



EUROPEAN COMMISSION

Brussels, XXX
[\[...\]](#)(2011) XXX draft

COMMISSION DECISION

of XXX

**on the request from the Kingdom of Denmark for a derogation pursuant to Article 3(4)
and (5) of Directive 98/70/EC, as amended by Directive 2009/30/EC**

(Only the Danish text is authentic)

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on the request from the Kingdom of Denmark for a derogation pursuant to Article 3(4) and (5) of Directive 98/70/EC, as amended by Directive 2009/30/EC

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel and amending Council Directive 93/12/EEC,¹ in particular Article 3(4) and (5) thereof,

Whereas:

- (1) By letter to the Commission registered on 1 July 2010, the Kingdom of Denmark (Denmark) notified a derogation to permit the placing on the market during the summer period of petrol with a maximum vapour pressure of 70 kPa, due to its low ambient summer temperatures, for a duration of ten years. A supporting report was submitted in addition to the notification letter.
- (2) According to Article 3(4) of the Directive, Member States with low ambient summer temperatures may, in accordance with the first subparagraph permit the placing on the market during the summer period of petrol with a maximum vapour pressure of 70 kPa.
- (3) In accordance with Article 3(5) of the Directive, Member States that wish to apply either of the derogations provided for in paragraph 4 shall notify the Commission and provide all relevant information. The Commission shall assess the desirability and duration of the derogation, taking account of both:
 - (a) the avoidance of socioeconomic problems resulting from higher vapour pressure, including time-limited technical adaptation needs; and
 - (b) the environmental or health consequences of the higher vapour pressure and, in particular, the impact on compliance with EU legislation on air quality, both in the Member State concerned and in other Member States.
- (4) Under Article 3(5), the Commission will assess the desirability and the duration of each derogation requested. If, taking into account relevant target values, the assessment shows that the derogation will result in a lack of compliance with EU

¹ OJ L 350, 28.12.1998, p.58-68.

legislation on air quality or air pollution, including limit values and emissions ceilings, the application shall be rejected.

- (5) The Directive must be transposed into national law by 31 December 2010 and enters into force on that date in the Member States. Failure to comply with the vapour pressure requirements of the Directive after this date will constitute an infringement of EU law, unless a derogation is in place.
- (6) The notification was assessed in line with the Directive and with the general recommendations for assessment set out in the public document 'Guidance note on notifications of exemptions from the vapour pressure requirements for petrol under Article 3(4) of Directive 98/70/EC relating to the quality of petrol and diesel fuels' ('the Guidance').
- (7) The Commission found that some essential information was missing in the initial notification and supporting document, and asked the Kingdom of Denmark by letters dated 5 October 2010 and 17 February 2011 to complete the notification. Denmark submitted additional information by letters registered at the Commission on 2 December 2010 and by e-mail on the 14 March 2011.
- (8) The letter of 2 December 2010 concluded the submission of information. The Commission therefore has six months until 2 June 2011 to adopt a decision on the request for a derogation.
- (9) Firstly, the notification will be assessed in accordance with the following information supplied by the Member State, which is common to all evaluations:
 - the forecast quantity of petrol to be supplied to retail outlets in the Member State concerned and the proportion this represents of the Member State's total amount to be produced during each calendar year for which the derogation is sought,
 - the forecast quantity of petrol to be supplied to retail outlets in the Member State concerned, during each year for which the derogation is sought,
 - the quantity of petrol supplied to retail outlets in the previous calendar year in the Member State concerned that cannot currently meet the regulated maximum vapour pressure limit and, if applicable, the associated percentage of bioethanol content of that petrol. The quantity of petrol exported in the previous calendar year by the Member State concerned and the associated average vapour pressure of that petrol, and
 - the quantity of petrol forecast to be supplied to retail outlets in the Member State and, if applicable, the associated percentage of bioethanol content that would not meet the regulated maximum vapour pressure limit during each calendar year for which the derogation is sought.
- (10) To make a reliable assessment, the applicant must submit sufficient, relevant and precise figures and facts regarding the requested quantities and years to evaluate and compare the conditions before and after a possible derogation.

