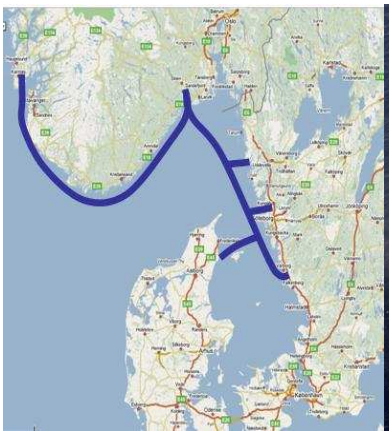
Information concerning the planning of the Skanled gas pipeline

June 2007



Information concerning the planning of Skanled gas pipeline

This document is a summary attachment to “Informasjon om Skanled rørledningsprosjekt for notifisering etter Esbo (Espoo) konvensjonen”

Introduction

A number of industry and energy companies are planning for an offshore gas transmission pipeline from Kårstö on the Norwegian west coast to Rafnes in the eastern part of Norway and further on to Sweden and Denmark. The project is managed by the state owned gas pipeline operator Gassco A/S.

Background

The industry has expressed the need of safe, stable, competitive long term feedstock and energy supply to a number of sites. The increased demands of gas will primarily substitute heavy oils thus contributing to a reduction of green house gases.

Increased domestic use of natural gas has also been a requirement in several petitions to the Government and Storting in Norway.

In Sweden, as in Norway, is it important for the industry to have safe, stable, competitive long term feedstock and energy supply. Examples are the petrochemical industries Preem Petroleum and Perstorp Oxo situated on the Swedish west coast.

The Danish gas fields offshore Jutland have for a number of years delivered gas to the Danish domestic market as well as gas to Sweden and Germany. The gas production will decline in the coming years. The Skanled project will then make up for the reduction and contribute to continued safe supply to the Danish domestic and export markets.

Participating companies

As of June 2007, the following companies had signed “letters of intent” expressing their intention to participate as investors in the pipeline or as “shippers” and users of gas.

Users	**Investors**
Kerling (Hydro Polymers)	Skagerack Energi
Borealis	Östfold Energi
Yara	Hafslund
Statoil	Agder Energi
E.ON Ruhrgas	E.ON Ruhrgas
Göteborg Energi	Göteborg Energi
Preem Petroleum	Swedegas
Perstorp Oxo	Preem Petroleum
SIGC *)	Energinet.dk
Energinet.dk	PGNiG
PGNiG	

*) Swedish Industrial Gas Consortium: (Kemira, Trelleborg, Höganäs, Pilkington, Öresundskraft och Stora Enzo)

The project is managed by the Norwegian gas pipeline operator with the Swedish and Danish operators Swedegas AB and Energinet.dk participating as partners.

Gassco is fully owned by the Norwegian state and is responsible for operation of the gas transmission network from Norway to Europe.

Swedegas is owned by E.ON Ruhrgas, DONG Energy, Fortum Heat and Gas and Statoil. Swedegas offers safe and reliable transport of gas and is active in the development of the Swedish natural gas market.

Energinet.dk is fully owned by the Danish state and is responsible for the Danish high pressure gas network as well as for the Danish high voltage electricity supply grid.

The Skanled project requires authority permits in all three countries Norway, Sweden and Denmark. All three countries stipulate a demand of an Environmental Impact Assessment. A brief summary of the offshore construction activities are listed below.

The national authority approval of the project in all three countries will be carried out until end of 2009. Simultaneously, a notification according to the Esbo convention is carried out.

The construction work will mainly be carried out in 2010-11 with commissioning in 2012.

Technical description

The Skanled transport system consists of four parts:

1. A 24 or 26 inch gas pipeline from Kårstö to Rafnes
2. Ethane injection facilities at Kårstö
3. Ethane extraction facilities at Rafnes
4. A 20 or 22 inch gas pipeline from Rafnes with branches to pressure reduction stations in Sweden and Denmark

Up to 20 MSm3/day natural gas is planned to be transported from Kårstö to Rafnes. Ethane is injected into the natural gas at Kårstö and transported with the natural gas to Rafnes. The Ethane is separated and extracted from the gas at Rafnes.

The separation facilities onshore at Rafnes and the installations downstream the reduction stations in Sweden and Denmark are not part of the project and not subject to the notification according to the Esbo convention.

Installation of the pipeline offshore may require excavation and rock blasting in certain areas with difficult topography. Gravel fill-up may also be required to support or cover the pipeline in certain areas.

The pipeline routing will be chosen in order to minimize the environmental impact of the construction activities to locally and temporary effects. While in operation, Skanled will have very limited impact on the environment.

The pipeline is designed for 50 years of operation but is expected to be kept fit for operation longer than that. Decommissioning of the pipeline will take place according to the rules relevant at that time in the future.

Corridors and routing alternatives including the no-action alternative

The corridors towards Sweden/Denmark have been determined from studies confirming their technical feasibility. Data from earlier sea bottom surveys, geotechnical information as well as information from marine authorities and institutes have been used as input. The corridors are wide enough to allow for necessary adjustments depending on findings. Further studies and engineering, including extensive sea bottom surveying, are necessary to find the ultimate routing.

