



Brussels, 18.8.2021  
C(2021) 6024 final

**COMMISSION IMPLEMENTING DECISION**

**of 18.8.2021**

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

(Only the Danish text is authentic)

# COMMISSION IMPLEMENTING DECISION

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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**

(Only the Danish text is authentic)

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 fuels and amending Council Directive 93/12/EEC<sup>1</sup>, and in particular Article 3(4) and (5) thereof,

Whereas:

- (1) Commission Decision C(2011)3837 of 7 June 2011 on the request from the Kingdom of Denmark ('Denmark') for a derogation pursuant to Article 3(4) and (5) of Directive 98/70/EC ('the Directive') expired on 31 December 2020.
- (2) By letter to the Commission registered on 18 December 2020, Denmark notified a request for 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 till 31 December 2030. A supporting report was submitted in addition to the notification letter.
- (3) 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 instead of 60 kPa.
- (4) 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.
- (5) Pursuant to Article 3(5), the Commission shall assess the desirability and the duration of each derogation requested. If, taking into account relevant values, the assessment shows that the derogation will result in a lack of compliance with EU legislation on air quality or air pollution, including limit values and emissions ceilings, the application shall be rejected.

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<sup>1</sup> OJ L 350, 28.12.1998, p.58.

- (6) Directive 2009/30/EC amending Directive 98/70/EC by i.a. introducing Article 3(2) to (6) had to be transposed into national law by 31 December 2010. A failure to comply with the vapour pressure requirements of the Directive after this date would constitute an infringement of EU law, unless a derogation is in place.
- (7) The notification was assessed in line with Directive 98/70/EC 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 note’)<sup>2</sup>.
- (8) The Guidance note provides that the notification by the Member State is assessed considering the forecast quantity of petrol concerned, the share it represents of the Member State's total produced amount, the quantity of petrol exported, the forecast quantity of petrol for which a derogation is sought and – if relevant – the associated percentage of bioethanol content of that petrol. In addition, the assessment of notifications will be conducted in accordance with the following socioeconomic and environmental criteria:
- Any social, financial or economic impact to implementing the regulated vapour pressure of 60 kPa.
  - Compliance with Union legislation on air quality and air pollution encompassing realistic and reliable predictions of their emissions of non-methane volatile organic compounds (NMVOCs), ozone and benzene, including additional measures being considered to outweigh the additional emissions caused by the derogation.
- (9) First, the notification was assessed in accordance with information requirements set out under point 4 of the Guidance note. Denmark provided information on petrol sales, exports, imports and distribution, which the Commission considers sufficient to evaluate the notification. More specifically, Denmark has indicated a slight increase of the estimated maximum petrol sales from 1750 000 m<sup>3</sup> in 2021 to 1945 000 m<sup>3</sup> in 2030. The expected ethanol content is 10% in octane 92 and 95 petrol and 5% in octane 98+ petrol for the time period 2021 – 2030, while the octane 92 petrol sales will end in 2022.
- (10) Second, as set out under point 4.1 of the Guidance note, Denmark provided information about the direct socioeconomic problems on the impact on petrol producers and/or petrol suppliers of not being granted the derogation. This concerns any social, financial or economic impact of implementing the regulated vapour pressure of 60 kPa.
- (11) Denmark has informed that the situation, as described in the previous notification, has largely remained the same, therefore, the prolongation of the waiver is requested. Denmark is not permitted to add MTBE<sup>3</sup> and other ethers to its petrol grades due to potential contamination of drinking water, which is produced right from the cleanest possible groundwater, and is a well-preserved resource of Denmark. As indicated by the notification, Denmark has not added ethers to octane 92 and 95 petrol since around 2000 and to octane 98+ petrol – since 2014.
- (12) Denmark indicated that it would be unable to produce suitable quality petrol of sufficiently low vapour pressure in its two refineries, without the addition of MTBE.

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<sup>2</sup> [https://ec.europa.eu/clima/sites/clima/files/transport/fuel/docs/guidance\\_note\\_vapour\\_pressure\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/transport/fuel/docs/guidance_note_vapour_pressure_en.pdf)

<sup>3</sup> Methyl tert-butyl ether, is commonly used as an oxygenate petrol additive in the production of petrol from crude oil.

The two refineries have a different set-up and configuration when producing petrol for the Danish market and export. Moreover, the two refineries are not producing octane 98+ petrol on their own, and rely entirely on imports from other European countries, such as the United Kingdom, Sweden and Norway. These are countries with low ambient summer temperatures and are producing octane 98+ petrol with vapour pressure of 70 kPa for their home market and export. Hence, it is unlikely that they will produce petrol with a vapour pressure of 60 kPa during the summer period.

