

Case No: 61272
Event No: 407448
Dec. No: 23/07/COL

EFTA SURVEILLANCE AUTHORITY DECISION

of 14 February 2007

on the prolonged and amended scheme for reducing nitrogen oxide (NO_x) emissions from vessels in the Norwegian Shipping Register

(Norway)

THE EFTA SURVEILLANCE AUTHORITY¹,

Having regard to the Agreement on the European Economic Area², in particular to Articles 61 to 63 and Protocol 26 thereof,

Having regard to the Agreement between the EFTA States on the establishment of a Surveillance Authority and a Court of Justice³, in particular to Article 24 thereof,

Having regard to Article 1(3) of Part I and Article 4(3) of Part II of Protocol 3 to the Surveillance and Court Agreement,

Having regard to the Authority's Guidelines⁴ on the application and interpretation of Articles 61 and 62 of the EEA Agreement, and in particular Chapter 15 on aid for environmental protection thereof,

Having regard to the Authority's Decision of 14 July 2004 on the implementing provisions referred to under Article 27 of Part II of Protocol 3 to the Surveillance and Court Agreement⁵,

Whereas:

¹ Hereinafter referred to as the Authority.

² Hereinafter referred to as the EEA Agreement.

³ Hereinafter referred to as the Surveillance and Court Agreement.

⁴ Guidelines on the application and interpretation of Articles 61 and 62 of the EEA Agreement and Article 1 of Protocol 3 to the Surveillance and Court Agreement, adopted and issued by the EFTA Surveillance Authority on 19 January 1994, published in OJ 1994 L 231, EEA Supplements 03.09.94 No 32. The Guidelines were last amended on 13 December 2006. Hereinafter referred to as the State Aid Guidelines.

⁵ Published in the OJ L 139 of 25.05.2006, p. 37.

I. FACTS

1 Procedure

By electronic notification dated 14 December 2006 (Event No 403284), the Norwegian authorities notified a scheme for reducing nitrogen oxide (NO_x) – “*NO_xRED for vessels in the Norwegian Shipping Register*”, pursuant to Article 1(3) of Part I of Protocol 3 to the Surveillance and Court Agreement.

The Norwegian authorities completed the notification with additional information by letter dated 9 February 2007 (Event No 409358).

2 Description of the notified amendments to an existing aid scheme

The measure consists of an aid scheme to support decreases in NO_x emissions from marine engines. For a detailed description of the scheme, see the Authority’s Decision No 126/05/COL of 26 May 2005. The scheme is hereinafter referred to as NO_x-RED scheme.

2.1 Title of the scheme

The current notification prolongs and amends the “*Norwegian scheme for reducing nitrogen oxide (NO_x) – NO_xRED for vessels in the Norwegian Shipping Register*” as authorised by the Authority by Decision No 126/05/COL of 26 May 2005.

2.2 The objective of the aid measure

The objective of the scheme is to decrease NO_x emissions from existing marine engines and newly installed marine engines.

According to the explanations of the Norwegian authorities, there are two methods to reduce NO_x emissions. One is the modification of the engine and the input media to the engine (reduction of the maximum temperature level, the oxygen partial pressure during combustion and the duration of temperature peaks in the combustion chamber). The other method consists of after treatment (cleaning) of the exhaust gas.

With the proposed amended scheme, the Norwegian authorities expect to reduce the NO_x emissions by between 10-90% depending on the measure chosen.

In the current notification, the Norwegian authorities have proposed one amendment to the approved scheme to reduce the NO_x emissions for vessels in the Norwegian Shipping Register. This amendment consists of modifying the cost efficiency of the NO_x reduction which, under the new proposal, should be lower than 50 NOK/kg NO_x reduced (instead of 10 NOK/kg NO_x reduced as foreseen in the original scheme).

2.3 National legal basis for the aid measure

The NO_xRED scheme is proposed by the Norwegian authorities and resources allocated for the 2007 budget in accordance with the Annual Budget St. prp. Nr. 1 2006-2007.