- (11) The Kingdom of Denmark provided information on petrol sales, export and import conditions and distribution in Denmark, which the Commission considers sufficient to evaluate the notification.
- (12) To assess the direct socioeconomic problems (which are any social, financial or economic impact of implementing the regulated vapour pressure of 60 kPa), the Member State must provide information on the impact on petrol producers and/or petrol suppliers of not having the derogation. The information required includes:
- a short description of the technical and market-based difficulties in complying with the regulated maximum vapour pressure of petrol of 60 kPa and the corresponding percentage of Member State petrol to be supplied to retail outlets including, if applicable, information on the expected rate of penetration of bioethanol as a constituent of petrol, as defined by the Directive,
 - the options available to make the necessary technical adaptations to existing infrastructure and installations associated with petrol production and supply, the time it would take to make such adaptations in order to comply with the maximum regulated vapour pressure of 60 kPa and the corresponding percentages of Member State petrol to be supplied to retail outlets. This should include an assessment of imports of fuel of the requisite quality, given that the EU is a net exporter of petrol,
 - a short description of the implications on the economic operation of the refinery and supply infrastructure, including impacts on employment associated with implementing the above technical adaptations, and
 - the potential disruption to petrol production and supply associated with implementing the above technical adaptations. The potential for mitigating such disruption by importing petrol of the requisite quality should be addressed.
- (13) In order to assess the technical and market-based difficulties in complying with the regulated maximum vapour pressure of petrol, the Commission needs access to pertinent information.
- (14) Denmark has informed the Commission that it is not permitted to add MTBE to its main petrol grades due to potential contamination of drinking water, which is “un-rinsed” and is unique to Denmark. It only permits a small proportion of MTBE to be added in the small sales volumes of 98 octane petrol.
- (15) Further Denmark states that it is unable to produce suitable quality petrol of sufficiently low vapour pressure from its refineries, without the addition of MTBE. Moreover that the transition from 95 kPa to 60 kPa would require numerous changes within storage tanks, due to a heel remaining in the tank which, when re-filled, would affect the overall volatility of tank contents.
- (16) The refineries in Denmark are of a predominantly non-complex hydroskimming configuration, lacking the conversion processes for the vacuum gasoil fraction of crude oil. In particular, they do not contain fluid catalytic cracking (FCC) conversion facilities, which provide the important petrol blending component of cracked petrol, sometimes referred to as FCC petrol. The FCC unit is often considered as a primary

source of olefins for processing in an alkylation unit to produce another useful petrol blending component: alkylate.

- (17) Denmark states that the installation of alkylation facilities in Danish refineries would cost €150 million and would still require the import of raw olefinic feedstock. Denmark claims that the impact of this investment would be too great, given the size of their refineries, and therefore is disproportionate.
- (18) Petrol trade in Denmark is significant. Domestic consumption is a combination of locally produced product and imported petrol. Denmark points to the uncertainty in being able to source low vapour pressure petrol through imports and that it would be dependent on whether derogations were granted in other Member States which export to Denmark to meet its target. Amongst its sources, Sweden is the primary petrol exporter to Denmark and the submitted trade data show that the production and supply of petrol in Denmark and Sweden appear interdependent.
- (19) Petrol in Denmark shows a significant proportion of volatile components in the blend and contains high quantities of isopentane, which improves octane but also increases volatility. The blending of suitable petrol of sufficient octane, in the absence of MTBE, remains a constraint for Denmark as it is reliant on imported low volatile petrol components. According to the submitted information it is likely to be challenging for the two Danish refineries to produce petrol of sufficiently low volatility without increasing the proportion of imported petrol components within the blends.
- (20) Denmark is an established trader of petrol components: it is not known to which extent Denmark could source sufficient imports of petrol components, given the quantities needed in order to produce suitable blends. Securing reliable sources of petrol components to enable consistent petrol production in the long-term is also judged to be challenging for Denmark.
- (21) Alternative solutions like replacing isopentane with isomerate would entail relying on imports and leads to risks in relation to security of supply as Denmark would be dependent of external markets. This could also include disproportionate costs connected to the purchase of the needed components.
- (22) It may be possible to compensate for the loss of octane that would have been provided by the isopentane by increasing the severity of the catalytic reformer and producing reformat of a higher octane. However, higher octane reformat would be expected to contain more aromatics and the aromatic content of Danish gasoline blends is already very close to the limit of 35 vol%. A wider variation in the gasoline blend may occur in practice to offset the lower octane of isomerate and light naphtha. The changes may impact the quantities of imported blend components such as FCC gasoline and/or alkylate.
- (23) The Commission finds that Denmark has provided credible and reasonable information and that the socioeconomic situation in Denmark is acceptably covered. The Commission therefore sees no grounds for objecting to this part of the notification.