- (13) Denmark further indicated that the two refineries are no longer producing octane 92 petrol. Instead, they are producing octane 95 petrol that partially satisfies the Danish market, while the additional quantities are imported. The production of octane 95 petrol summer grade for the Danish market requires preparing a base petrol with a vapour pressure of approximately 63 kPa that needs to be blended with 10 % ethanol to obtain the 70 kPa parameter.
- (14) In its submission, Denmark explained that without the derogation, the Danish refineries would have to implement one of the three options: 1) import alkylate and other necessary petrol blending components as an alternative to MTBE and other ethers, 2) invest in new refining capacity dedicated to produce alkylate and other necessary petrol blending components, or 3) import octane 95 petrol with a maximum vapour pressure on 60 kPa for the summer period<sup>4</sup>.
- (15) Regarding the first option, Denmark indicated that it would impact on the security of supply, as import of alkylate and/or isooctane are not considered as commercially available feedstocks in Europe, instead, they would need to be imported from refineries outside Europe. Denmark would become entirely dependent on an external market situation. In addition, these imported components would substitute other petrol components locally produced in the two Danish refineries, leading to unused feedstocks that would need to be exported. As indicated by Denmark, this would result in disproportionate costs for the two refineries, given the price of the imported alkylate and isooctane is higher than the price of the locally produced petrol components.
- (16) Regarding the second option, Denmark explained that securing a domestic production of alkylate would require an upgrade of existing refineries involving a likely cost of approximately €150 million, not including the running costs. Denmark further indicated that to lower the vapour pressure of 70 kPa petrol containing 10% ethanol to 60 kPa would cost on average 15-20 USD per ton. Given the size of the Danish refineries, any production of alkylate would be too insignificant to make such an investment profitable and as a result, the competitiveness of the refineries would suffer.
- (17) Regarding the third option, Denmark explained that the estimated quantity of imported octane 95 petrol for the summer period with the necessary parameter of maximum vapour pressure of 60 kPa would amount to 410 000 – 500 000 m<sup>3</sup>. Denmark indicated that the Norwegian and Swedish refineries currently supplying the Danish market with summer grade petrol have confirmed not to be able to guarantee the supply of petrol with a lower vapour pressure (60 kPa) in the amounts required. As a result, Denmark would have to rely on the imported petrol from refineries elsewhere. In addition, Denmark would need to export an equal amount of summer grade petrol that is currently produced for the Danish market to other European countries where the 70 kPa limit is allowed leading to a risk of accumulating an excess stock petrol. As a

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<sup>4</sup> For Member States with low ambient summer temperatures, the summer period is defined as the period between 1 June and 31 August according to Annex I of the Directive.

result, Denmark considers that this option would lead to a) an increased reliance on imported petrol of 60 kPa that is already short in supply in Europe, and b) it would create an oversupply of summer grade petrol with 70 kPa that Denmark would find difficult to export, since there is an overproduction of summer grade petrol in Europe, while the demand from the United States has shrunk due to the ethanol content in European petrol.

- (18) 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.
- (19) Third, as set out under point 4.2.1 of the Guidance note, Denmark provided information concerning the compliance with the national emissions ceilings and reduction commitments for non-methane volatile organic compounds ('NMVOC').
- (20) Denmark supplied information on its full compliance with the emissions ceilings stipulated in Directive (EU) 2016/2284<sup>5</sup> on National Emission Ceilings ('NEC Directive'). More specifically, Denmark informed to have reduced its annual NMVOC emissions from 106.6 kilotonnes (kt) in 2005 to 64.6 kt in 2018 corresponding to almost 40% reduction, based on the latest submitted inventory in 2018<sup>6</sup>.
- (21) In relation to different sectors relevant for this application, Denmark indicated that the emissions from road transport gasoline evaporation (code 1A3bv) have declined by 92% in 2018 in comparison to 1990, amounting to 1.32 kt or 1.11% of the total national NMVOC emissions of 119.67 kt. Much of this decrease was due to catalytic conversion of vehicle exhausts. The fugitive emissions from the distribution of oil products (code 1B2av) have also experienced a decrease reaching 0.71 kt, representing 0.6% of the total national amount of NMVOC emissions in 2018.
- (22) Denmark provided information on the estimated effect of reducing the petrol vapour pressure during the summer period from 70 kPa to 60 kPa. According to the analysis provided, this would reduce the NMVOC emissions by 0.2 kt, representing 0.17% of the national total NMVOC emissions.
- (23) Denmark provided information on the projections of its compliance with the NMVOC emission reduction commitments for the time period between 2020 and 2030. The Danish obligations under the NEC Directive is a reduction of 35 % in 2020 compared to the emission level in 2005 and a reduction of 37 % in 2030 compared to the emission level in 2005. Denmark has indicated that the expected reductions in 2020 and 2030 are 42 % and 44 % respectively, which correspond to an overachievement of the targets.
- (24) The Commission notes that the methodologies employed by Denmark appear to be consistent with those required under Directive (EU) 2016/2284 and considers that:
  - national NMVOC emission reduction commitments under the NEC Directive for Denmark are already met with existing petrol vapour pressure specifications of 70 kPa;

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<sup>5</sup> Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants; OJ L 344, 17.12.2016, p. 1–31.