2.4 Eligible undertakings

The scheme includes all commercial ships registered in the Norwegian Ordinary Shipping register (Norsk ordinært skipsregister (NOR)), with engine power exceeding 750 kW. The ships must operate in the Norwegian coastal area, which includes services from Norwegian ports to installations on the Norwegian continental shelf.

2.5 Eligible costs and investments

The aid scheme's eligible costs consist of the investment costs necessary to achieve a higher level of environmental protection than the ships in question would achieve in the absence of any environmental aid. The NOxRED scheme will go beyond the MARPOL Annex VI regulation⁶. The applicant must submit information on the efficiency of the measures. The information must be proven correct by the relevant contractors.

The eligible investments under the notified scheme are:

1. SCR: Selective Catalytic Reduction reduces NOx emissions by the use of a catalytic material and a reduction fluid, urea, injected into the exhaust gas. This reduces NOx-emissions by between 70 to 90% per installation.
2. Reduction on existing engines. The expected NOx reduction per installation will be in the range of 10 to 35 %. It concerns the change in existing engines to the new environmental standards which exceed the IMO standard by 20 %.
3. Input water to the engine. The injection of water into the fuel system or directly into the combustion chamber can lead to a reduction of 5 to 20 % NOx per installation. The injection of a water emulsion cools down the combustion temperature, and therefore reduces NOx-emission.
4. Change of engine to the latest motor technology and the NOx-emission will be 20% lower than the IMO standard.
5. Engine rebuilding technology:
 - a. Retardation of start of injection
 - b. Injection rate-/pressure modifications
 - c. Revision of nozzle specifications
 - d. Changes to the combustion chamber
 - e. Reduced charge air temperature

⁶ Annex VI to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (referred to as MARPOL 73/78) concerns the prevention of air pollution from ships. It was adopted by the International Maritime Organisation (IMO) in September 1997 but only entered into force on 19 May 2005. The regulations in Annex VI set limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibit deliberate emissions of ozone depleting substances.

f. Modifications to turbocharger

6. Other measures can be any technology that gives documented NO_x-reduction. In addition to those mentioned, it is possible to reduce NO_x by:

- HAM (Humid Air Motor); Humid Air Motor is a technology that is based on the same principle as water emulsion. Humidity is added to the charge air, and this leads to reduced combustion temperature.
- EGR (Exhaust gas recycling); Exhaust gas recycling is also based on the same principle, except that in this case there is CO₂ in the exhaust gas that leads to reduced combustion temperatures.
- Membrane technology; Membrane technology is also based on the principle that reduced combustion temperature will give reduced NO_x emissions. The membrane separates the oxygen from the air and gives nitrogen enriched charge air. This reduces the combustion temperature.

According to the information provided by the Norwegian authorities, the applications will be considered individually on the basis of the cost/benefits of individual projects and available funding. The cost-effectiveness will be evaluated by the Maritime Directorate taking into account the following optimal lifetime according to the different measures:

1. SCR installation: 20 years
2. Modification of the engine: 15 years
3. Water injection: 10 years
4. Gas engines: 25 years
5. New engine: 15 years
6. Other measures: 10 years.

Under the NO_x-RED scheme, eligible costs are calculated net of the benefits stemming from increase in capacity, cost savings and additional ancillary production during the first five years following the investment. The Norwegian authorities have explained that this objective is met by the following two step formula.

The first step of the formula provides that the grant may be up to 30 % of the eligible cost in the case of engine modification and 15 % in the case of replacements. The grant for SMEs may be raised by an additional 10 % of the eligible costs. This amount will be reduced by subtracting the reduction in operating costs during the first five years following investment. The formula applied is thus:

1. Grant \leq 30% of eligible costs (reduced to 15% for engine replacements)(+10% of eligible costs for SMEs)-5*yearly reduction in operating costs ;

The second step of the formula introduces a requirement of cost efficiency in reducing NO_x emissions as follows:

2. Eligible costs(NOK)/Total reduction of NO_x per year (kg) ≤ 50 NOK/kg NO_x per year.

Thus, unless NO_x emissions are lowered by at least 1 kg NO_x per year for every 50 NOK spent, the measures will not be considered to be cost efficient and no grant will be awarded.