- (24) In order to assess the second criterion — compliance with EU air quality and pollution legislation, Member States must provide realistic and reliable estimates of their emissions of non-methane volatile organic compounds (NMVOCs) and state how these predictions compare to the emission ceiling set in Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants² (the NEC-D). These estimates have to:
- be shown to be consistent with the methodologies permitted by Directive 2001/81/EC to satisfy the obligation for reporting emissions and emission estimates to the Commission, and
 - include an assessment of the proposed derogation on national NMVOC emissions by assessing the changes in emissions in all relevant emitting sectors. As a minimum this has to cover (1) the storage of petrol at terminals and distribution to service stations; (2) the storage of petrol at service stations; (3) the fuelling of motor vehicles, including accidental spills; (4) evaporative losses for motor vehicles at rest; and (5) evaporative emissions from vehicles in use, ‘running losses’.
- (25) Denmark supplied information referring to the latest emission projections submitted to the Commission under the NEC Directive (December 2009) which indicates that Denmark’s NMVOC emissions were 105 kt in 2008 and were expected to be 85kt in 2010. The request states that Denmark is expected to just meet its NMVOC NEC in 2010 (85 kt).
- (26) Denmark also provided information confirming that the projections include the impacts of using petrol with a vapour pressure of 70kPa, which has been in use in Denmark for some time now.
- (27) An assessment is provided where the impact of the proposed derogation on VOC emissions from vehicle refuelling, storage tanks and drips and minor spillage, for the period June to August, leads to an increase of 56 tonnes; and from vehicles at rest and in use, an increase of 229 tonnes. Total emissions are therefore estimated to increase by 285 tonnes with the application of the derogation. This represents around 0.3% of total VOC emissions, which presumably will not lead to a non-compliance situation with the NEC Directive.
- (28) The Danish authorities have confirmed that the emission estimates have been calculated in accordance with the 2009 version of the EMEP/CORINAIR emission inventory guidebook and the guidelines for the calculation of emissions from vehicles in use and at rest.
- (29) It is clear for the Commission that Denmark is expected to exactly meet its 2010 NEC for NMVOCs: 85kt. It recognises also that the current use of petrol with a vapour pressure of 70kPa is included in the projections, i.e. that an eventual derogation would not affect the ability to meet the NEC 2010.
- (30) The Commission recognizes that in Denmark the projected emissions under the NEC Directive have been developed according to the methodologies agreed upon in the

² OJ L 309, 27.11.2001, p. 22–30.

Convention on Long-Range Transboundary Air Pollution, with the aid of the EMEP/CORINAIR guidebooks. Further, concerning the estimates of emissions increases from the use of petrol with a vapour pressure of 70 kPa, it may be verified that these estimates have been performed by using the methodology provided in the EMEP/EEA Guidebook and guidelines for the calculation of emissions from vehicles in use and at rest.

