



NORWEGIAN MINISTRY OF
THE ENVIRONMENT

**Norwegian National Allocation Plan
for the Emissions Trading System
in 2008–2012**

**Revisions in response to ESA's
decision of 16 July 2008**

December 2008

Revisions in Norwegian allocation plan for the emissions trading system in 2008-2012 in response to ESA's decision of 16 July 2008

1. BACKGROUND

Norway submitted its allocation plan to the EFTA Surveillance Authority (ESA) 28 March 2008. Supplementary information was submitted 30 May 2008. ESA assessed the plan and in its decision 16 July 2008 requested that Norway make certain amendments to the plan to bring it in line with all relevant provisions of the EEA Agreement.

The main elements of the plan remain as described in the original document. This document primarily specifies the amendments to the trading system in order to accommodate ESA's decision of 16 July. In parallel to the issuance of these revisions to the plan, a legal proposal with the corresponding content is sent to the Storting for its endorsement. The content of the legal proposal has been on a public hearing. The revisions to the plan described in this document are conditional on the Storting's endorsement of the proposed amendments to the Emissions Trading Act.

The environmental ambition and the scope of the trading system are not affected by the proposed amendments. The total allocation of allowances will be at least 20% below the installations' emissions in 2005. Almost half of the total quantity of allowances will be sold at market conditions. The petroleum sector, representing about 60 % of emissions in the scheme, will not be allocated any allowances free of charge. Allocation based on historic emissions in the period 1998-2001 remains the main principle for allocation free of charge to land-based industry. There will also still be a reserve for highly efficient combined heat and power installations.

ESA had three main objections to the plan of 28 March:

- The rules in the plan give no allocation to installations that were established after 2001, but had a greenhouse gas emissions permit as of 28 March 2008. This represents undue discrimination compared to installations established earlier
- An exclusive reserve for gas-fired power plants based on carbon capture and storage (CCS) technology could not be accepted
- The date defining existing installations and new entrants should be 28 March 2008 (submission of the NAP) and not the date of the entry into force of the amended law (1 July 2007).

This document focuses on the allocation to "new existing" installations not covered by the Act Relating to CO₂ Tax in the Petroleum Activity on the Continental Shelf, i.e. land based installations without emissions prior to 2002, holding a complete greenhouse gas emission permit (i.e. a permit to operate in the emissions trading scheme) by 28 March

2008. However, the proposed amendments to the Emissions Trading Act and consequently the plan also reflect necessary changes regarding the reserve and the definition of a new entrant.

A total of 10 installations can be categorized as “new existing”. In comparison and based on the applications for permits and allowances, it appears that 69 existing installations had relevant emissions in the base period and could receive allowances on that basis. After adoption of the proposed amendments, the “new existing” installations will have the right to be allocated allowances free of charge following the new rules described in this document. Six of these installations had operations for one or more full calendar years before the cut off date 28 March 2008. Three installations started their operations in 2007 and one is a reserve power plant.

To avoid undue discrimination between (1) “new existing” installations which are allocated allowances on the basis of more updated emissions data and (2) installations with emissions in the 1998-2001 base period, installations in the latter category that have significantly increased emissions due to significant changes in the nature and scope of their activities, have the right to increased allocation reflecting the extension. Based on the current knowledge of the Norwegian Pollution Control Authority (Statens Forurensningstilsyn - SFT), 5-6 installations of the 69 that existed before 2002 appear to fall in this category. There may also be other installations that could be affected by this rule.

2. AMENDMENTS TO THE PRINCIPLES FOR ALLOCATION

In order to avoid possible discriminatory effects of the allocation plan that was notified to ESA 28 March 2008, and following a public consultation, the Ministry has proposed the following amendments to the Emissions Trading Act to the Storting. The amendments are designed to remedy the concerns expressed by ESA in its decision of 16 July 2008, with regard to existing installations that were established after 2001 or installations that had significantly increased emissions due to significant changes in the nature and scope of their activities thereafter, but had a greenhouse gas emissions permit as of 28 March 2008.