2.6 Aid intensities

The Norwegian authorities have notified the application of an aid intensity of up to 30 % gross of the eligible investment costs. Further, investments carried out by small or medium-sized enterprises may get an increase of 10 %. The Norwegian authorities have clarified that this additional aid will be given in accordance with the definition of small and medium sized enterprises foreseen in Commission Regulation (EC) No 70/2001 of 12 January 2001, Annex I. This Regulation has been incorporated into point 1f of Annex XV to the EEA Agreement⁷.

2.7 Budget and duration

The Norwegian authorities have notified the duration of this scheme for three years. Allocation of funds will be made on a yearly basis in the annual budget of the State. The expenditure planned for 2007 corresponds to NOK 15 million (approximately € 1.86 million). The expenditure planned for 2008-2009 has been estimated at NOK 35 million (approximately € 4.34 million). Therefore, the overall amount to be allocated to the notified scheme has been estimated at NOK 50 million (approximately € 6.2 million).

II. APPRECIATION

1 The presence of state aid

State aid within the meaning of Article 61(1) EEA Agreement

The Authority makes reference to Decision No 126/05/COL adopted on 26 May 2005 where the Authority concluded that the NO_x-RED scheme as notified at the time constituted state aid.

The scheme is funded by state resources. Further, it benefits vessels with an engine power exceeding 750 kW registered in the Norwegian Ordinary Shipping Register that operate in the coastal area and/or provide services to installations on the Norwegian continental shelf. The scheme is thus selective and the undertakings operating the vessels are actually or potentially in competition with similar undertakings in Norway and/or other EEA States and accordingly affects trade within the EEA.

The prolongation and amendment of the scheme do not alter the assessment of the scheme as state aid.

⁷ Regulation (EC) 70/2001 on the application of Articles 87 and 88 of the Treaty to State aid for small and medium-sized enterprises, as amended by Regulation (EC) 364/2004 incorporated into the EEA Agreement through Annex XV point 1f) by decision of the EEA Joint Committee No 131/2004 of 25.9.2004 (OJ L 64, 10.3.2005, p.57 and EEA Supplement No 12, p.42).

2 Procedural requirements

By submitting notification of the scheme by electronic notification 14 December 2006 (Event No 403284), the Norwegian authorities have complied with the notification requirement.

Furthermore, although the entry into force of the scheme was foreseen for January 2007, in their letter dated 9 February 2007, the Norwegian authorities have restated their intention not to execute the scheme before the Authority has taken a final decision in the case.

The Authority can therefore conclude that the Norwegian authorities have respected both the notification and the standstill obligation pursuant to Article 1(3) of Part I of Protocol 3 to the Surveillance and Court Agreement.

3 Compatibility assessment

Article 61(3)(c) of the EEA Agreement provides that aid may be considered as compatible with the EEA Agreement if its purpose is to facilitate the development of certain economic activities, where such aid does not adversely affect trading conditions between the Contracting Parties to an extent contrary to the common interest.

The Authority has issued guidelines for the application of Article 61(3)(c) of the EEA Agreement with regard to state aid for environmental protection, the so-called Environmental Guidelines, Chapter 15 of the State Aid Guidelines⁸. Aid for environmental protection must, in particular, be examined in light of these provisions.

In the following, the Authority will assess the compatibility of the NO_x-RED scheme as amended in light of the assessment carried out by the Authority in its Decision No 126/05/COL regarding the original scheme.

3.1 Aid intensity

There are currently no European Community standards in the field of NO_x reduction for vessels. However, as explained in the notification, the International Maritime Organisation has adopted an international standard resolution setting a standard for NO_x emissions⁹. The scheme will only be applied for measures that go beyond the standards set by that resolution.

According to Section D.1.2 of the Environmental Guidelines, investment aid can be granted up to 30% of the gross eligible investment costs. In addition Section D.1.5 allows for an additional 10% of the gross eligible investment costs for SMEs.

As described above, the aid intensities of the NO_x-RED scheme as notified by the Norwegian authorities, which allow for grants of up to 30% of eligible expenditure in the case of engine rebuilding and 15% in the case of engine replacements and includes a bonus of 10% for SMEs, are in line with the Environmental Guidelines. Moreover, the

⁸ Chapter 15 of the State Aid Guidelines on Aid for environmental protection was adopted on 23 May 2001 by Decision No 152/01/COL, published in the OJ L 21 of 24.01.2002 and the EEA Supplement No 6 of the same date.