- (31) However, even though the methods employed for estimating emissions from vehicles in use and at rest, vehicle refuelling, storage tanks and drips and minor spillage are appropriate, these estimates are only provided for June – August.
- (32) The Commission notes the fact that Denmark has provided sufficient and reliable information that the 2010 NEC ceiling will not be exceeded but leaves little margin for increases from other sources of emissions.
- (33) Concerning the ozone criteria, it is necessary to assess whether the Member State has fulfilled its duties pursuant to Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe³ (Directive 2008/50) to ensure compliance as far as possible with the target value for ozone. In addition, emissions of ozone precursors in one Member State can contribute to elevated levels of ozone in other Member States. Given this, the following information must be provided in the notification:
- The impact of the derogation on ozone concentrations in the Member State, in comparison with a scenario where no derogation is implemented. Changes in ozone concentration should, as a minimum, be expressed in a form that enables a simple comparison to be made with the ozone target value in Directive 2008/50/EC. The information is most likely to be in the form of results of recognised air quality models.
 - The impact of the derogation on concentrations of ozone in other Member States.
 - Pursuant to Articles 17(1) and (2) of Directive 2008/50/EC, Member States must take all necessary measures not entailing disproportionate costs to ensure that the target value for ozone is attained by 1 January 2010. Where the target value is exceeded, Member States must ensure that the programme is prepared in line with Article 6 of Directive 2001/81/EC and, if appropriate, an air quality plan is implemented in order to attain the target values, except where not achievable, through measures not entailing disproportionate costs. In their notification, Member States must explain:
 - (a) How the proposed derogation is compatible with the preceding obligations in relation to the attainment of the ozone target value.
 - (b) Whether the proposed derogation appears in any air quality plan or programme prepared in line with Directives 2008/50/EC or 2001/81/EC.

³ OJ L 152, 11.6.2008, p. 1–44.

- (c) Whether additional measures to reduce VOC emissions are envisaged that would offset any increase in emissions following implementation of the derogation.
- (34) Denmark has submitted information on the target value for ozone, which includes details of its ozone monitoring programme in place. The maximum AOT40 values recorded ($12,000 \mu\text{g}/\text{m}^3 \cdot \text{h}$) are below the ozone target value for 2010 ($18,000 \mu\text{g}/\text{m}^3 \cdot \text{h}$) and that the threshold for ozone $180 \mu\text{g}/\text{m}^3$ has only been exceeded on a few occasions and that the alert threshold ($240 \mu\text{g}/\text{m}^3$) has never been exceeded.
- (35) Furthermore the Danish authorities have submitted data on the current state of compliance with the target value, $120 \mu\text{g}/\text{m}^3$. In 2009, the target value was exceeded 14 times in total i.e. at all measurement stations. The majority of exceedences occurred at Ulfborg, a site on the west coast of Denmark. According to the authorities, this indicates that the result is primarily an effect of transboundary impacts from neighbouring countries. Denmark's latest annual report on air quality submitted to the Commission on 7 April 2010 indicates that the target value for ozone was not exceeded in any of the zones in 2008 although the long term objective for health (2 zones) and vegetation (3 zones) were exceeded.
- (36) In the data concerning ozone conditions in Denmark there is no information or assessment provided on the effects of the requested derogation. From the submitted information it is assumed that Denmark is currently in compliance even with the existing use of petrol with a vapour pressure of 70 kPa in place. No data has been provided for previous years (i.e. 2007 and 2008) that may confirm that the average over the last three years is in line with the limit.
- (37) In the supplementary information provided by the Danish authorities it is stated that ozone levels have gradually been declining since 1992 although this varies from year to year and between measuring stations.
- (38) The Commission finds that, even though no specific quantitative information has been provided on the potential impact of the use of petrol with a vapour pressure of 70 kPa on ozone levels in Denmark or neighbouring countries, there has been reliable information for 2009 indicating that the $120 \mu\text{g}/\text{m}^3$ target value has been exceeded on some occasions but not more than the 25 days allowed under the legislation.
- (39) Considering the information provided, the Commission finds that this gives a reasonable degree of confidence that continuing to use petrol with a vapour pressure of 70 kPa should not lead to the target value being exceeded, under the condition of the absence of increases in ozone concentration for other reasons. The Commission therefore sees no grounds for objecting to this part of the notification.
- (40) In order to assess the benzene criteria, Member States must submit evidence that the air quality limit value for benzene in Directive 2008/50/EC has been attained by 1 January 2010, although this deadline may be extended by 5 years subject to certain conditions set in Directive 2008/50/EC. To ascertain their compliance with this limit value, Member State notifications must contain the following:
- information on any instances when the limit value (or limit value plus margin of tolerance) for benzene in air has been exceeded in recent years. This should be

