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Monitoring issues with CCS in the ETS

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CCS in Norway

- Two existing projects, Snøhvit and Sleipner
- Three possible new projects
  - Cement plant
  - Waste to energy plant
  - Ammonia plant

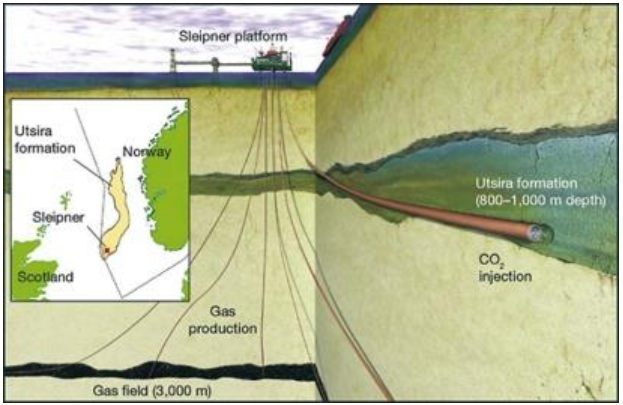

Illustration: http://infotore.com

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Transport of CO_2

- All the proposed new CCS-projects rely on CO_2 transport by ship, but the MRR does not give a sufficient framework for regulation and monitoring of transport of liquefied CO_2
  - Base requirement: Measurement-based monitoring methodology

➢ The MRR (Annex IV) and Annex 1 of the Directive should be amended to include all relevant forms of transport of CO_2 for permanent storage. The option of using a calculation-based monitoring methodology should be included on an equal footing

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Negative emissions

- Two of the three proposed CCS-projects in Norway will capture CO_2 from both fossil and biogenic sources
- There is currently no setup in the ETS to account for carbon captured and stored from biogenic sources
- MRR (Annex IV) does not provide a solution for handling the split between captured CO_2 from biogenic and fossil sources

➢ MRR, as well as ETS Directive, should be a amended in such a way that negative emissions are accounted for

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Venting of uncombusted separated CO_2

- The two existing CCS-projects in Norway store 1.7 million tonnes of CO_2 separated from natural gas
- The ETS covers these emissions only when CCS is applied, thus creating a disincentive to apply CCS on such emissions sources

➢ Annex 1 of ETS Directive should be amended to include venting of CO_2 that has been separated from natural gas

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