⁹ Annex VI MAROPL 73/78. The resolution enters into force on 19 May 2005.

Norwegian authorities have explicitly committed to respect the definition of SMEs foreseen under Commission Regulation (EC) No 70/2001 of 12 January 2001, Annex I as amended¹⁰.

The Norwegian authorities have notified an amended formula for the application of the scheme.

The first part of the formula¹¹ ensures that aid cannot be authorised for more than 30 % gross of the eligible investment costs. As explained, this aid intensity is in line with point D.1.2 of the Environmental Guidelines. The bonus for SMEs foreseen under the NOx-RED scheme is also in line with point D.1.5 of the Environmental Guidelines.

The second part of the formula¹², which has been notified amended, includes a cost-efficiency element. Unless NOx emissions are lowered by at least 1 kg NOx per year per 50 NOK spent, the Norwegian authorities will not consider the measures to be cost efficient and accordingly no grant will be awarded. The Norwegian authorities have given an explanation in the notes to the Annual Budget to the amendment of the cost-efficiency ratio from 10 to 50 NOK. By the ratification of the Gothenburg Protocol¹³ in January 2002, the marginal cost for reductions of NOx was estimated to be between 10 and 20 NOK per kilo NOx. New estimates by the Norwegian Pollution Control Authority (*Statens forurensningstilsyn* (SFT) together with other directorates show that the costs related to fulfilling the obligation in 2010 are expected to be essentially higher than assumed. In 2006, the Norwegian Pollution Control Authority published an analysis of the costs for emission reducing measures. The analyses indicate that the marginal cost could be up to 50-60 NOK per kilo of NOx for measures which are to be completed in line with the Gothenburg Protocol. Consequently the second part of the formula had to be amended to fit the real costs of NOx emissions reduction.

The Norwegian authorities have introduced a restriction related to efficiency of the measure in environmental terms. Although the efficiency requirement has been reduced from 0.10 to 0.02 kg NOx reduction per NOK spent, this is in line with the increased cost estimates provided by the Norwegian Pollution Control Authority. Therefore, the Authority considers that this amendment is justified.

¹⁰ Commission Regulation (EC) No 70/2001 of 12 January 2001 was amended by Commission Regulation (EC) No 364/2004 of 25.02.2004 (published in the OJ L 63 of 28.02.2004, p. 22). This Regulation was incorporated into Annex XV to the EEA Agreement by Joint Committee Decision No 131/2004, published in the OJ L 64 of 10.03.2005, p. 67 and the EEA Supplement No 12. Commission Recommendation 2003/361/EC containing a new definition of micro, small and medium-sized enterprises has been incorporated into Chapter 10 of the Authority's State Aid Guidelines by the Authority's Decision No 94/06/COL of 19 April 2006.

¹¹ Grant $\leq 30\%$ of eligible costs (reduced to 15% for engine replacements)(+10% of eligible costs for SMEs)-5*yearly reduction in operating costs.

¹² Eligible costs(NOK)/Total reduction of NOx per year (kg) ≤ 50 NOK/kg per year.

¹³ The "Protocol to Abate Acidification, Eutrophication and Ground-Level Ozone" was signed in 1999 in Gothenburg, Sweden, as an extension to the United Nations' 1979 Geneva Convention on Long-Range Transboundary Air Pollution, referred to as the Gothenburg Protocol.

3.2 Conditions for the authorisation of investment aid to firms improving on standards

The NOx-RED scheme's eligible costs consist of the investment costs necessary to achieve a higher level of environmental protection than the vessels in question would achieve in the absence of environmental aid.

On the basis of point D.1.2, investment aid enabling firms to improve on the Community standards applicable or in the absence of mandatory Community standards or where they have to undertake investment in order to comply with national standards that are more stringent than the applicable Community standards, may be authorised.

