Briefing
Implementation Appraisal

European Parliament

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Clean Vehicles Directive

Directive 2009/33 on the promotion of clean and energy-efficient road transport vehicles

This briefing is one in a series of 'implementation appraisals', on the operation of existing EU legislation in practice. Each such briefing focuses on a specific EU law which is likely to be amended or reviewed, as envisaged in the European Commission's annual work programme. Implementation appraisals are aimed at providing a succinct overview of publicly available material on the implementation, application and effectiveness to date of an EU law, drawing on input from EU institutions and bodies, as well as external organisations. They are provided to assist parliamentary committees in their consideration of new Commission proposals, once tabled.

Summary
According to a recent evaluation of the Clean Vehicles Directive performed by the European Commission, the directive seems to raise concerns about whether the incentives included in it actually reach their intended aim, notably to increase the demand for and deployment of cleaner vehicles.

Indeed, performing the evaluation was a complicated task, due to the significant data gaps that were found. This was particularly true when evaluating the implementation of the directive and its associated impacts, notably due to the lack of structural monitoring at EU or Member State level and the limited amount of published research and stakeholder positions available. Yet, regardless of the insufficient data, the directive appears to have had little impact with regard to incentivising a market uptake of clean vehicles and has therefore had a very limited impact on reducing the greenhouse gas emissions and air pollutants emitted from publicly procured vehicles.

Ultimately, the Commission decided to revise rather than withdraw the directive, In this review process, the Commission would ensure that some appropriate reporting requirements are included in the directive. In addition, as there appear to be some barriers to the use of the monetisation methodology, the Commission would be able to consider to further develop the information available on the Clean Vehicle Portal and to provide contracting authorities with further guidance. Finally, the scope could be improved for making the directive more effective and efficient.

EP committee responsible at time of adoption of the EU legislation: Environment, Public Health and Food Safety (ENVI).
Date of adoption of original legislation in plenary: 22 October 2008.
Transposition deadline: by 4 December 2010.
Planned date for review of legislation: by 4 December 2012 and every two years thereafter, the Commission will draft an implementation report on the actions taken by the Member States to promote the purchase of clean and energy-efficient road transport vehicles (Article 10 of the Clean Vehicles Directive). These reports will compare the nominal and relative number of vehicles purchased corresponding to the best market alternative in terms of lifetime energy and environmental impacts, within each of the categories of vehicles listed in Table 3 of the Annex, to the overall market for these vehicles, and will estimate how the options

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referred to in Article 5(3) have affected the market. So far, the Commission has published only one such implementation report, in April 2013.[1]

Timeline for new amending legislation: by 4 December 2012, the Commission will examine whether the options referred to in Article 5(3) would need adjustments. So far, the Commission has not published a proposal amending the Clean Vehicles Directive; such a proposal is expected in the second quarter of 2017 (see European Commission's 2017 work programme[2] and Annex I[3] to it).

1. Background

There is a broad consensus among the scientific community that human emissions of greenhouse gases (GHG) are both causing and contributing to climate change. Under the 1992 United Nations Framework Convention on Climate Change (UNFCCC), there was a general agreement to limit the increase in global warming to below 2 degrees Celsius compared with the average temperature in pre-industrial times, in order to prevent the worst impacts of climate change.

The EU has long been committed to international efforts to tackle climate change. Having played a key role in the entry into force of the world's first legally binding treaty to reduce GHG emissions, the Kyoto Protocol, the EU has consistently championed the implementation of measures to reduce GHG emissions within its territory. The EU can also be considered to have successfully contributed to the conclusion of the Paris Agreement in December 2015, having been a key player in the 'high ambition coalition' calling for significant mitigation commitments. [4]

In line with its extensive international involvement, the EU has developed an internal framework for the reduction of GHG emissions. In March 2007, the European Council endorsed [5] the Commission's integrated energy policy package[6], in which it declared the EU's major commitment to unilaterally reduce GHG emissions by 20 % by 2020, compared with 1990 levels. In October 2014, the EU heads of state or government set goals that went even further, by pledging to achieve a reduction of GHG emissions by 40% by 2030, [7] compared with 1990 levels. In addition, binding targets to further improve energy efficiency by 27%, and to attain a level of at least 27 % for the share of renewable energy consumed in the EU by 2030, have been adopted.