based on assessments and reports pursuant to Directive 2008/50/EC (or earlier legislation),

- quantification and a short description of the methodology used to quantify the expected increase in benzene concentrations at locations where such concentrations may be higher than the general background levels and where there may be a greater risk of the limit value being exceeded. This should include locations in the vicinity of service stations or other major sources of benzene emissions, such as petrol manufacturing and storage installations,
 - an assessment of the impact of the derogation in relation to compliance with the air quality limit value for benzene in 2010, and
 - where there is a risk of non-compliance with the limit value in 2010, what additional measures are being considered to offset the additional emissions caused by the derogation and to ensure compliance.
- (41) Denmark has submitted information showing that benzene levels are only recorded at one urban traffic station, where the concentrations measured have decreased significantly over several years and are now below the limit value of 5 µg/m³. The supplementary information provided includes a graphical summary of how benzene concentrations in Denmark have declined since 1999. Measurements have not exceeded the limit value since 1999 and concentrations have been below 3 µg/m³ since 2005.
- (42) From Denmark's latest annual report on air quality submitted to the Commission (7 April 2010) it is indicated that the single monitoring station for benzene did not record any exceedance of the limit value in 2008.
- (43) No modelling of the impact of the requested derogation or withdrawal of the existing use of petrol with a vapour pressure of 70 kPa has been undertaken. Neither has any information been made available to identify the methods employed in relation to any projected future changes in benzene concentrations. Denmark has instead submitted information indicating that Denmark is currently compliant with the target value with a waiver in place at one monitoring station combined with the fact that there is an existing declining trend in benzene.
- (44) The Commission finds that although Denmark does not appear to have assessed the potential impacts of the requested derogation on benzene concentrations there are no reported exceedences of the limit value with the current use of petrol with a vapour pressure of 70 kPa and benzene levels have been well below the limit value for over 10 years. The Commission raises therefore no objection to this part of the notification from Denmark.
- (45) Denmark has a fuel supply situation which is strongly determined by environmental legislation prohibiting the use of MTBE to secure ground water purity. The impacts from possible and practicable alternative solutions such as investing in up-grading domestic production or the supply of necessary components through imports are shown to have considerable effects financially as well as from a supply security point of view. The Commission also acknowledges Denmark's dependency on trade, with predominantly Sweden, in petrol and petrol components.

- (46) The Commission finds that these conditions altogether justifies a duration of a derogation to be limited to the end of 2020.

HAS ADOPTED THIS DECISION:

Article 1

The Commission raises no objection to the notification from the Kingdom of Denmark to permit the placing on the market during the summer period of petrol with a maximum vapour pressure of 70 kPa (derogation) until the end of 2020.

Article 2

This Decision shall be invalidated in the event of non-compliance with EU legislation on air quality or air pollution, including the relevant limit values and emission ceilings established during the derogation period.

Any breach of relevant EU legislation as mentioned above will constitute an infringement and be proceeded with according to applicable law.

Article 3

This Decision is addressed to the Kingdom of Denmark.

Done at Brussels,

For the Commission
Connie Hedegaard
Member of the Commission