



EUROPEAN COMMISSION

Brussels, 15.6.2011
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COMMISSION DECISION

of 15.6.2011

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

(Only the English text is authentic)

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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, Directive, 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 2 June 2010, the United Kingdom ('UK') notified a request for derogation to permit the placing on the market during the summer period of petrol with a maximum vapour pressure derogation of 70 kPa, due to its low ambient summer temperatures, until the end of 2020. 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.

¹ OJ L 350, 28.12.1998, p.58-68.

- (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 legislation on air quality or air pollution, including limit values and emissions ceilings, the application shall be rejected.
- (5) The Directive had to be transposed into national law by 31 December 2010 and entered effectively into force in the Member States on that date. 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.
- (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 report, and asked the United Kingdom by letter dated 22 October 2010 to complete the notification. The United Kingdom submitted additional information by letter registered at the Commission on 29 November 2010.
- (8) The letter of 29 November 2010 concluded the submission of information. The Commission therefore has six months until 29 May 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 United Kingdom provided information on petrol sales, export and import conditions and distribution in the United Kingdom, 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) The United Kingdom claims that its refineries were not originally designed to produce petrol of low vapour pressure of 60 kPa and are currently incapable of producing petrol blends of sufficiently low vapour pressure.
- (15) Data supplied by the UK indicates that the majority of the petrol sold in the UK is sourced from domestic production. The current UK forecast for total domestic petrol demand amounts to 15.8 million tonnes, and is forecast to decline to 11 million by 2020. Imports are small and a substantial proportion of domestic production is exported.
- (16) Concerning UK export, for which a forecast beyond 2009 was not provided, the submitted data further indicates that the volatility of petrol exports in 2006 to 2009 ranged from 54-62 kPa. In 2009 the total exports amounted to approximately 7.8 million tonnes, of which about 4.9 million were exported to the US. The US is a major export market for the UK, and typically requires low volatility petrol pre-blend, where

the Reid Vapour Pressure ('RVP')² specification is 62 kPa, to enable ethanol blending. For this reason pre-blends with lower RVP of 54 kPa are supplied to the US.

- (17) The United Kingdom argues that the proportion of annual sales requiring derogation is 54% based in a period from May to September and a preceding six-week period. The summer period runs from 1st June to 31st August. In the winter the UK adopts the F Volatility Class, which allows a maximum RVP of 100 kPa between the 15th October and 15th April. During the spring and autumn, the UK applies a transitional period whereby both volatilities can exist and thus the effect specification limit remains 100 kPa.
- (18) The UK states that its refining industry is not State controlled and operates commercially. The UK industry has provided information that there are no plans to implement changes in the absence of UK legislation to set the 60kPa vapour pressure limit during the summer period. The UK suggests that technical solutions would need to be implemented during refinery shutdowns and given the scheduling of refinery turnarounds and the need for planning, some refiners might require a lead time of up to 8 years.
- (19) The Commission notes the fact that EU legislation, through the Directive, on vapour pressure should be transposed and in force in the Member States, including the United Kingdom, as of 1 January 2011. The Directive has been adopted in 2009, and therefore a well known legal pre-requisite for taking action and enforce measures to comply with the legislation.
- (20) The United Kingdom stresses that the necessary refinery upgrades to comply with a 60 kPa vapour pressure limit will require additional distillation capacity. Such upgrades would by necessity be conducted during a refinery shutdown. UK further considers that the lead time for these installations could be up to 8 years, based on refinery turnarounds typically occurring every four years and, that plans may not be sufficiently advanced to install at the next turnaround. UK has submitted a detailed overview on the planned and performed turnarounds of UK refineries. From this it is shown that the latest planned turnaround is expected for 2018.
- (21) The Commission notes the fact that the United Kingdom's refineries have considerable capacity to produce near to vapour pressure compliant fuel. It is however clear that different market fuels are based on different recipes.
- (22) The UK has indicated, concerning alternative blending, that gasoline blends vary between refineries and offers some typical ranges of gasoline components in summer gasoline products for domestic consumption and for exports. It is to be noted that the UK did not explore the technical feasibility, nor the financial cost, arising from reformulating domestic petrol along the lines of petrol export blends, although it does remove the highly volatile butane from the export designated production and puts the extracted butane on the market for profit.

² RVP is a common measure of the [volatility of petrol](#). It is defined as the absolute [vapor pressure](#) exerted by a liquid at 100 °F (37.8 °C) as determined by the test method ASTM-D-323. The test method applies to volatile crude oil and volatile nonviscous petroleum liquids, except [liquefied petroleum gases](#).