On 20 July 2016, the Commission proposed a package of measures to reduce emissions in the transport, buildings, agriculture, waste, land-use and forestry sectors. The package consists of four elements:

- an overarching communication on 'Accelerating Europe's transition to a low carbon economy';[8]
- a legislative proposal on binding annual GHG emissions reductions by Member States from 2021 to 2030 (the Effort-Sharing Proposal);[9]
- a legislative proposal on the inclusion of GHG emissions and removals from land use, land-use change and forestry into the 2030 climate and energy framework (the LULUCF Proposal);[10] and
- a European strategy for low-emission mobility.[11]

According to the Commission's communication on 'A European Strategy for Low-Emission Mobility'[12], by the middle of the 21st century GHG emissions from transport will need to be at least 60 % lower than in 1990 and to be firmly on the path to reaching a zero value for both GHG and pollutant emissions, in order to meet

[1] COM(2013) 214
[2] COM(2016) 710
[3] COM(2016) 710, Annex 1
[4] Foie gras, oysters and a climate deal: How the Paris pact was won, Climate Home website, 14.12.2015.
[5] Presidency conclusions of the European Council, 8-9 March 2007.
[6] COM (2007) 1
[7] European Council conclusions of 23-24 October 2014.
[8] COM(2016) 500
[9] COM(2016) 482
[10] COM(2016) 479
[11] COM(2016) 501
[12] Ibid

the EU's emissions targets. One important prerequisite for achieving these ambitious goals is to ensure faster deployment of clean vehicles. Public procurement, which exercises a strong influence on consumption and production and is a substantial driver of economic growth, jobs and competitiveness, can serve to speed up such deployment. The role of public procurement in this regard is explained by the fact that the public sector is currently the largest consumer in the economy and that government expenditure on works, goods and services represents around 14 % of EU GDP, accounting for roughly €1.8 trillion annually.[13] Yet again, public procurement can also be used effectively as an essential tool for minimising the damage caused by human beings to the environment, while maintaining an economic equilibrium.

With regard to the transport sector, the Clean Vehicles Directive requires public bodies to take into account the lifetime energy and environmental impacts when purchasing road transport vehicles. This represents a sectorial complement to the EU horizontal procurement legislation[14]. It supports the EU's environmental and climate policies by focussing on the main aims of the transport policy concerning the challenges related to the environment, decarbonisation and trade.

2. The legislation

Directive 2009/33/EC on the promotion of clean and energy-efficient road vehicles (the Clean Vehicles Directive), is a **public procurement-related instrument**.

It aims to promote and **incentivise the market for clean and energy-efficient road transport vehicles**. In particular, it aims to influence the market for standardised vehicles produced in larger quantities (such as passenger cars, buses, coaches and trucks), by ensuring a level of demand for clean and energy-efficient road transport vehicles that is sufficiently substantial to encourage manufacturers and the industry to invest in and to further develop vehicles with low levels of energy consumption, carbon dioxide (CO_2) emissions and pollutant emissions.

The directive applies to vehicles purchased by contracting authorities and contracting entities as defined by the public procurement directives, [15] and to public transport operators as defined by the Regulation on public passenger transport service. [16]

The main objective of Directive 2009/33/EC is to increase the demand for and deployment of cleaner vehicles.

The directive requires that lifetime operational energy consumption, CO_2 emissions and emissions of oxides of nitrogen (NO_x), non-methane hydrocarbons (NMHC) and particulate matter (PM) are taken into account, and defines a methodology for calculating them. Thereby, **the Clean Vehicle Directive introduces, for the first time, sustainability obligations into public procurement law for the whole EU**.

