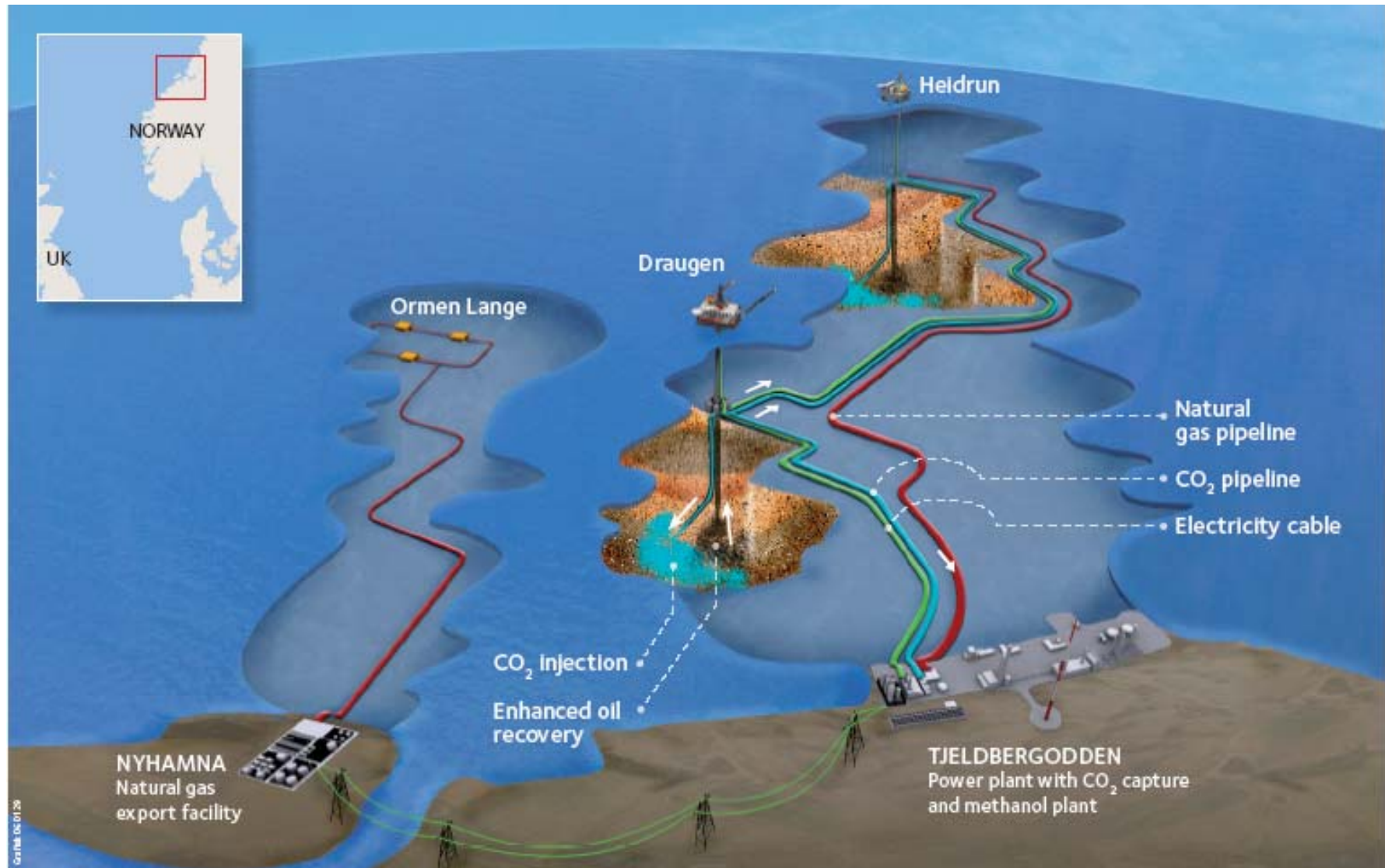
Shell International Renewables



Carbon Sequestration Leadership Forum. 3-5th of April 2006 – New Delhi



The industry model



An integrated value chain for electricity and CO₂

Power plant at Tjeldbergodden



- 860 MW gas power plant:
 - Serving offshore electricity demand
 - Secure regional power supply

CO₂ capture and transport



- CO₂ for offshore injection
 - Up to 2,5 million tonnes CO₂ injected annually

CO₂ for enhanced oil recovery/storage



- Enhanced oil recovery:
 - Draugen
 - Heidrun
 - Potentially other candidates



Dependent on gas power plant with carbon capture



One project – several players

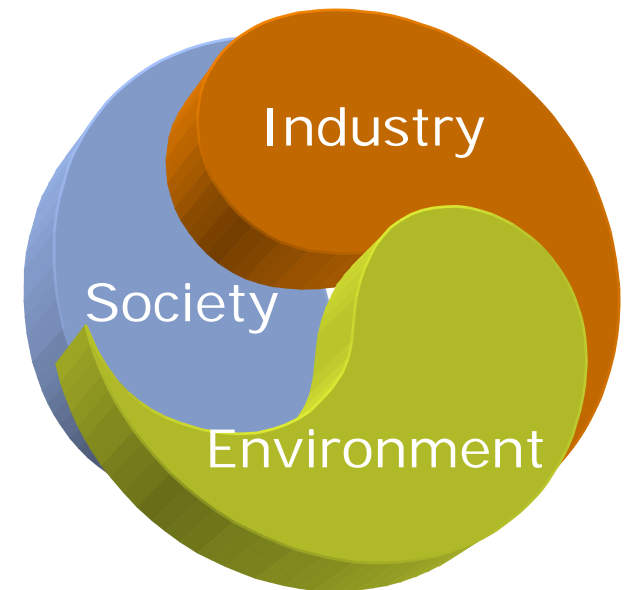
- Shell and Statoil will:
 - Engage in commercial and technological evaluations to realise the CO2 value chain
 - Invest in all parts of the chain
- A successful development requires:
 - A substantial economic contribution by the Norwegian authorities
 - Contribution by industrial players onshore and offshore