<sup>6</sup> Data are used excluding emissions from animal husbandry and manure management (NFR 3B) and agricultural soils (NFR 3D) as these sources are excluded from the reduction commitments in the NECD.

- the projections show a continued compliance with the NMVOC emission reduction targets by 2030.
  - requiring a petrol vapor pressure limit at 60 kPa would have a very limited impact on reducing NMVOC emissions corresponding to 0.17% of the national total NMVOC emissions.
- (25) The Commission therefore sees no grounds for objecting to this part of the notification.
  - (26) Fourth, concerning the ozone criteria, Denmark provided information as set out under point 4.2.2 of the Guidance note.
  - (27) With respect to the ground level ozone, the EU target value of 120 µg/m<sup>3</sup> may not be exceeded by more than 25 days a year as from year 2010, under the Directive 2008/50/EC<sup>7</sup> (Air Quality Directive). Denmark has reported its full compliance with this provision. In 2018, the concentration of ozone (maximum daily 8 hour mean value) exceeded 120 µg/m<sup>3</sup> 16 times at the measurement station with the highest number of exceedances which is still below the EU target value. The information threshold of 180 µg/m<sup>3</sup> was not exceeded in 2018, although it is typically exceeded once a year for every two to three years, as reported by Denmark. The alert threshold of 240 µg/m<sup>3</sup> has never been exceeded.
  - (28) The EU legislation also includes a target value for protection of the vegetation against ozone. This target specifies that the AOT40<sup>8</sup> value must not exceed 9000 parts per billion hours (=18000 µg/m<sup>3</sup>·hours) as an average for five years. The ozone levels at all the Danish rural measurements stations were below the target values both in 2018 and as an average for 2014 to 2018, as indicated by Denmark.
  - (29) With regard to the future estimates, Denmark has indicated that an overall decreasing trend in the maximum daily mean 8 hour ozone concentration is observed in Denmark since 1990-ties which has remained constant in the last years. Denmark furthermore refers to the fact that ozone formation over Danish territory is very limited and therefore, concludes that it is not likely that a new derogation will have a negative influence on the current trend.
  - (30) The Commission finds that the use of monitoring data is appropriate for identifying any current or historical problems with achieving the ozone target value. The methods employed appear therefore to be suitable. It is established that there were no reported exceedances of the ozone related target value linked with the current use of summer petrol with a vapour pressure up to 70 kPa. On this basis, the Commission finds that it is unlikely that the target values for ground level ozone would be exceeded in 2021 and forward. The Commission finds no reasons to object to the request in this part.
  - (31) Fifth, in order to assess compliance with air quality limit value for benzene, Denmark provided information as set out under point 4.2.3 of the Guidance note.
  - (32) With respect to benzene, the limit value of 5 µg/m<sup>3</sup> may not be exceeded as annual average for a calendar year as from year 2010, as specified by the Air Quality Directive. Benzene concentrations are measured and monitored at one urban street station in Denmark (Jagtvej, Copenhagen). The information submitted indicates that

<sup>7</sup> Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe; OJ L 152, 11.6.2008, p. 1–44.

<sup>8</sup> AOT40 - Accumulated Ozone exposure over a Threshold means the sum of the differences between hourly concentrations greater than 80 µg/m<sup>3</sup> (= 40 parts per billion), source: European Environment Agency.

there are no exceedances of the benzene target value at this station. Benzene concentration at the measurement station has decreased by more than 90% since 1998 and has not exceeded the limit value since 1999, while concentration value is less than 1 µg/m<sup>3</sup> in 2018 which is well below the EU limit value. Denmark indicated that no impact of the derogation is expected on the concentration of benzene.

- (33) The Commission concludes that Denmark ensures a full compliance with the benzene limit value and that any such exceedance is unlikely to arise until 2030, due to the application of the derogation. The Commission raises no objection to this part of the notification.
- (34) In conclusion, the Commission takes into account that the Danish fuel supply situation is strongly determined by environmental legislation prohibiting the use of MTBE to secure ground water purity. The impacts from possible alternative solutions such as investing in up-grading domestic production or the supply of necessary components through imports are shown to have considerable economic impacts as well as from an energy security point of view. The Commission also acknowledges Denmark's dependency on trade, with predominantly Norway and Sweden, in petrol and petrol components, as well as Denmark's full compliance with the Union legislation on air quality and air pollution.
- (35) In light of the above considerations, the Commission finds that these conditions justify a duration of a derogation limited to the 31 December 2030.

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 31 December 2030.

*Article 2*

The Commission shall revoke the decision if, based on updated data, the Commission's assessment shows that the derogation will result in a lack of compliance with Union legislation on air quality or air pollution.

*Article 3*

This Decision is addressed to the Kingdom of Denmark.

Done at Brussels, 18.8.2021

*For the Commission*  
*Frans TIMMERMANS*  
*Executive Vice-President*