



Persbericht

Press release

Corporations to find logistic solution for large-scale transport of CO₂ in concerted effort

Rotterdam, 17 March 2010 – The companies Vopak, Anthony Veder, Air Liquide and Gasunie signed an agreement today with Rotterdam Alderman Grashoff (responsible for the environment), who signed the agreement on behalf of the City of Rotterdam as partner of the Rotterdam Climate Initiative (RCI). This officially confirms the intention to contribute together towards the realization of the objective of the RCI: 50% reduction of CO₂ emissions compared with the levels of 1990. Large-scale capture and storage of CO₂ is an important step towards this goal. It will prevent CO₂ from being released into the atmosphere, and thus from impacting the climate.

The objective pursued by these companies in their collaborative action is to facilitate two things in the foreseeable future:

- temporary storage of CO₂ in a new transit hub to be set up; and
- transport to empty gas fields in the North Sea through pipelines or by ship.

According to the collaborating companies, this is not only a world's first, it is actually technically feasible.

5 process steps towards a world's first

1. CO₂ is captured from industrial emissions.
2. After its capture, 'pure' CO₂ gas is transported to the envisaged CO₂ hub in gaseous or liquid form.
3. From the hub, the gaseous CO₂ is transported to depleted gas fields through a pipeline, or it is condensed into a liquid at the hub and stored temporarily in reservoirs.
4. Liquefied CO₂ is transferred into special ocean-going vessels.
5. The ship takes the CO₂ to the injection point at sea, and links up with a redundant gas field for permanent storage.



Gemeente Rotterdam



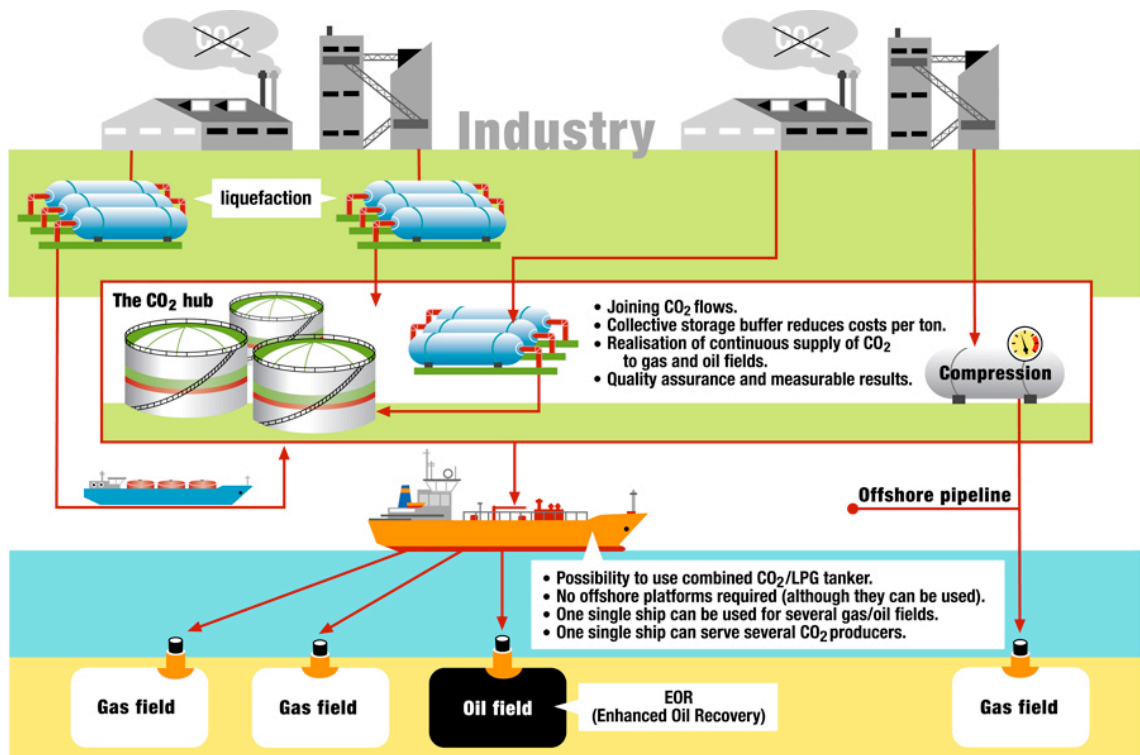
Improving the climate for the benefit of people, the environment, and the economy; that is the challenge confronted by the collective initiators: the Port of Rotterdam, the City of Rotterdam, employers' organization Deltalinqs, and DCMR Environmental Protection Agency Rijnmond. The Rotterdam Climate Initiative creates a movement in which government, organizations, companies, knowledge institutes, and citizens collaborate to achieve a 50% reduction of CO₂ emissions, adapt to climate change, and promote the economy in the Rotterdam region.

Expertise

The Rotterdam Climate Initiative is pleased with the initiative of these companies to pool their resources and expertise in order to study the feasibility of a cost-efficient form of transport and storage of CO₂.

- **Air Liquide** is global market leader in gases for industry, health and the environment. The Group combines many products and technologies for the development of valuable applications and services, not just for its customers but for the benefit of society as a whole. As part of its technologies, Air Liquide masters the entire CO₂ chain, ranging from purification and liquefaction to transport.
- **Royal Vopak NV** is global market leader in the field of independent storage of bulk liquids. Vopak tries to reach agreement with the port on a location to establish the CO₂ hub, to facilitate the setup of comprehensive and reliable services for all parties interested (third-party access).
- **Anthony Veder Group NV** is an expert in the transport of liquefied gases in gas tankers, including CO₂. Anthony Veder has developed a ship that is able to unload CO₂ offshore into gas fields and operational oil fields, independent of the existing infrastructure.
- **Gasunie** is a specialist in the field of gas infrastructure. The full focus of this company is on the infrastructure (pipes) between the emitters and the hub (or, if this works out more efficiently, the gas fields themselves).

CO₂ transport by ship: diagram



(Picture: Zone5300/RCI, in hi-res, available through RCI)

About the Rotterdam Climate Initiative

CCS is one of the key focus areas of the Rotterdam Climate Initiative, in addition to energy efficiency and sustainable energy. The objective is to achieve 50% reduction of CO₂ emissions by 2025 as compared with 1990, or, in other words: to improve

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the climate for the benefit of people, the environment and the economy. The initiators are the Port of Rotterdam, the City of Rotterdam, employers' organization Deltalinqs and DCMR Environmental Protection Agency Rijnmond. Deltalinqs is the RCI partner who agreed to take care of the preparations for the signing ceremony as representative of the industrial community.

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