- (23) Furthermore in this context it is noted that the volumes which are dedicated for export, most notably the US, with a near to compliant vapour pressure, are mostly not meeting to EU petrol specifications, and consequently can not be transferred to EU markets directly.
- (24) To achieve the required EU vapour pressure limit refineries have to blend and fit components taking into account their different vapour pressure properties. It is apparent to the Commission that the UK supply situation of appropriate components demands either an increased level of imports or the adaption of its domestic producing capacity.
- (25) Concerning its claim, that upgrading requires a shutdown to be accomplished, the UK has, while considering the refineries' age and size, shown a readiness to the possibility to accommodate this kind of work in various ways. For example, UK envisage the possibility to install new distillation columns at processing units, by building them alongside the existing equipment or fabricates new distillation towers off-site and connecting them at a scheduled individual process turnaround. This means that the capacity for compliance would be considerable and also the time designated for this shortened.
- (26) The cost of undertaking suitable refinery investment is estimated by the UK to around £46 million per year over a 5 year period, plus additional operating costs of £106 million per year. The UK has also submitted information concerning the overall refinery market situation, where competitiveness and profitability are shown to be challenged, both from global effects and the discussed measures to comply with vapour pressure regulation.
- (27) Concerning the financial effects of adapting to comply with the legislation, the Commission see the need to underline that it is inevitable that compliance measures will lead to costs, and that this as such is not a valid single ground for granting a derogation. However, the information provided from the United Kingdom about costs and the following impacts are credible and reasonable and the Commission finds these acceptable.
- (28) On the basis of the submitted information, the Commission has no reason to question the notification, as concerns the relevant socio-economic criteria.
- (29) 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 pollutants³ (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

³ OJ L 309, 27.11.2001, p. 22–30.

- 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’.
- (30) The United Kingdom supplied information on the VOC emissions for 2007 (942kt), projections for 2010 (814kt) and projections to 2020 (717kt). These indicate that the UK will comply with its NEC by 2010 (1,200kt). The existing use of petrol with a vapour pressure exceeding 60 kPa has been estimated to increase emissions by approximately 2kt in 2020, meaning a 1.45kt increase from fuel distribution and storage and a 0.54kt increase due to evaporative emissions from vehicles. Concerning the reported emissions data these also include the impacts of the use of petrol with a vapour pressure of the 70kPa as this is currently applied in the UK. Emissions in 2007 are well below the 1200kt ceiling and are projected to decline in the future. For the United Kingdom is expected to be almost 400 kt below its 2010 NMVOC NEC.
- (31) The UK has also submitted details of some measures already taken to limit evaporative emissions from the storage and distribution of petrol including Stage II PVR and a national industrial pollution control regime that reportedly goes beyond that specified in European legislation such as the Solvent Emissions Directive.
- (32) The UK emissions inventories are produced by a consultancy and state that the methodologies employed to estimate emissions are consistent with those required under Directive 2001/81/EC. Evaporative emissions have been estimated using the COPERT 4 methodology which is described in the EMEP/CORINAIR Emission Inventory Guidebook. Further details of the methodologies applied including key assumptions has been provided in a supporting consultancy report, included in the UK’s supplementary information.
- (33) The Commission notes that the methodologies employed appear to be consistent with those required under Directive 2001/81/EC and finds that the United Kingdom has provided sufficient information that there is no risk of non-compliance with the 2010 NEC ceiling and forward.
- (34) The Commission concludes, taking into account the impacts of use of the petrol with vapour pressure of 70 kPa, that NEC-D limits are not surpassed nor projected to be exceeded. The Commission therefore sees no grounds for objecting to this part of the notification.
- (35) 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 Europe⁴ (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

⁴ OJ L 152, 11.6.2008, p. 1–44.

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.
 - (c) Whether additional measures to reduce VOC emissions are envisaged that would offset any increase in emissions following implementation of the derogation.
- (36) The United Kingdom has submitted information on the target value for ozone, which consists mainly of a summary of current monitoring practices in the United Kingdom, including 79 automatic monitoring sites for recording ozone concentrations. According to the UK monitoring, the ozone target value has been exceeded since 2005 but this excess is now limited to one site in 2008. However concerning the potential changes in ozone concentration, the submitted information seems to be modelled for 2020 to show possible implications of the derogation on ozone concentrations. No modelling results have been submitted for 2010.
- (37) The United Kingdom has used two different models; the Ozone Source Receptor Model (OSRM) and the Community Multiscalar Air Quality (CMAQ) Model. The UK also submitted two studies, one from 2007 and the other one from 2010, looking at the impacts of the derogation on emissions and ozone concentrations. These studies however only consider changes in evaporative emissions from vehicles and not other sources. It is to be noted that in the 2007 report the emissions saving of 60kPa compared to 70kPa summer petrol due to evaporative emissions from vehicles is 0.54kt, however, in the 2010 report, the aforementioned differences between 68kPa petrol and 58kPa petrol of 1.45kt from fuel distribution and storage and of 0.54kt from road vehicles are quoted.