“New existing” installations will primarily be allocated allowances free of charge based on their average historic emissions in the years in which they were in operation during the 2002-2007 period. 6 installations fall in this category. The allocation of allowances for free to these 6 installations is estimated to total about 20 000 tons/year. These installations are Lyse gass, Hamar-regionen fjernvarme, Hønefoss fjernvarme, Østfold energy, BKK produksjon and Gasnor.

Allocation to *installations (“new existing” or extensions) without a full calendar year of operation* during the 2002-2007 period (i.e. in place between 1 January 2007 and 28 March 2008), will be based on benchmarks (see below). 3 installations (Naturkraft

Kårstø, NorFraKalk and Ormen Lange) in sum will get an allocation of about 540 000 t/year.

Installations with emissions during the 1998-2001 period which significantly increased their emissions after 2001 based on significant extensions, will be allocated allowances based on their average historic emissions during the 2002-2007 period, calculated from the year in which the extensions came into operation. It is estimated that 5-6 installations may get about 450 000 t/year in addition compared to their allocation based on 1998-2001 figures. Installations that may qualify are Maxit Leca at Rælingen, Gassco's plants at Kårstø and Kollsnes as well as the petroleum refineries at Mongstad and Slagen. The SFT will define whether these and possibly others will meet the criteria set in the Emissions Trading Act.

Installations with emissions during the 1998-2001 period which significantly increased their emissions after 2001 based on significant extensions, but where the extension has been in operation for less than a full calendar year before 28 March 2008, can be allocated allowances on the basis of the benchmarks presented below. Among the installations that had emissions during the 1998-2001 period, the Ministry of the Environment and the SFT have so far not identified any extensions that have come into operation in the period 1 January 2007 to 28 March 2008.

Compliance factors for allocation based on historic emissions will be 0.87 for energy related emissions and 1 for process related emissions. Process related emissions have not been identified in installations eligible for allocation on the basis of historic emissions after 2001.

A reserve limited to highly efficient combined heat and power plants is established and limited to 4.2 Mt for the whole period. There are no changes to the rules for allocation to highly efficient combined heat and power plants compared to those presented in the NAP submitted 28 March 2008 and reflected in the benchmarks below. Installations such as Energiverk Mongstad and Industrikraft Midt-Norge (a planned power plant in Skogn) would be defined as new installations (i.e. have not received complete greenhouse gas emission permits before the NAP was notified 28 March 2008) and would have to apply and qualify for allocation from the reserve in order to receive allowances free of charge according to the benchmarks.

3. EXPLANATION OF THE BENCHMARKS

3.1 *Benchmarks according to type of activity or product*

The benchmark for *electricity* is set at 354 tonnes CO₂/GWh. This figure is derived from the level of emissions from efficient CCGT plants and was already in the plan of 28 March 2008 for use under the reserve.

The benchmark for *heat* is set at 180 tonnes CO₂/GWh and was also in the original plan. This level is stricter than what can be achieved using only fossil fuels. For simplicity reasons, the government has chosen to use only one benchmark for heat. The level of the benchmark must be compared with the allocation principle for installations established or extended before 2007. Thus, it should be seen in light of the situation that some installations have the possibility to use renewables and electricity for heat production. Indeed, several installations used such sources for producing heat in the base period 1998-2001, leading both to lower emissions and lower allocation to those installations than if they had only used fossil fuels. A higher benchmark, reflecting emissions as if the heat were produced only through use of fossil fuels, could systematically give higher allocation to installations that receive allowances based on the benchmarks than to the groups being allocated on the basis of historical emissions.

The government sees no justification for fuel specific benchmarks, which could imply higher allocation to those installations which emit more from using oil or coal than to those who use natural gas.

The benchmark for *use of limestone* (0.4258 ton CO₂/ton limestone) in lime production is derived from a chemical relation in the process and should reflect the conditions in lime production, including NorFraKalk's installation. It is not seen as feasible to avoid these process emissions in the 2008-2012 period.

Ormen Lange is a natural gas terminal. The nature of the operations makes a *load factor* necessary. It is uncertain how much the two 40 MW furnaces will be used. The load factor of 0.55 is believed to be in the low end of the probability range.

