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COMMISSION STAFF WORKING DOCUMENT

**Mid-term evaluation of Council Directive 2009/119/EC
imposing an obligation on Member States to maintain minimum stocks of crude oil
and/or petroleum products**

{SWD(2017) 439 final}

1. EXECUTIVE SUMMARY

Council Directive 2009/119 imposes an obligation on Member States to maintain minimum emergency stocks of crude oil and/or petroleum products. This Staff Working Document presents the findings of the mid-term evaluation to assess the actual effectiveness, efficiency, relevance, coherence and EU-added value of the Directive in the period 2009 to 2016.

While the transition to alternative sources of energy has started and is projected to accelerate in the future as a result of EU policies to decarbonise the economy and to implement the Paris Agreement on climate change, EU dependency on imports of crude oil and petroleum products remains today extremely high¹. Given the important role of oil products in the current economy, holding emergency stocks that can be allocated quickly to where they are most needed in case of supply disruptions remains vital for the energy security of the Union.

Emergency oil stocks have existed since 1968 and the corresponding rules were revised on several occasions. The last time was in 2009 when the legislator adopted Directive 2009/119 to achieve the following four specific objectives:

- improved availability of the oil stocks, in particular by obliging Member States to have arrangements in place for identifying, accounting and controlling the oil stocks and to keep up-to-date an oil stocks register which identifies the exact location of the stocks;
- better harmonization with the mechanism existing under the International Energy Agency (IEA), in particular by aligning the methodologies and allowing for synergies in case of an oil supply crisis;
- reduced administrative burden for those Member States that are parties to the IEA, as a result of the alignment with IEA's methodologies and reporting obligations, and
- improved transparency on the actual levels of stocks held in the EU, by providing data comparability and avoiding double accountancy of stocks.

The mid-term evaluation concludes with a reasonable degree of assurance that the Directive has **effectively** contributed to achieve the above-mentioned objectives. The stakeholders' confidence in the availability and accessibility of the emergency stocks in case of need has improved as a result of clearer rules on who may own the stocks, the type of products to stock, as well as the requirements to count, control and trace the location of stocks. The methodologies for calculating the crude-oil equivalent of the imports of petroleum products and the level of oil stocks held were aligned with the ones of IEA, as well as the rules for preparing and submitting to the Commission the statistical summaries of oil stocks. This harmonisation of methodologies and reporting has reduced the administrative burden for the administration and the operators of those Member States that are member countries of the IEA and has introduced a greater transparency.

No firm conclusions can be drawn as to the Directive's **efficiency** due to the difficulties to quantify the costs and the benefits linked to the security of oil supply. On one side, the majority of stakeholders consulted stated that the costs resulting from the implementation of the Directive, although potentially substantial, are proportionate to the benefits for the

¹ The EU imports 89 % of its oil demand.

security of supply. On the other side, new obligations for Member States to report annually on their national oil stock registers and the measures to inspect and control the level of stocks and the methodology to calculate the stocks are perceived as giving rise to unnecessary administrative burden and uncertainties; this is the case of the impact of the 7% ‘naphtha trigger’ in the annual stockholding obligation, the need to comply with the stockholding obligation by 1st April, the obligation to deduct 10% of the stocks when calculating the level of stocks actually held or the perceived ambiguity of the provisions on cross-border stocks. This administrative burden and uncertainties may imply extra costs for those obliged to hold stocks, which may undermine the Directive’s efficiency.

As to the **relevance** of the Directive, the energy security needs that led to the establishment of reliable emergency stocks fully remain. While oil consumption in power generation and heating has fallen, transport still relies on oil for 94 % of its energy needs. Even if the EU medium to long term climate and energy objectives imply a strong decline in the use of oil thanks to a greater energy efficiency, use of bioenergy and electrification of transport, the fact is that oil is projected to remain a vital source of energy in the short term. Moreover the extremely high external dependency of the EU has to be seen in a context of higher exposure to supply risks as dependency from supply sources in geopolitically unstable regions has increased.

The evaluation confirms the **added value** of the Directive above and beyond Member States’ individual measures and the IEA framework. The Directive enhances the energy security of the eight Member States that are not member countries of IEA². For the other Member States that are member countries of the IEA, the Directive reinforces the legal certainty about their obligation and their right to use their emergency oil stocks upon request of this organisation, as well as about the potential interactions between the Commission and the IEA. The majority of respondents considered that the levels of emergency oil stocks available in case of disruption would be lower without the Directive and that the existence of an EU mechanism separate from the one under the IEA is justified.

The evaluation highlights that the Directive is **coherent** with the different objectives of the Energy Union. The Directive contributes to the objectives of security of energy supply and completes the parallel mechanisms existing in other energy sectors even if there might be some room for alignment with the rules applicable to these other sectors, e.g. through regional cooperation and solidarity in case of oil disruption. The Directive is also coherent with the objective of decarbonisation. As the share of clean energy will increase in the Member States (including as a result of EU initiatives on clean energy and low-emission mobility), the levels of consumption of oil and oil products and the corresponding emergency stocks needed calculated on the basis of the consumption will fall accordingly.