- (38) In addition, impacts on ozone concentrations are not modelled as such. Instead the study has estimated the impacts of the derogation on UK Photochemical Ozone Creation Potential (POCP) weighted NMVOC emissions, which essentially is a proxy for possible impacts on ozone concentrations. The supplementary information states that this impact is expected to be less than 0.1% in 2010, 2015 and 2020.
- (39) The Commission acknowledges that UK has undertaken some measures to limit evaporative emissions from the storage and distribution of petrol including Stage II PVR and a national industrial pollution control regime that reportedly goes beyond that specified in European legislation.
- (40) The Commission concludes that the methods employed appear to be suitable. However the possible implications of the derogation on ozone concentrations have been modelled for 2020 only. Whilst some information has been provided on potential impacts in earlier years this information is based on changes to evaporative emissions from vehicles only and it has not been modelled. The Commission finds that it is not possible to exactly determine whether the derogation would have any implications for achieving the target value in 2010.
- (41) The Commission recognizes that the OSRM and CMAQ modelling results suggest that the derogation will not have any impact on the number and location of exceedences of the target value in 2020. However the Commission further takes into account that the modelling results provided indicate that the derogation will have no detectable impact on ozone concentrations in 2010 and 2015 although bearing in mind that it is based on changes to evaporative emissions from vehicles only. The Commission concludes that it has been sufficiently shown that the derogation is expected to have a minimal impact on the number of exceedance days in the UK and that it is not evidenced that the target value for ozone will be exceeded.
- (42) 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.
- (43) The United Kingdom has submitted information that includes a summary of current monitoring practices for benzene in the UK, covering 5 automatic and 35 non-automatic monitoring sites, together with a report. According to the monitoring results for 2005-2008, the benzene target value has not been exceeded at any of these sites. From this data it is clear that the impacts of the use of petrol with a vapour pressure exceeding 60 kPa are included.
- (44) The UK has used the COPERT methodology to estimate the changes in evaporative emissions of NMVOC, including benzene. However, no concentration modelling has been undertaken. Nor has the UK presented any quantitative information on the potential impacts of the derogation on benzene concentrations. From the submitted report on the estimation of impacts of a derogation on benzene emissions it is apparent that consideration has only been taken to changes in evaporative emissions from vehicles and not from all sources i.e. fuel storage and distribution.
- (45) It is to be noted that the United Kingdom's latest submission to the Commission under Directive 2004/461/EC on 5 November 2009 show that all zones complied with the benzene limit value in 2008.
- (46) The Commission finds that the UK has no existing problems with complying with the benzene limit value and that any such exceedance is unlikely to arise by 2010, with or without the application of the derogation. As the UK is already applying the use of petrol containing bio-ethanol with a maximum vapour pressure exceeding 60kPa and is complying with the limit value, it is unlikely that any issues will arise in the immediate future. The Commission raises no objection to this part of the notification.
- (47) The United Kingdom also points out safety issues as a potential risk of increased fires during refuelling as a result of supplying lower vapour pressure petrol. The UK cites incidences in the US and in Finland, Germany and France. Upon request UK has not presented any proof or evidence to confirm that the vapour pressure of petrol is the essential cause of such incidences. The Commission, which acknowledges the scientific results, considers the UK assertions as ungrounded.
- (48) The United Kingdom has argued for a derogation until 2020. As main grounds it refers to the disproportionate costs for measures to comply on refinery level and further its sensible market and competitiveness situation.
- (49) Furthermore it is notable in this context, that the Directive is in force since 1 January 2011 and that relevant legislation therefore is in place and applicable in the United Kingdom, which constitutes a solid ground for executing adapting measures to eventually comply with the vapour pressure regulation.
- (50) In summary, the Commission finds that considering the UK refinery market situation, and the estimated costs for investments to comply with legislation compared with its notable capability to increase distillation capacity within a foreseeable time, justifies a derogation to the end of 2020, where account is taken for the substantial actions to be taken and planned for to comply with EU fuel quality legislation.

HAS ADOPTED THIS DECISION:

Article 1

The Commission raises no objection to the notification from the United Kingdom of Great Britain and Northern Ireland to permit the placing on the market during the summer period of petrol with a maximum vapour pressure of 70kPa (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.

Article 3

This Decision is addressed to the United Kingdom of Great Britain and Northern Ireland.

Done at Brussels, 15.6.2011

For the Commission
Connie HEDEGAARD
Member of the Commission

