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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND
THE COUNCIL**

**under Article 7 of Directive 2009/126/EC of the European Parliament and of the Council
of 21 October 2009 on Stage II petrol vapour recovery during refuelling of motor
vehicles at service stations**

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1. INTRODUCTION

Petrol storage and distribution is a source of emissions to air of volatile organic compounds (VOCs). These are precursors of tropospheric ozone (also referred to as ground-level ozone), a greenhouse gas which causes health problems and damages vegetation (thus reducing crop yields). In addition, some VOCs, such as benzene and toluene, also have harmful properties, e.g. chronic or acute toxicity.

Two complementary directives aim jointly to reduce VOC emissions from the storage and distribution of petrol:

- Directive 94/63/EC¹ concerning emissions of volatile organic compounds (VOC) from the storage of petrol and distribution from terminals to service stations (the VOC-I Directive), which covers refineries and the delivery of petrol to service stations; and
- Directive 2009/126/EC² concerning petrol vapour recovery during refuelling of motor vehicles at service stations (the VOC-II Directive).

Article 7 of the VOC-II Directive requires the Commission to review its implementation (in particular certain technical issues) and to report its findings to the European Parliament and the Council.

In its Communications on *Regulatory Fitness and Performance (REFIT): results and next steps*³ and the *REFIT State of play and outlook*,⁴ the Commission announced that it was launching the evaluation of both VOC Directives.

It was decided that it would be most efficient to carry out the implementation review of the VOC-II Directive and the evaluation of the two VOC Directives in parallel. Full details on the review and evaluation can be found in Commission Staff Working Document on the REFIT evaluation of Directive 94/63/EC on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations and Directive 2009/126/EC on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations (SWD(2017)65) and the study commissioned to support this work.⁵

¹ European Parliament and Council Directive 94/63/EC of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations (OJ L 365, 31.12.1994, p. 24-33).

² Directive 2009/126/EC of the European Parliament and of the Council of 21 October 2009 on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations (OJ L 285, 31.10.2009, p. 36-39).

³ Annex to *Regulatory Fitness and Performance (REFIT): results and next steps*, Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (COM(2013) 685 final); http://ec.europa.eu/smart-regulation/docs/20131002-refit-annex_en.pdf

⁴ COM(2014) 368; see also the Commission's Better Regulation website: http://ec.europa.eu/smart-regulation/refit/index_en.htm

⁵ *Evaluation of Directive 1994/63/EC on VOC emissions from petrol storage and distribution and Directive 2009/126/EC on petrol vapour recovery — final evaluation report*, Amec Foster Wheeler *et al.* (2016); <http://bookshop.europa.eu/en/evaluation-of-directive-1994-63-ec-on-voc-emissions-from-petrol-storage-distribution-and-directive-2009-126-ec-on-petrol-vapour-recovery-pbKH0416107/>

This report focuses on the outcome of the implementation review and the follow-up to the evaluation of the VOC-II Directive.

2. THE VOC-II DIRECTIVE

2.1. What does the Directive do?

The VOC-II Directive ensures the recovery of harmful petrol vapour that would otherwise be emitted during the refuelling of a motor vehicle at a service station. Eventually, all petrol pumps in the EU (except at service stations with very small annual throughputs) will have to be equipped to recover this vapour.

2.2. What are the key measures?

The Directive applies to new service stations, and those that have undergone major refurbishment, that have an annual throughput of over 500 m³ of petrol, and service stations with an annual throughput of over 100 m³ that are located under living accommodation (Art. 3(1) and (2)). It requires them to install 'stage II' petrol vapour recovery (PVR) systems. Large service stations (with an annual throughput in excess of 3 000 m³) must install PVR systems by 2018 (Art. 3(3)).

The PVR equipment must be certified by the manufacturer in accordance with relevant technical standards and be able to capture at least 85 % of the petrol vapour (Art. 4). Its efficiency must be tested once a year, or every three years if the service station has automatic monitoring equipment (Art. 5(1) and (2)).

Service stations that have installed PVR equipment must notify consumers of the fact by placing a sign, sticker or other notification on or around the petrol dispenser (Art. 5(3)).

2.3. Adaptation to technical progress

In accordance with Article 8 of the Directive, a harmonised test method to determine the efficiency of PVR systems was established by Directive 2014/99/EU,⁶ which amended Articles 4 and 5 of the VOC-II Directive to include references to standards EN 16321-1:2013 and EN 16321-2:2013 respectively.