The Norwegian authorities have explained that the International Maritime Organisation has adopted an international standard resolution, Annex VI Marpol 73/78, which sets a standard for NOx emissions. Annex VI Marpol 73/78 entered into force on 19 May 2005 and was implemented in Norway from that date. This regulation applies to vessels/engines built or upgraded after 1 January 2000, which must fulfil this regulation. This regulation constitutes the standard applicable on an international level. The Norwegian authorities have explained that there are no stricter Community standards.

The NOx-RED scheme will only be applied for measures which go beyond Annex VI Marpol 73/78.

3.3 Eligible costs

The Environmental Guidelines require in point D.1.7 that eligible costs are confined strictly to the extra investment costs necessary to meet the environmental objectives. This means that eligible costs must be calculated net of the benefits accruing from any increase in capacity, cost savings engendered during the first five years of the investment and additional ancillary production during that five-year period.

Paragraph eight of Section D.1.7 of the Environmental Guidelines determines that “*where no standards exist, eligible costs consist of the investment costs necessary to achieve a higher level of environmental protection than that which the firm or firms in question would achieve in the absence of any environmental aid*”.

The Norwegian authorities have stated that the eligible costs of the NOx-RED scheme consist of the additional investment costs necessary to achieve a higher level of environmental protection than the vessels in question would achieve in the absence of any environmental aid. The NOx-RED scheme will go beyond the Marpol VI regulation. The applicant must submit information of the efficiency of the measures. The information must be proven correct by the relevant contractors. Further, the Norwegian authorities will carry out a test on the ship both before and after the supported measures are installed in order to ensure that the grant given fulfils the aim of the scheme.

Under the NOx-RED scheme, eligible costs are calculated net of the benefits stemming from increase in capacity, cost savings and additional ancillary production during the first five years following the investment.

The Authority considers that the formula proposed by the Norwegian authorities to determine the granting of aid for each project is in line with the requirements of the Environmental Guidelines.

3.4 Cumulation

In accordance with point G of the Environmental Guidelines, aid authorised under the Environmental Guidelines may not be combined with other forms of state aid within the meaning of Article 61(1) of the EEA Agreement or with other forms of European Community financing obtained through the participation of EFTA States in Community programmes, if such overlapping produces an aid intensity higher than that laid down in the Environmental Guidelines.

The Norwegian authorities have stated in point 8 of Part I of the notification form that aid under the NOx-RED scheme cannot be cumulated with aid received from other local, regional, national or Community schemes to cover the same eligible costs.

4 Conclusion

On the basis of the foregoing assessment, the Authority considers that the scheme for reducing NOx emissions from vessels in the Norwegian Shipping Register as amended is compatible with the functioning of the EEA Agreement in accordance with Article 61(3)(c) of the EEA Agreement read in conjunction with the Environmental Guidelines. Hence, the Authority does not raise objections to the amendment of the scheme as notified.

The Norwegian authorities are reminded about the obligation resulting from Article 21 of Part II of Protocol 3 to the Surveillance and Court Agreement in conjunction with Article 6 of Decision 195/04/COL to provide annual reports on the implementation of the scheme.

The Norwegian authorities are also reminded that all plans to modify this scheme must be notified to the Authority.

Finally, the Authority draws the attention of the Norwegian authorities to the fact that the Environmental Guidelines, under which the above scheme has been approved, will be reviewed in 2007. In case the rules of aid for environmental protection change, this may have an effect on all existing aid schemes falling under the Guidelines, including the amendment to the NOx-RED scheme authorised by this decision.

HAS ADOPTED THIS DECISION:

Article 1

The EFTA Surveillance Authority has decided not to raise objections to the notified amendment to the scheme for reducing nitrogen oxide (NOx) emissions from vessels in the Norwegian Shipping Register on the basis of the provisions of the State aid guidelines on aid for environmental protection. The Norwegian authorities have notified the duration of the scheme until the end of 2009.

Article 2

The implementation of the measure is accordingly authorised.

Article 3

This Decision is addressed to the Kingdom of Norway.

Article 4

Only the English version is authentic.

Done at Brussels, 14 February 2007

For the EFTA Surveillance Authority,

Bjørn T. Grydeland
President

Kurt Jaeger
College Member