An industrial solution

A win-win-win for:

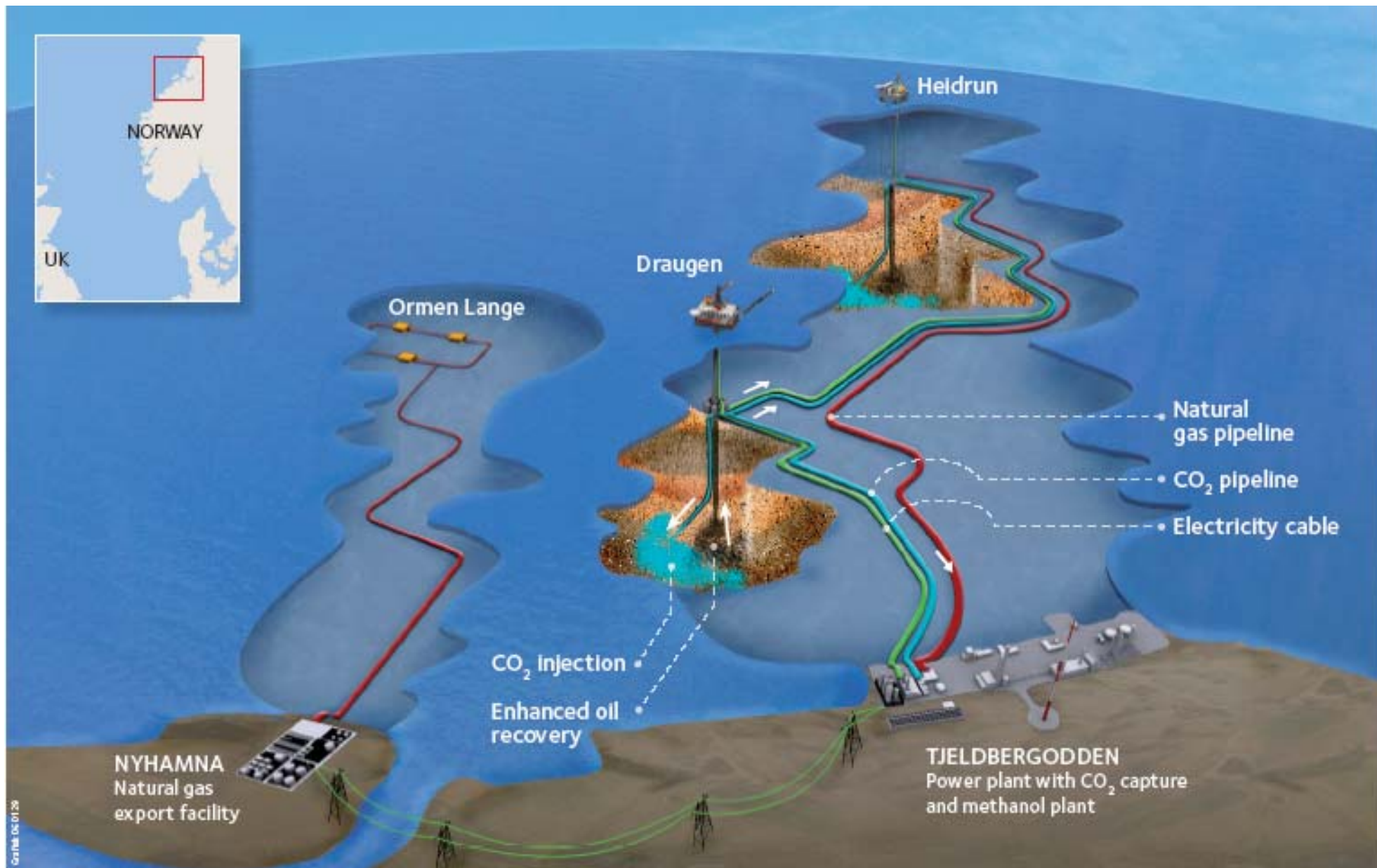
- Industry
 - Large scale CO₂ for EOR
 - Improved security of supply
- Environment
 - Reduction of CO₂ and NO_x emission through offshore electrification
 - Industrial utilisation of greener fossil fuels technologies with a global market potential
- Society
 - Prolonged field life and increased oil recovery
 - National electricity grid benefits



Execution plan

- Establish a joint project team between Shell and Statoil with the following milestones:
 - Feasibility study Ultimo 2006
 - Concept select Ultimo 2007
 - Value chain investment decision Ultimo 2008
- Provided a satisfactory commercial outcome:
 - Start-up power plant and electrification of Draugen 2010 – 2011
 - First CO₂ supply to Draugen for EOR 2011 – 2012





A greener solution - faster

- Meeting the climate challenge
- Reducing a regional power deficit
- Enhanced oil recovery
- Security of supply
- Value creation and industrial development