Overall the evaluation concludes that the existing EU mechanisms for holding oil emergency stocks are effective, relevant, coherent with Energy Union objectives, and with a well-recognised EU added value. The evaluation has however identified a series of areas for improving the efficiency of the obligations stemming from the Directive by reducing uncertainties and administrative burden for operators. To this end, it makes suggestions to further assess potential changes concerning mainly the annexes of the Directive, namely the

² BG, CY, HR, LT, LV, MT, RO and SI.

methodology to calculate the crude oil equivalent of imports of petroleum products, the 10 % reduction applicable when calculating the level of oil stocks held, the date of start of the yearly stockholding obligation and possible harmonisation of the conditions for holding oil stocks in another Member State ('cross border stocks').

2. INTRODUCTION

While the transition to alternative sources of energy has started and is projected to accelerate in the future as a result of EU policies to decarbonise the economy and to implement the Paris Agreement on climate change, EU dependency on imports of crude oil and petroleum products remains today very high. In view of the important role of oil for the economy, maintaining emergency stocks to be used in case of supply disruptions is therefore vital. Emergency oil stocks must be readily available so that in case of a crisis they can be allocated quickly to where they are most needed.

Member States have been obliged to hold emergency oil stocks since 1968³, well before the oil price shocks in 1973-74 and 1979-80. The applicable rules were revised on several occasions, the last time in 2009, when Council Directive 2009/119/EC⁴ (hereafter: the Oil Stocks Directive, or: the Directive) was adopted.

The main objectives for revising the EU framework on emergency oil stocks in 2009 were:

- guaranteeing the availability of the stocks and the credibility of the emergency stocks mechanism;
- better harmonization with the mechanism existing under the International Energy Agency (IEA), concerning both the data reporting and the interactions between the EU and the IEA;
- as a matter of consequence, reducing the administrative burden for those Member States that are also member countries of IEA, and
- improving transparency.

Article 22 of the Directive specifies that *"by 31 December 2015, the Commission shall review the functioning and implementation of this Directive"*. The reason for this review is stated in the Directive as follows: *"Given that this Directive introduces a number of new mechanisms, its implementation and functioning should be reviewed"*.⁵

The general objective of this mid-term evaluation is to assess how the Oil Stocks Directive has been implemented in Member States and how it is functioning in practice and covers the period 2009 to 2016. Special attention is paid to whether the four abovementioned goals of the Directive have been achieved and to what extent. Finally, possible difficulties encountered by the Member States and other stakeholders are identified, as well as possible areas for improvement or simplification. In accordance with the Better Regulation Guidelines⁶, the

³ Council Directive 68/414/EEC of 20 December 1968 imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and/or petroleum products (OJ L 308, 23.12.1968, p. 14)

⁴ Council Directive 2009/119/EC, of 14 September 2009, imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products (OJ L 265, 9.10.2009, p. 9)

⁵ See 31st recital.

⁶ http://ec.europa.eu/smart-regulation/guidelines/toc_guide_en.htm

evaluation is based on the five mandatory evaluation criteria explained under point 4 (effectiveness, efficiency, relevance, EU added value and coherence).

3. BACKGROUND TO THE INITIATIVE

3.1. Description of the initiative and its objectives

When in 2008, the European Commission⁷ proposed the text of a new Directive⁷, the situation concerning oil security of supply was analysed as follows⁸: while oil consumption kept growing, the EU remained particularly dependent on oil imports, as nearly 85% of the oil used in the EU was imported from third countries (2006 data). The risk of oil supply disruptions had grown for a number of reasons, including the increasing global demand coupled with limited spare production capacity, the concentration of supply in a handful of (often politically unstable) countries, the proliferation of geopolitical conflicts and the growing number of natural disasters. Apart from these external factors, recent experience had showed that oil infrastructures within the EU (such as refineries, inland waterways and ports receiving oil tankers) might also be vulnerable to risks such as accidents, terrorist attacks or strikes.

While the threat of oil supply disruption was real and the EU vulnerability was growing, the analysis of the system in place had revealed a series of shortcomings that might limit the EU's ability to react to an emergency efficiently or the EU's capacity to participate efficiently in collective actions to address a global supply crisis. These shortcomings are explained under point 3.2 (Baseline).

Aware of these threats, the European Council, in its Action Plan (2007 to 2009) entitled "Energy Policy for Europe" had called for *"improving oil data transparency and reviewing EU oil supply infrastructures and oil stocks mechanisms, complementary to the IEA crisis mechanism, especially with respect to availability in the event of a crisis"*.⁹

Directive 2009/119 addressed the existing shortcomings as follows:

Oil stockholding obligation: Each Member State is obliged to maintain a total level of emergency oil stocks corresponding, at the very least, to 90 days of average daily net imports or 61 days of average daily inland consumption, whichever of the two quantities is greater. Under the new provisions introduced by the Directive, the average daily net imports are to be calculated on the basis of the method explained in its Annex I of the Directive, whilst the procedure for calculating average daily inland consumption is given in Annex II. Annex III lays down the procedure for calculating stock levels actually held. The new procedures were largely aligned with equivalent methodology applied by the IEA.