3.2 *Operating hours and flaring*

For most installations, the *benchmark for operating hours is proposed to be 7 500 hours*. The installations to which this benchmark is expected to be applied are industrial plants that would not be much exposed to seasonal or shorter term variations in demand or prices on the input factors in production. The benchmark of 7 500 hours still reflects that there will be stops or reduced use of the capacity for technical and economical reasons which may occur in a 5 year period. Similar fluctuations are reflected in the historical base periods used for other installations established before 2007.

The benchmark for operating hours for *power plants based on fossil fuels that are not highly efficient combined heat and power plants* is set to 2 500 hours. This benchmark is expected to apply only to the gas fired power plant Kårstø, which came into operation in 2007. After the test period the plant has only been in production a short period around the last turn of year. This must be seen in relation to the market conditions, with relatively low prices on electricity in Southern Norway and high gas prices. The extent to which the plant will operate is determined by the owners on commercial grounds. It can be expected that the installation will remain out of operation for long periods the nearest years. It can, however, not be ruled out that prices will be such that the power production from the plant could be substantial during what remains of the 2008-2012

period. All factors taken into account, the government has proposed that the benchmark for power plants based on fossil fuels that are not highly efficient combined heat and power plants is set to 2 500 operating hours/year for the 2008-2012 period.

Allocation related to *flaring* shall be based on the minimum emissions needed for safety reasons. The pollution authorities will do an assessment of this need on the basis of an application from the installation, and base the allocation on this assessment.

The benchmark for operating hours for *back up capacity* will be 0. Back up capacity includes reserve power plants. Reserve power plants will not be used in "regular" electricity production, only for emergency situations. There are no comparable reserve power plants to Nyhamna and Tjeldbergodden established before 2002. These plants are owned by Statnett; the operator of the grid. Statnett is not a commercial participant in the electricity market. In some of the other installations there may be diesel engines or other back up capacity only intended for emergency use or special situations (start up etc.) which will not be granted allowances.

4. COMPLIANCE FACTORS

The compliance factor is used to create scarcity in the allocation. The government has chosen to use few compliance factors to keep the system relatively simple.

For the 1998-2001 base period, 0.87 is used for energy related emissions and 1 is used for process related emissions. In many European countries compliance factors have also been used to ensure that the allocation is within the limits set by the total quantity of allowances approved by the EU Commission. In practice this motivation does not apply to Norway, since the total quantity of allowances is considerably higher than emissions in land based industries that are eligible for an allocation free of charge.

Compliance factors can differ between sectors and types of emissions (energy/process). The rationale for a factor of 1 for process related emissions in the Norwegian system is that these emissions are unavoidable when producing cement and lime, which are the main process emissions in Norway within the mandatory scope of the Directive.

Compliance factors of 0.87 and 1 is proposed for energy and process related emissions respectively for installations that are established or extended and had a whole calendar year of operation and thus get an allocation based on historic figures. The Ministry has not identified process emissions from the possible applicants in this category. For the benchmark allocation, compliance factors of 0.85 and 1 are proposed for energy and process related emissions respectively. One installation eligible for benchmark allocation is identified as having process emissions.

Attachment:

Benchmarks used for allocation for installations established or extended after 2006 and from the reserve for highly efficient CHPs.

Compliance factor:

0.85 for energy related emissions

1 for process related emissions

Benchmarks related to production activities:

354 tons CO₂/GWh for electricity production

180 tons CO₂/GWh for heat production

0.4258 ton CO₂/ton limestone used

Benchmark for operating hours are:

7 500 hours/year (also applying to highly efficient combined heat and power plants)

2 500 hours for power plants based on fossil fuels that are not highly efficient combined heat and power plants

0 for reserve power plants and other back-up capacity

Benchmark for load factor:

0.55 for natural gas terminals

Flaring will be allocated allowances based on minimum needs from a safety perspective. The SFT will decide the individual allocations.

A provision for other benchmarks is established if applications for allowances should provide a need. Bioenergy and load factors in district heating are candidates, but may not be relevant if there are no installations that qualify for benchmark allocation.