3. IMPLEMENTATION OF THE VOC-II DIRECTIVE

3.1. General transposition and implementation

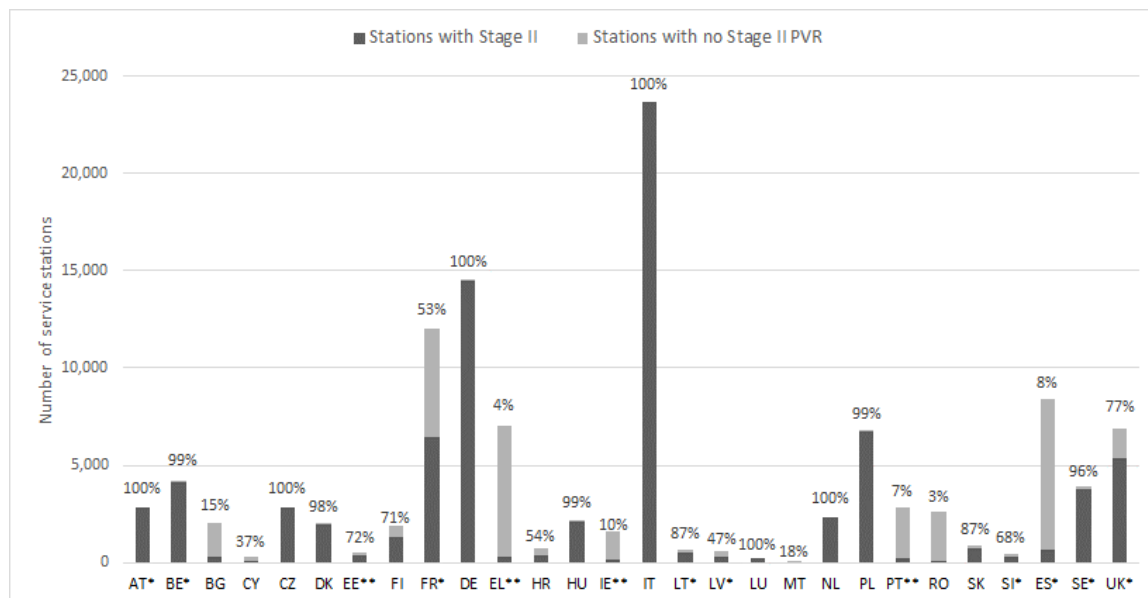
The Directive has been transposed into national law by all Member States, albeit with a delay in some cases. Infringement proceedings for late transposition were launched in March 2012 against 11 Member States: Austria, Bulgaria, Cyprus, Germany, Greece, Italy, Poland, Portugal, Romania, Slovenia and Sweden. The proceedings were closed in 2012 in nine cases and in 2013 in the other two, after the Member States concerned had notified all their transposing measures.

Of all service stations in the EU, 72 % are currently fitted with stage II systems. Given that smaller service stations are exempt and not all implementation deadlines have passed

⁶ Commission Directive 2014/99/EU of 21 October 2014 amending, for the purposes of its adaptation to technical progress, Directive 2009/126/EC on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations (OJ L 304, 23.10.2014, p. 89-90); <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1468508694487&uri=CELEX:32014L0099>

(see section 2.2 above), this high rate suggests that good progress is being made. As shown in Figure 1, however, the situation varies significantly across Member States: while 15 Member States have reached or exceed the average of 72 %, others seem to be lagging behind.⁷

Figure 1: Uptake of stage-II systems by Member State (estimated)



Stakeholders’ replies to the consultation indicate that most Member States have encountered few, if any, technical issues or interpretation problems in implementing the Directive. This can be partly explained by the fact that many already had legislation in this area. Some individual issues were mentioned, such as a lack of clarity as to the meaning of ‘major refurbishment’; however these are being clarified through discussion and exchange of experience with Member States.

3.2. Article 7 implementation review

Article 7 of the Directive requires the Commission to review in particular:

- (a) the 100 m³/year threshold referred to in Article 3(1)(b) and (2)(b) of the Directive and Article 6(3) of Directive 94/63/EC;
- (b) the in-service compliance record of stage II PVR systems; and
- (c) the need for automatic monitoring equipment.

3.2.1. The 100 m³/year threshold

The Directive imposes obligations on service stations with an annual throughput of over 100 m³ (Art. 3(1) and (2)). It was considered that, below this threshold, the cost associated with the measures would not be proportionate to the potential environmental benefits.

⁷ The data refer to the total number of service stations, including small ones and those for which the deadlines have not passed. Therefore, depending on the local market situation, low coverage rates do not necessarily suggest a compliance problem.