⁷ Proposal for a Council Directive imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products (COM/2008/0775 final), <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2008:0775:FIN>

⁸ See the Staff Working Document on the Impact Assessment of the proposal (SEC(2008)2858) <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52008SC2858&from=EN>

⁹ Action Plan (2007 to 2009) entitled "Energy Policy for Europe", annexed to the Council Conclusions (Brussels, 8/9 March 2007).

Member States may meet this stockholding obligation in different ways. Emergency stocks can be held by the Member State itself or through so-called central stockholding entities (CSEs) set up for this purpose in the form of a non-profit making body or service; the Member State may also impose an obligation on economic operators (typically oil companies) to hold the stocks for the benefit of the State. Several Member States have opted for a mixed system where part of the stocks is held by economic operators while the other part is maintained by a central stockholding entity.

Where a Member State obliges economic operators to hold emergency stocks for the State's benefit, the operator may delegate this obligation, at least in part, to a CSE or to another economic operator. Where such CSE or economic operator are not within the territory of the Member State on which account the emergency stocks are held, prior authorisation of that Member State is required, as well as the authorisation of all Member States within whose territories the stocks will be held.

Emergency oil stocks must be available when needed. This is the core principle of the Directive. The Directive distinguishes "emergency stocks", that are those specifically held for security of supply reasons, from commercial stocks, which are those held by the economic operators for their own operational and commercial needs. The Directive also introduced the concept of "specific stocks", which are a sub-category of emergency stocks composed of certain oil products that Member States may voluntarily decide to hold and that correspond to the actual needs in case of a crisis (therefore subject to stricter requirements).¹⁰ Member States need to make sure that at least one-third of their stockholding obligation is held in the form of such specific oil products.

Member States have an obligation to ensure that emergency oil stocks are available and physically accessible at all times. They are therefore responsible for putting in place arrangements for the identification, accounting and control of these stocks. A register containing detailed information on the emergency stocks (the location of the depot, refinery or storage facility, the quantities involved, the owner of the stocks and their nature) has to be established and continually updated.

Reporting obligations: The Directive consolidated the monthly reporting of stock levels; it moreover introduced annual reporting (summary copy of the register of emergency stocks and a report on the measures ensuring the availability and physical accessibility of stocks) which provides additional information about the Member States' stockholding arrangements and compliance with the Directive. Since 2013, a single questionnaire is used by the IEA and the Commission, which was adjusted to fully meet the requirements of the Directive.

Emergency procedures: Member States must be able to release all or part of their emergency stocks and specific stocks when needed. To this end, they need to have in place the necessary procedures and contingency plans. The Directive contains specific rules that apply both in the

¹⁰ Specific stocks shall be owned by the Member State concerned or the CSE set up by it. Specific stocks shall be composed of one or several of the following products: ethane; LPG; motor gasoline; aviation gasoline; gasoline-type jet fuel (naphtha-type jet fuel or JP4); kerosene-type jet fuel; other kerosene; gas/diesel oil (distillate fuel oil); fuel oil (high sulphur content and low sulphur content); white spirit and SBP; lubricants; bitumen; paraffin waxes; petroleum coke.

event of a global disruption triggering an IEA decision and in case of difficulties in the oil supply to the European Union or to a Member State.

Finally, the Directive set up a "Coordination Group for Oil and Petroleum Products", as a standing advisory group, in short known as the "Oil Coordination Group" (OCG)¹¹. While the main role of the Group is to facilitate coordination between Member States in case of a disruption, it is also a useful forum to discuss various issues related to the implementation of the Directive.

The Directive's rationale is illustrated in the following intervention logic scheme:

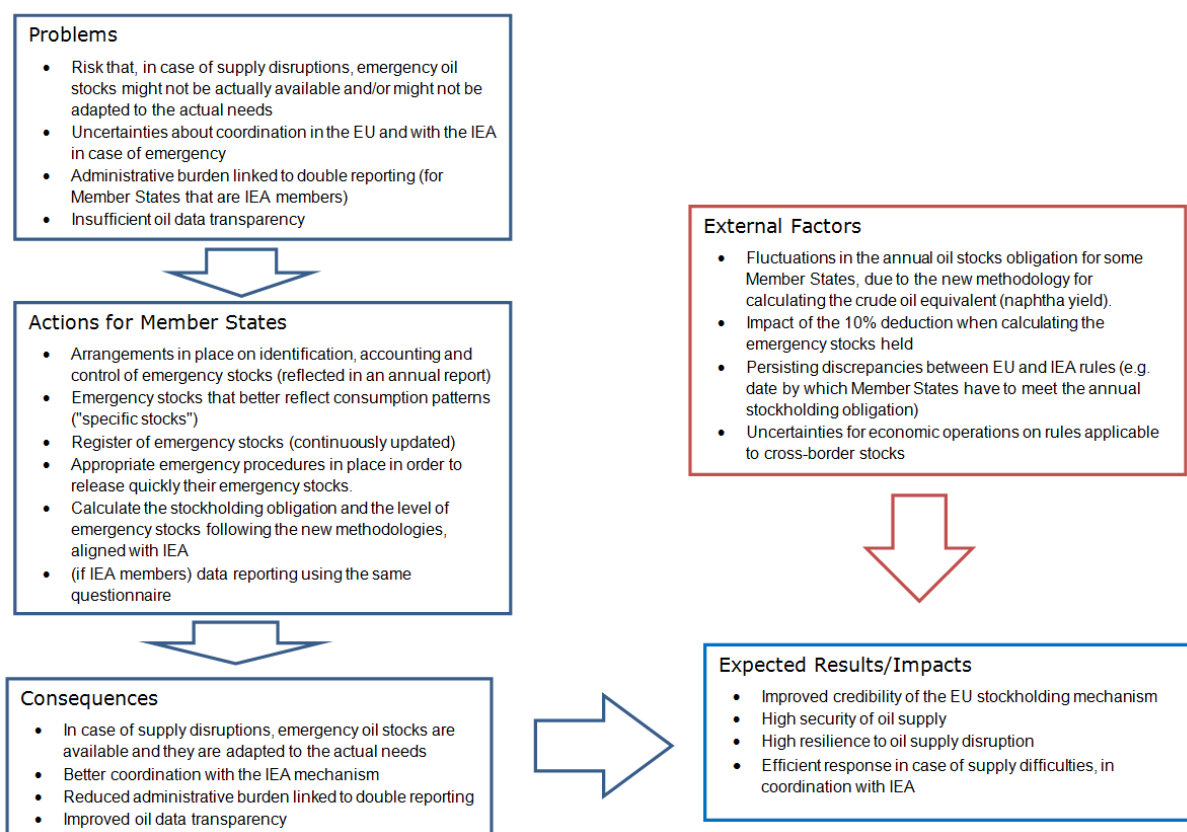


Figure 1. Intervention logic scheme. Source: DG Energy

3.2. Baseline

Back in 2009, the stockholding mechanism in the EU was based on 3 pieces of legislation:

- Council Decision 68/416/EEC of 20 December 1968 on the conclusion and implementation of individual agreements between Governments relating to the obligation of Member States to maintain minimum stocks of crude oil and/or petroleum products;¹²

¹¹ This Group took over the activities of the "Oil Supply Group", foreseen for crisis events in Article 3 of Directive 73/238/EEC, which had been meeting on a regular basis since 2003.

¹² OJ L 308, p. 19.

- Council Directive 73/238/EEC of 24 July 1973 on measures to mitigate the effects of difficulties in the supply of crude oil and petroleum products;¹³;
- Council Directive 2006/67/EC of 24 July 2006 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products,¹⁴ which codified the changes introduced over time in the original 1968 Directive¹⁵.

Under the emergency oil stocks mechanism resulting from these rules, there were doubts whether all national systems could guarantee that the stocks held for emergencies would be fully available and could be effectively mobilised as needed. For example, some Member States would allow that operational stocks of commercial operators are counted as emergency stocks and six Member States relied fully on private entities for their holding the emergency stocks; also the extensive use of "tickets"¹⁶ by several Member States casted doubts on the actual availability of stocks in case of emergency.

Although, in general, the same oil stocks could be used for complying with the EU and IEA stockholding obligations, there were some differences in the calculation methodology and the reporting, which implied substantial administrative burden on those Member States that were also members of the IEA.

The EU lacked sufficient coordinated intervention procedures, which rendered prompt decision making and effective actions, which are crucial in a crisis, very difficult in practice. The interaction between the EU system and the mechanism and procedures under the IEA was not clear. In particular, there were some uncertainties as for the position, vis-à-vis the Directive obligations, of those Member States that would execute IEA decisions to release emergency stocks, and also about the Commission's role in such cases.

Finally, the composition of the stocks (based on 3 categories of products¹⁷) would not necessarily reflect what is really needed in a crisis. The share of individual product stocks ranged from 20-100 % in MS.

Moreover, there was a risk of free riding: Member States with possibly less reliable systems could count on countries with sound arrangements, which would compromise the emergency preparedness of the EU as a whole.

The need to address these considerations and risks led to the adoption of the 2009 Oil Stocks Directive, which repealed and replaced the three above-mentioned pieces of legislation.

¹³ OJ L 228, p. 1.

¹⁴ OJ L 217, p. 8.

¹⁵ Council Directive 68/414/EEC of 20 December 1968 imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and/or petroleum products (OJ L 308, p. 14).

¹⁶ "Tickets" are leasing contracts by which the ticket seller agrees to hold oil stocks (crude oil or oil products) on behalf of the ticket buyer for a given period of time –e.g. three months– and a predetermined fee, and to make the stocks available to the ticket buyer in case of supply crisis.

¹⁷ (a) motor spirit and aviation fuel (aviation spirit and jet-fuel of the gasoline type); (b) gas oil, diesel oil, kerosene and jet-fuel of the kerosene type; (c) fuel oils.