The no-action alternative, meaning that no pipeline will be constructed, will also be studied. For example, the consequences for the industries and the environment in case no substitution of heavier oil with natural gas will take place, will be studied.

The main Information Document contains a description of the environment concerned and maps showing the various areas of interest in relation to the corridors being considered. Further is an overview of the framework for the national and Esbo Environmental Impact Assessments to be carried out.

Following subjects will be studied in the Environmental Impact Assessment

- Plans for construction and operation of the pipeline – a description of the activities and their purpose
- Important general environmental impact of the proposed activities
- Description of the environmental that will be effected and methods for investigations
- Consequences on the environment during construction and operation of the pipeline
- Consequences on fishing and fish farming during construction and operation of the pipeline
- Consequences for shipping
- Protective measures, activities to prevent impact on the environment
- Socioeconomic consequences
- Evaluation of alternatives including the no-action alternative
- Gaps of knowledge and assumptions made during the evaluations

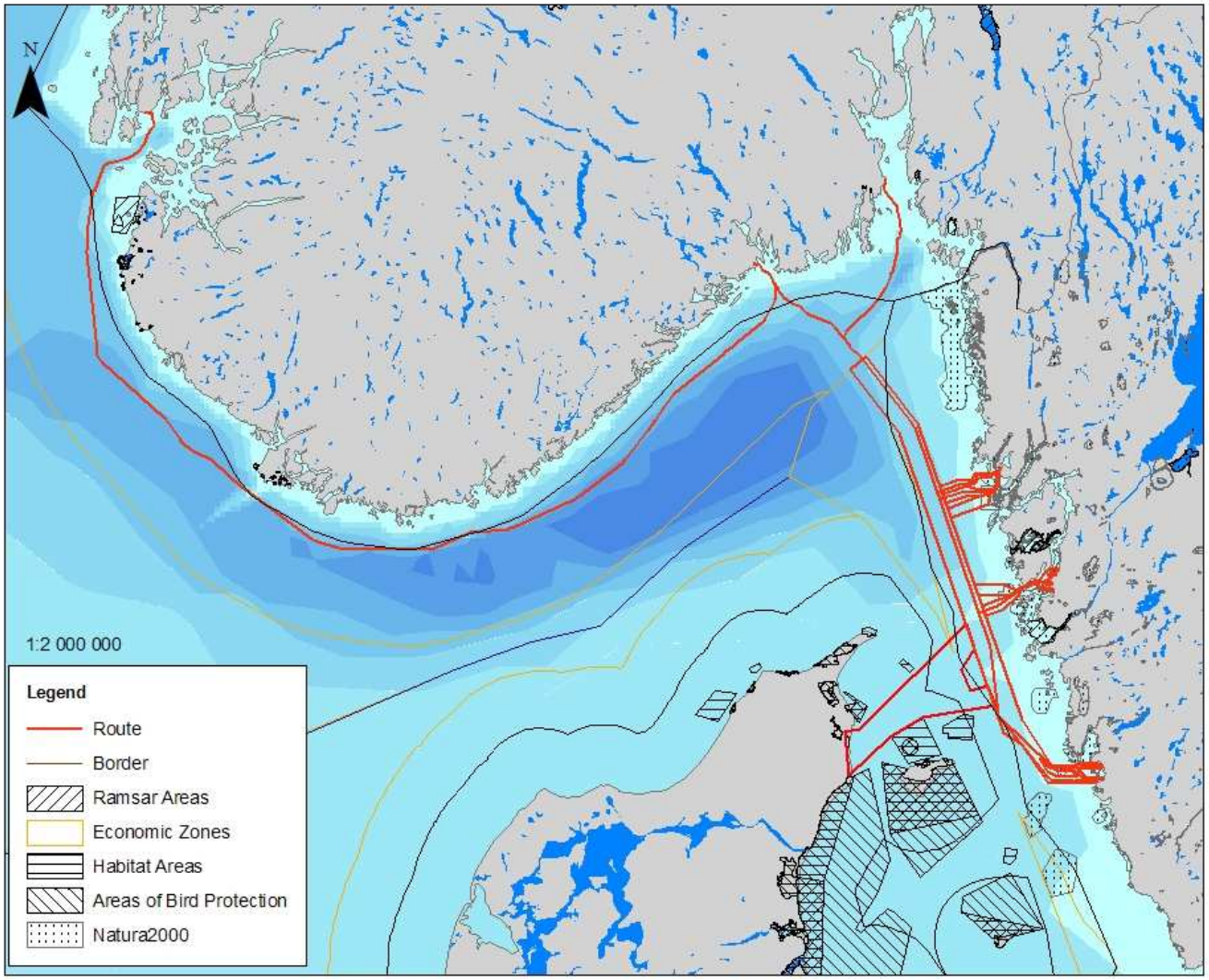


Figure – Protected areas close to the alternative routes for the pipeline within the EEZ of the three states and investigations areas in Sweden and Denmark.