The consultation showed that stakeholders generally accepted the threshold as appropriate and that such exemptions for small stations also apply outside the EU. Only 7 out of 45 responded that the threshold should be higher, whereas 3 Member States and 3 industry stakeholders called for a lower threshold.

Lowering the threshold would however not currently be justified given the scale of potential emission reductions and the additional cost involved.

3.2.2. In-service compliance record

Article 4 of the Directive sets out minimum efficiency standards for recovery equipment. Article 5 provides for periodic checks to verify performance.

The assessment showed that commercially available equipment can achieve vapour recovery efficiency of 85-95 %. However, for systems installed at stations before the obligations entered into force, it was not always possible to retrieve the necessary documentation. The degree of efficiency varies in practice according to the specific equipment and how it is used. It is also influenced by external factors such as temperature and fuel composition. Generally, equipment was found to work according to the minimum standard obligations, but the analysis also highlighted the importance of routine (at least annual) tests, as the vapour/petrol ratio can easily deviate from optimal values. Some Member States also require testing of ‘vapour-tightness’, which is not obligatory under the Directive.

3.2.3. Automatic monitoring equipment

The Directive does not require the use of automatic monitoring equipment, but provides for reliefs in the control schedule if such equipment is installed (Art. 5(2)). However, automatic monitoring equipment could prevent increased emissions, e.g. due to bad maintenance (see previous section).

It emerged from the stakeholder consultation that the use of automatic monitoring systems is mandatory in three Member States,⁸ with uptake generally low in those where use is voluntary. The main barriers to uptake are high cost and lack of knowledge.

The potential for additional emission reductions from the generalised use of automatic monitoring systems throughout the EU appears to be limited. The voluntary approach allowed industry or Member States to adopt such systems where it was deemed useful, e.g. in the light of national circumstances.

4. EVALUATION OF THE VOC-II DIRECTIVE

4.1. Background

The Directive was evaluated in the context of the Commission’s Regulatory Fitness and Performance (REFIT) programme on the basis of its effectiveness, efficiency, relevance, coherence and EU added value.

During the evaluation, particular attention was paid to detecting and assessing regulatory burden and identifying opportunities for simplification.

⁸ Austria, Germany and Hungary.

4.2. Result

The Directive was found to be effective, efficient, coherent and relevant, and to have EU added value.

The evaluation showed that the Directive has been effective in contributing to the reduction in VOC emissions from petrol during the refuelling of motor vehicles at service stations. Today, the activities covered by the VOC-I and VOC-II Directives contribute only 0.7 % of all anthropogenic VOC emissions in the EU.

The Directive was also found to be efficient. The available data suggest that the costs are largely proportionate to the benefits, in particular if one takes into account the additional non-monetised benefits and the revenue generated from the re-sale of recovered petrol. Savings resulting from reduced harmful effects on health and the environment have been estimated between €92-€270m, whereas estimated financial benefits resulting from the sales of recovered petrol were estimated €77m. Annual costs for capital and maintenance have been estimated €199m, whereas administration and compliance would cost €13m. It should be noted however that, due to the limited amount of data available, it was not possible to conduct a robust cost-benefit analysis.

The Directive is coherent with other Union legislation. Claims by some stakeholders of inconsistencies with the Fuel Quality Directive⁹ and the VOC-I Directive were not found to be accurate or significant.

The Directive remains relevant as a response to environmental and health threats. It provides a 'safety net' of environmental protection, also in view of relevant international commitments. It also remains relevant in the light of the clean-air policy objectives established in the 7th Environment Action Programme¹⁰ and the Clean Air Policy Package.¹¹ Some stakeholders claimed that the obligation to display a sign, sticker or other notification in the vicinity of petrol dispensers with PVR equipment (Art. 5(3)) would not influence consumer choice as desired, as this would be driven by price and convenience rather than environmental concerns. However, the evaluation concluded that even in this case legislative change may be more burdensome than simplification.

The consultation acknowledged the benefits of EU-level regulation in this area. The Directive has been important in establishing a common EU-wide approach and has stimulated cross-border trade in petrol and equipment.

5. CONCLUSION

The VOC-II Directive has been found to be effective, efficient, coherent and relevant, and to have EU added value. It is also generally well implemented by Member States.

⁹ Directive 2009/30/EC of 23 April 2009 amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC, OJ L 140, 5.6.2009, p. 88–113

¹⁰ Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet';
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013D1386>

¹¹ http://ec.europa.eu/environment/air/clean_air_policy.htm

The Commission will continue to cooperate with Member States to assist them in ensuring full implementation of the Directive.