4. EVALUATION QUESTIONS

Effectiveness. What have the (quantitative and qualitative) effects of the intervention been? To what extent have the main objectives of the Directive been achieved? Has the Directive improved the availability of the emergency oil stocks? Is the EU mechanism now better harmonized with the IEA stockholding system? Has the administrative burden linked to holding emergency oil stocks been reduced? Has the Directive contributed to improved transparency regarding the availability and level of stocks held?

Efficiency. To what extent has the intervention been cost effective (cost/benefit ratio)? Is the administrative burden (including its costs) imposed on Member States and economic operators justified? Is there room for simplification?

Relevance. To what extent is the Directive still relevant? Do the objectives of the Directive still correspond to the needs of the policy area?

EU added value. What is the additional value resulting from the Directive, compared to what could be achieved by Member States at national and/or regional levels? What is the additional value resulting from the Directive compared to the IEA system?

Coherence. To what extent is this Directive coherent with other interventions which have similar objectives and with wider EU policy? To what extent is the Directive coherent with international obligations (harmonisation with the IEA system)?

5. METHOD

The Commission services started preparatory work for the evaluation of the Directive in 2014, by seeking the views of the members of the Oil Coordination Group about the difficulties encountered when implementing the Directive. This information was the basis for drafting the Terms of Reference for the call for tenders that led to the selection of an external contractor.

The Evaluation Roadmap was prepared in November 2015 and made publicly available¹⁸.

The evaluation process was assisted by an Inter-service Steering Committee (ISC) chaired by DG ENER and composed of the representatives of the Secretariat General, the Directorate General for Internal Market, Industry, Entrepreneurship and SMEs, the Joint Research Center and Eurostat.

A supporting study was finalised and published on 5th August 2016. The main tasks carried out by the contractor included: desk research¹⁹; two online technical surveys (one general survey answered by 109 stakeholders and one on administrative burden answered by 69 stakeholders); interviews with 37 representatives of industry, economic operators and CSEs, as well as OCG members; preparation of six case studies; one workshop with CSE representatives, and one general workshop addressed to all stakeholders. The main evaluation tool was the analysis and synthesis through data triangulation of collected facts, arguments and opinions sought.

¹⁸ http://ec.europa.eu/smart-regulation/roadmaps/docs/2016_ener_027_evaluation_art22_crude_oil_petroleum_en.pdf

¹⁹ See the list of reference used by the contractor in page 121 of the study.

It should be emphasised that the tender specifications were launched in May 2015 and did therefore not reflect yet the changes brought about by the 2015 Better Regulating guidelines and its heightened emphasis on ex-post evaluation, including through quantification.

In the context of the preparation of the contractor's study, a group of nine Member States agreed on a joint document presenting six issues of concern and proposals. This document was transmitted to the Commission on 19th February 2016. Its content was duly taken into consideration in the contractors study and in this staff working document.

The Commission carried out (using EU Survey) an online public consultation for a 15-week-period, the results of which were analysed and published in the website of the Commission.²⁰ In this document, references to the "consultation" mean the survey conducted by the Commission. The document summarising the outcome of the public consultation is reproduced in Annex 1.

Additional sources of information include a literature review and the analysis of the following documents:

- preparatory works preceding the adoption of Directive 2009/119 (e.g. the 2008 Public consultation on the revision of the emergency oil stocks regime in the EU²¹, the 2008 Impact assessment²²) as well as the documents from the legislative process expressing the views of the co-legislators and EU advisory bodies;
- the annual reports of Member States submitted under Article 9(5) of the Directive;
- the Member States' summary copies of the register submitted under Article 6(2) of the Directive;
- the monthly reports of Member States on oil stock levels under Article 14 of the Directive;
- Fitness check of the refining sector;²³
- evidence from assessing the implementation and application of legislation (complaints, infringement procedures).

The main weakness of the evaluation methods and tools (desk research, interviews and case studies mainly) relates to the limitations of the evidence base and the clear risk that the results of data triangulation may be biased by stakeholders' subjective statements. High reliance on information from a limited group of stakeholders is explained by the following reasons:

- no assessment of the current administrative costs provided by the 2008 IA on Member States due to the dual reporting and compliance system with EU and IEA, hence no quantified

²⁰ <https://ec.europa.eu/energy/en/consultations/consultation-evaluation-directive-2009119ec-imposing-obligation-member-states-maintain>

²¹ "Towards a modern and effective system of oil stocks in Europe": <https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/eu-oil-stocks>

²² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2008:2858:FIN:EN:PDF>

²³ <https://ec.europa.eu/jrc/en/news/publication-sectoral-fitness-check-petroleum-refining-sector>

baseline for the evaluation that could be used in order to estimate whether the burden was reduced. This gap could also not be remedied by the 2016 REFIT exercise on reporting obligations in the energy acquis (SWD 2016) 396 final, as that did not assess improvements but only the status quo;

- other limitations in the 2008 IA such as the lack of a qualitative and quantitative analysis of the specific objectives and measures proposed;
- limited literature and research works in this area; no thorough academia analysis on the Directive itself;
- lack of relevant case law; no single request for preliminary ruling was submitted by national courts concerning the Directive;
- limited interest from the members of the European Parliament: since the adoption of the Directive in 2009, the Commission received only 8 parliamentary questions²⁴, which seems to indicate a limited awareness about the Directive from the EU citizens (also confirmed by the limited number of complaints received and the limited number of respondents to the public consultation launched by the Commission);
- highly technical nature and difficulties to apply assessments made in other sectors by analogy;
- absence of quantifiable data: security of oil supply is difficult to measure, both before and after the adoption of the Directive;
- limited number of relevant stakeholders at EU and international level (20 EU Member States are also Parties to the IEA global stockholding mechanism).