Article 5(3) of the directive gives contracting authorities three options for taking energy and environmental impacts into account:

- to use a set of technical specifications for energy and environmental performance in the documentation for the procurement of road transport vehicles;
- to include energy and environmental impacts in the purchasing decision by using these impacts as award criteria in the context of a procurement procedure;

[13] European Commission (2015) Public Procurement Indicators 2013. These figures exclude spending by utility companies; earlier estimates (2011), which included utility procurement, placed it at around 19 % of EU GDP, or more than €2.3 trillion.
[14] Mainly Directive 2014/24/EU on public procurement, Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors, and Directive 2014/23/EU on the award of concession contracts.
[15] Directive 2004/17/EC of the European Parliament and of the Council coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors; Directive 2004/18/EC of the European Parliament and of the Council on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts
[16] Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road

- to include energy and environmental impacts in the purchasing decision by monetising them and calculating an 'operational lifetime cost', in accordance with a set ('harmonised') methodology provided in the directive. This **monetisation approach** internalises external transport costs and is aimed at giving an advantage to more energy-efficient and cleaner vehicles so as to accelerate their market penetration.

The Clean Vehicles Directive requires that energy and environmental impacts are taken into account when vehicles are purchased by public authorities or private operators performing public transport services.

When using the first two options, the directive does not set any minimum specifications for environmental performance or any minimum weighting for the award criteria – these may be determined by the individual purchasing organisation. When using the third option – the monetisation approach – the precise methodology of the directive must be followed.

3. EU-level reports

3.1. European Commission

Energy union package communication,[17] 25 February 2015

In this document, the Commission underlines that the EU needs to speed up energy efficiency and decarbonisation in the transport sector, and reiterates that further action will be taken to create the right market conditions for increasing the deployment of alternative fuels and for promoting procurement of clean vehicles further.

Commission staff working document on the implementation of the 2011 White paper on transport,[18] 1 July 2016

The Commission states that further action will be taken to promote the procurement of clean vehicles, such as clean, alternatively fuelled buses, as announced in the energy union communication.[19]

3.1.1. Implementation report

Article 10 of the directive sets out the reporting requirements towards the European Commission, which is to draft an implementation report by 4 December 2012 and every two years thereafter. The report must focus on the actions taken by the Member States to promote the purchase of clean and energy-efficient road transport vehicles. So far, the Commission has drafted a single implementation report,[20] in April 2013, failing to fulfil its obligation.

Based on a monitoring report[21]prepared for the Commission, the implementation report states that **only three Member States have met the transposition deadline** of 4 December 2010. However, by 2012, the directive had been transposed by all but one Member State, Latvia, which fully transposed it in 2013.

The assessment of the impact of the Clean Vehicles Directive was seriously hampered both by the **absence of reporting obligations** for the Member States and the **late implementation** by a number of them.

According to the report, the majority of Member States made use of all three options provided for in Article 5(3) when transposing the directive into their national legislation. This allowed public authorities to include the energy and environmental impacts of vehicles in procurement procedures by setting either technical

[17] COM(2015) 80
[18] SWD(2016) 226
[19] COM(2015) 80
[20] COM(2013) 214
[21] Completed in October 2012, by consultants Ricardo-AEA with TEPR, at the request of the Commission's DG MOVE, on the state of play of the implementation of the Clean Vehicles Directive in the EU's 27 Member States.

specifications or including the impacts as award criteria. In the latter case, these impacts can also be monetised. The report concludes that **additional guidance appears to be necessary** for the application of these different options, especially regarding the monetisation approach. Member States could provide this guidance, paying particular attention to their relevant national legislation.

The report considers both the Clean Vehicle Portal, created by the Commission in 2009 to assist public authorities, and the **European Electromobility Observatory** (EEO), launched by the Commission in December 2012 and ensuring the collection and dissemination of key statistical data on electromobility (battery electric and fuel cell electric vehicles), as useful instruments.

Finally, the report states that there is a consensus amongst stakeholders that **the directive has had little impact on the market** for cleaner vehicles. Nevertheless, the report concludes that there is anecdotal evidence from manufacturers that more public authorities have been trying to evaluate a vehicle's lifetime costs and impacts, rather than just focus on purchasing costs. In this respect, the directive could be considered to be contributing to a shift in attitudes, which could have a more significant long-term impact on the procurement decisions of public authorities and public transport operators.

3.1.2. Evaluation report

In September 2015, the Commission published a final report on the ex-post evaluation. The report highlights three main problems concerning the Clean Vehicles Directive:

- the overall functioning of the directive;
- its ineffectiveness and inefficiency in reducing GHG and pollutant emissions; and,
- the particularly high emphasis on fuel consumption in the monetisation methodology.