6. IMPLEMENTATION STATE OF PLAY

Directive 2009/119 was to be transposed by 31st December 2012.

²⁴ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fTEXT%2bWQ%2bE-2016-005178%2b0%2bDOC%2bXML%2bV0%2f%2fEN&language=FR;>
<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fTEXT%2bWQ%2bE-2016-001141%2b0%2bDOC%2bXML%2bV0%2f%2fEN&language=FR;>
<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fTEXT%2bWQ%2bP-2015-000734%2b0%2bDOC%2bXML%2bV0%2f%2fEN&language=FR;>
<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fTEXT%2bWQ%2bE-2014-000519%2b0%2bDOC%2bXML%2bV0%2f%2fEN&language=FR;>
<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fTEXT%2bWQ%2bP-2014-009675%2b0%2bDOC%2bXML%2bV0%2f%2fEN&language=FR;>
<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2011-002834+0+DOC+XML+V0//EN;>
[http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2011-002742+0+DOC+XML+V0//EN ;](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2011-002742+0+DOC+XML+V0//EN)
<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2011-003656+0+DOC+XML+V0//EN>

In October 2012, based on enquiries from stakeholders, the Commission services issued a document called "Frequently asked questions and answers related to Council Directive 2009/119/EC", providing non-binding guidance to assist Member States in implementing the Directive.²⁵ Moreover, in 2014, the Commission services issued a "Checklist" (non-official document) to help Member States preparing the annual report foreseen in Article 9(5) of Council Directive 2009/119/EC, listing the main topics the report should ideally cover.

Between 2013 and 2015, 21 infringement proceedings for non-transposition of the Directive started. All of them were closed after the Member States completed the transposition process and notified relevant legislation.

A limited number of complaints were received (a total of five complaints). Two infringement procedures for non-conformity with the Directive were opened, one was later closed and one has reached the stage of reasoned opinion.

Systematic conformity checks were carried out on the basis of the national implementing measures notified by the 28 Member States, with special focus on the transposition of Articles 3 (methodology for calculating the stockholding obligations), 5 (measures to guarantee the availability of stocks), 8 (rights of economic operators / delegation) and 20 (emergency procedures) of the Directive. The in-depth conformity checks were finalised in September 2015.²⁶

As a general comment, the Commission services observed that the transposition of the Directive's provisions might not be fully satisfactory as regards some key provisions, such as those concerning the availability and accessibility of stocks or those concerning the cross-border delegation by economic operators, which might indicate among other factors, some lack of clarity as for the actual results to be achieved by the relevant provisions. Of special concern is the fact that Article 20 of the Directive (on emergency procedures) has not been fully implemented in most of the Member States. In view of the ongoing review of the Directive, the Commission services considered it appropriate to wait until the end of the mid-term evaluation process before addressing the possible cases of non-compliance with the relevant Member States.

Additionally, the progress made in implementing the Directive was reviewed through Member State's reporting at the meetings of the Oil Coordination Group and regular reporting by the Commission services on the state of play of the control of implementation of the Directive.

Finally, concerning the reviews of emergency preparedness and stockholding foreseen in Article 18 of the Directive, following discussions at the Oil Coordination Group, it was decided to avoid duplicating reviews and to use synergies with IEA for those Member States that are also member countries of the IEA. Since then, the Commission has participated in Emergency Response Reviews organised by the IEA in 12 Member States and was associated to such reviews in 3 more Member States as a "virtual" member of the review team. Until now, no EU review based on the provisions of Article 18 of the Directive was carried out. The

²⁵ Not published.

²⁶ Report - Assistance with the verification of compliance of national legislative measures implementing Council Directive 2009/119/EC - Milieu Ltd under Service Contract ENER/A1/2013-294 and ENER/A1/2013-294/2.

Commission services might envisage organising such reviews in the coming months, concerning in particular those EU Member States that are not member countries of the IEA.²⁷

Special attention must be paid to the reporting obligations laid down in Article 6(2), as regards the annual summary copy of the stock register, showing at least the quantities and nature of the emergency stocks included in the register on the last day of the preceding calendar year; and Article 9(5), which requires from Member States holding less than 30 days of specific stocks an annual analysis of the measures taken to ensure and verify the availability and physical accessibility of their emergency stocks and documentation of the arrangements made to allow them to control the use of these stocks in case of supply disruption. When the transposition deadline expired in 2013, just a few Member States provided these reports and the Commission services had to address this lack of reporting with the other Member States. While compliance with the reporting obligations increased in the following years, some Member States seem to be reluctant to provide those reports.

7. ANSWERS TO THE EVALUATION QUESTIONS

This section summarises the main findings in relation to the analysis of each of the questions set out in the roadmap.

7.1. Effectiveness

What have the (quantitative and qualitative) effects of the intervention been? To what extent have the main objectives of the Directive been achieved? Has the Directive improved the availability of the emergency oil stocks? Is the EU mechanism now better harmonized with the IEA stockholding system? Has the administrative burden linked to holding emergency oil stocks been reduced? Has the Directive contributed to improved transparency regarding the availability and level of stocks held?

The effectiveness analysis focussed on how successful the Directive has been in achieving or progressing towards its four main objectives: (1) improving the availability of the stocks, (2) better harmonizing with the stockholding system created by the IEA, (3) reducing administrative burden and (4) improving transparency.

The Commission services conclude that the Directive has been effective in achieving its objectives. The degree of uncertainty around this conclusion is however medium to high, due to the lack of validated data to support it. The main difficulty arises when it comes to qualifying or quantifying the actual effects of the Directive, knowing that the effectiveness was never tested in practice. In other words, whether the Directive is effective will only become apparent once there is a supply major supply disruption and the ready availability of oil stocks and credibility of the system are put to a test. Quantification through simulation /modelling of such an incident is a very data intensive process and would have to be based on strong assumptions. This would have been a disproportionate effort for this mid-term evaluation and had delivered potentially misleading results. The contractor's study, while acknowledging these limitations, makes some attempts to measure the Directive's

²⁷ Eight Member States are not IEA member countries: BG, CY, HR, LT, LV, MT, RO and SI.

effectiveness²⁸, which are to a big extent informed by the results of the surveys made in the context of the study.

7.1.1. The Directive has improved the availability of stocks.

In a supply disruption, it is essential to replace disrupted oil swiftly and effectively. Therefore, emergency stocks have to be fully available and physically accessible in the required quality and quantity. At least a part of the stocks have to be in the form of finished products. This is clearly illustrated by the situation of the transport sector, where fuel switching is currently not always possible, especially for aviation and freight transport, and where disruptions may have a multiplying effect in the whole economy. The appropriate fuel products need therefore to be immediately available and accessible when needed.

The Directive's provisions aiming at improving the availability and accessibility of the oil stocks are illustrated in the following picture



Figure 2. Directive provisions on oil stocks availability. Source: DG Energy

For the reasons explained under point 5 ("Methodology"), it is difficult to make an evidence-based assessment of the impact of the Directive on the availability of the oil stocks.²⁹ The Commission services consider that the effectiveness can be quantified in terms of stakeholders' confidence in the reliability of the mechanism, which is confirmed by the contractor's report and the public consultation, according to which 80% of respondents believe that the Directive improved the availability of stocks in case of oil supply disruption and only 7 % think that this is not the case. About 12 % of respondents did not express an

²⁸ See e.g. table 4-5 of the contractor's study (p. 65)

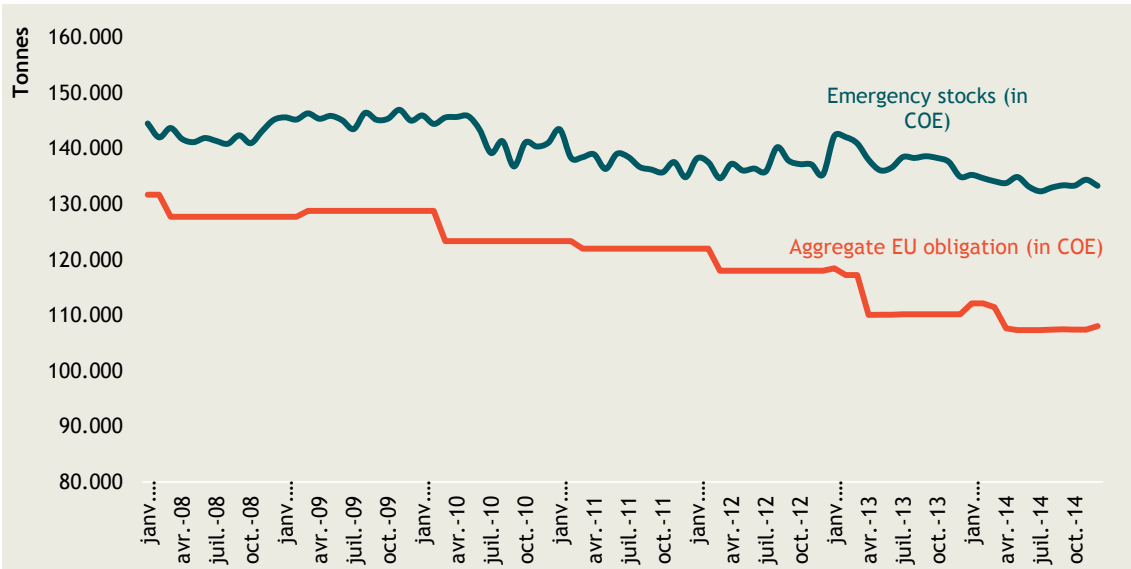
²⁹ The contractor's study qualifies this impact either as being "positive" or "neutral", depending on the different provisions addressed (p. 65 of the study).