The report assesses that these problems are rooted in:

- the existing limitations (such as the threshold values) on the scope of the directive, resulting in too few vehicle procurements falling in its remit;
- the availability of different options for transposing the directive into national law, leading to a great variety of national legal frameworks and causing fragmentation in procurement rules that inter alia makes it extremely difficult to monitor the legislation's impacts on an EU-wide scale;
- the current monetisation methodology, which provides counter-incentives to purchasing cleaner vehicles and, on certain occasions, conflicts with EU air quality targets. Indeed, since contracting authorities face problems when applying this methodology, they tend to select diesel vehicles, which can obstruct the achievement of the local air quality objectives, particularly in relation to NO_2. This may also conflict with EU air quality targets, as it does not lead to the purchase of the types of vehicles that are most advantageous to reducing pollutant emissions in urban areas.

The ex-post evaluation concludes that the Clean Vehicle Directive is estimated to have a low impact that is limited to specific vehicle segments, and that it is neither fit for purpose nor effective or efficient.

The report concludes that the directive continues to be relevant but would need adjusting to be more effective. In particular, it finds that objectives have not been met, namely that the directive has had little impact with regard to incentivising a market uptake of clean vehicles and has therefore had a very limited impact on reducing the GHG emissions and air pollutants emitted from publicly procured vehicles. **The key recommendation of the report is to keep the directive, but to revise it.**

Therefore, in its Low-emission mobility strategy action plan[22], the Commission announced a review for 2017 in the framework of the energy union package[23].

[22] COM(2016) 501
[23] COM(2015) 80

3.1.3. Review process

The directive also includes a **review clause**, asking the Commission to examine by 4 December 2012, whether the options set out in Article 5(3) would need adjustments. So far, the Commission has not published a revised proposal. However, the review process has started with an inception impact assessment (IIA) and a public consultation.

The Commission presented the inception impact assessment in August 2016, to tackle the main problems that the ex-post evaluation had detected. The IIA stresses the need to extend the scope of the directive, underlines that the variety of options offered to Member States restricts harmonisation, and stresses that the calculation methodology for the monetisation approach, which is overly complex, unintentionally favours certain conventionally fuelled vehicles. To address these problems, the Commission will look at different scenarios, such as:

- an improved monetisation methodology that would be mandatory and would be designed in such a way as to ensure the possibility for its continuous updating;
- abandonment of the monetisation methodology and introduction of an absolute definition of clean vehicles;
- a combination of the first two measures, leaving Member States to choose between them to meet their commitments.

As already mentioned, in addition to the inception impact assessment, the Commission conducted a 13-week public consultation from 19 December 2016 to 24 March 2017. The consultation was divided into two sections: general questions and technical questions, intended for a well-informed audience. Its aim was to collect opinions on:

- the appropriateness of the current directive's provisions relative to the objective of incentivising the deployment of clean vehicles in the EU through public procurement;
- the problems identified and the preliminary opportunities for policy responses to these problems, as identified by the Commission in the evaluation of the directive and the preparatory impact assessment work for a potential revision of the directive.

The results of the consultation will be summarised and published on the Commission's website, but no indicative timing is available.

During the review process, which is based on the findings developed in the above-mentioned final report on the ex-post evaluation, the Commission intends to ensure the inclusion of appropriate reporting requirements into the directive. In addition, the Commission might consider to further develop the information available on the Clean Vehicle Portal and to provide contracting authorities with further guidance on the use of the monetisation methodology.

3.2. European Parliament

European Parliament recommendation following the inquiry into emission measurements in the automotive sector,[24] 4 April 2017

The recommendation reaffirmed the need for the European Commission and the Member States to foster green public procurement policies. It called on the public authorities to purchase zero-emission vehicles (ZEV) and ultra-low-emission vehicles (ULEVs) for their own fleets or for (semi-)public car-sharing programmes.

European Parliament resolution on 'Sustainable urban mobility',[25] 2 December 2015

The report to the resolution underlined the importance of sustainable urban mobility plans in achieving EU targets regarding CO_2 emissions and pointed out that there is a need for a holistic approach to air pollution in European cities. It also added that Member States and local authorities should be encouraged to define

[24] 2016/2215(INI)
[25] 2014/2242(INI)

environmental performance requirements in public procurement procedures, particularly when purchasing vehicles for public transport or vehicles used by public authorities.

In its answer, the Commission took note of the need for a holistic approach to air pollution and of the request to assess the siting of urban atmospheric pollution measurers. It underlined that further integrating externalities in the public procurement decisions could be beneficial for reducing air pollution and announced that it had undertaken a revision of the Clean Vehicle Directive.

4. Questions by Members of the European Parliament

Written question by Dan Nica (S&D, Romania), 30 September 2016
The question was about what EU-level programmes and funds have been devoted to replacing current public transport vehicles with less polluting ones. It underlined that the information available in respect of evaluating the impact of the Clean Vehicle Directive is insufficient, owing to the lack of reporting requirements for the Member States.

Answer by Violeta Bulc on behalf of the Commission, 6 January 2017
In its answer, the Commission emphasised the need of reducing transport emissions. Moreover, it recalled that the Commission had started the impact assessment procedure and that a proposal for the revision of the Clean Vehicle Directive was planned for 2017.

The Commission further pointed out that the EU has earmarked € 13.7 billion from the European Structural and Investment Funds for financing urban mobility over the 2014-2020 period. This represents a 56 % increase in relation to 2007-2013, and the replacement of polluting public transport vehicle with low-emissions ones should consume most of this amount. In addition, over the 2014-2020 period the EU's research programme, Horizon 2020, will provide around €200 million for urban mobility and €650 million for smart cities, and the Connecting Europe Facility (CEF) will devote around €200 million for calls for proposals for urban nodes. It should also be noted that since 2010, EU grants worth around €370 million have been spent on innovative alternative fuels infrastructure on the trans-European network.

The Commission also stressed that it is actively engaging with local and regional authorities to facilitate and speed up the deployment of clean (alternatively fuelled) buses.

Written question by Ivo Belet (EPP, Belgium), 25 April 2016
The question recalled that the assessment of the impact of the Clean Vehicle Directive performed in September 2015 indicated that the estimated number of purchased vehicles running on alternative fuels was smaller than anticipated, and underlined that the figure quoted was only an estimate.

Belet asked the Commission whether it has precise information about the number of alternatively fuelled vehicles owned by the authorities and public undertakings in the various Member States. Furthermore, he asked the Commission what actions are planned to encourage national authorities and public undertakings to make their vehicle fleet more sustainable.

Answer by Violeta Bulc on behalf of the Commission, 13 June 2016
Bulc explained that the Commission does not gather precise information about the number of alternatively fuelled vehicles owned by the authorities and public undertakings in the EU, as there is no specific reporting obligation for the Member States. Bulc underlined that the Commission's periodic monitoring reports are based on data compiled or estimated by experts in the field following interaction with stakeholders, including online surveys with procurers and contractors and interviews with EU-level stakeholders, procurers and manufacturers. She furthermore explained that the Commission would be launching a possible review of the Clean Vehicles Directive in order to strengthen its effectiveness and efficiency.

5. European Council

European Council conclusions, 17-18 December 2015
The European Council assessed progress in building the energy union with a forward-looking climate policy and called for a swift submission of the relevant legislative proposals.

6. European Economic and Social Committee (EESC)

The EESC adopted an opinion on 'Clean and energy efficient vehicles' (INT/522) on 21 October 2010, stating that guidance should be provided for the various criteria to be applied to procurement procedures under the Clean Vehicle Directive. The EESC points out that such criteria should be incorporated as soon as possible and that they should come into force before the planned review in two years' time.

7. Other sources of information

- Pape, Marketa, Towards low-emission EU mobility, EPRS Briefing, March 2017.
- Thirion, Elodie, Emission performance standards for new passenger cars and light commercial vehicles, EPRS Briefing, April 2017.
- Moosmann, Neier, Mandl & Radunsky, Implementing the Paris agreement – Issues at stake in view of the COP 22 Climate Change Conference in Marrakech, Policy Department A on Economic and Scientific Policy, European Parliament.

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