opinion on this. As stated in the impact assessment that preceded the adoption of the Directive, "a stockholding system for emergency oil stocks has to ensure that such stocks are actually held and are available for release in the event of an emergency. Doubts about the availability of stocks in the context of an actual or potential crisis may lead to market speculation and increased price volatility. An effective stockholding system thus acts as a deterrent to speculation. Doubts may also undermine the expected positive effects of an emergency response."³⁰

Stakeholder's confidence seems lower when it comes to the physical accessibility of the stocks: less than 70 % of respondents consider that the Directive improved it, more than 8 % answered that this was not the case (e.g. because the type of oil products held are not necessarily those that are the most needed in case of disruption) and 22 % of respondents did not express an opinion on this.

The analysis of the Directive's impact on the stockholding systems chosen by the Member States (whether emergency stocks were held by a Central Stockholding Entity – "CSE"-, by economic operators or by both – "mixed system") shows some tendency in favour of CSEs. Out of five Member States that changed their stockholding system during the process of transposition of the Directive, two moved from an industry based system to a mixed one and two moved from a mixed system to a CSE system.³¹ This evolution has resulted in an increase of the share of emergency stocks held by CSE (from 49% in January 2013 to 55% in December 2014).

The analysis of the evolution of the emergency oil stocks held in the EU over the period January 2008 – October 2014 compared with the actual aggregate obligation shows that the Directive led to a structural increase of about 5% of the level of the stock holding obligations and the eligible emergency stocks (at the overall EU level).



³⁰ P. 12 of the impact assessment SEC(2008) 2858 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52008SC2858&from=EN>

³¹ See p. 35 ff, of the contractor's study.

Figure 3. Aggregate of EU emergency stocks levels (Crude Oil Equivalent) versus obligation, 2008-2014. Source: Contractor's study (p. 40) based on data from DG Energy (2008-2012) and Eurostat (2013 onwards).

The Directive provides for the possibility for the Commission to carry out, in coordination with Member States, reviews and inspections to verify emergency preparedness and related stockholding. Random controls on the spot might indeed serve to underpin the conclusions about the current availability of stocks.

The Commission services will consider carrying out the reviews foreseen in Article 18 of the Directive, starting with those Member States that are not member countries of the IEA. Ad-hoc reviews may also be organised in case of non-compliance and/or concern about emergency preparedness and stock's availability.

7.1.2. The mechanism resulting from the Directive is better harmonized with the stockholding system created by the IEA

The Commission services share the view of stakeholders that the current EU stockholding mechanism is better harmonised with the IEA mechanism than under the previous rules. The Directive aligned with the IEA the methodology for calculating the "crude oil equivalent" of imports of petroleum products and the methodology for calculating the level of stocks held. The rules for the preparation and submission to the Commission of statistical summaries of oil stocks are harmonised and the Commission and IEA use the same reporting methodology.

The Directive moreover put an end to the uncertainty existing under the previous rules about whether Member States could participate in a collective action initiated by the IEA without breaching their obligations under the Directive. The Directive expressly referred to this possibility and set up the procedure to be followed in that case.

Based on information provided by the stakeholders, as complemented by the IEA and the Commission services, the contractor's study makes a descriptive analysis of the measures taken to align both stockholding mechanisms³². The benefits and unexpected results of this alignment are summarised in the following table:

Harmonisation with the IEA	Observed development	Comment / conclusion
Integrated reporting with the IEA	Rather than having to report separately, the adjusted MOS combines the reporting processes of the EU and the IEA. Particularly for MSs that are also IEA members, this eased the reporting process and reduced administrative burden.	The joint MOS has a positive effect on administrative burden and efficiency, but cannot compensate for the increased administrative burden resulting from the increased overall reporting requirements.
Calculation of the obligation	The method to calculate the obligation has been aligned with the IEA and the situation where MSs that were also member of the IEA faced two obligations has ceased to exist.	This has a positive effect on efficiency, as one calculation is needed instead of two and if Member States comply with the requirements of the Directive, they automatically also comply with the IEA requirements.
Calculation of emergency stocks	The methods to calculate the level of emergency stocks have largely been aligned, with the exception of commercial stocks (which are part of the IEA calculation, but not part of EU	

³² See pages 72 ff.

	calculation)	
Naphtha rule	The naphtha rule (to account for stocks used for non-energy purposes) can create large swings in the annual obligation of MSs close to the 7% naphtha yield threshold. This may affect six MSs.	The naphtha rule can give rise to substantial transaction costs and inefficiencies, when its application leads to (potentially substantial) annual fluctuations in the required level of emergency stocks.
10% deduction	As in the IEA system, to compensate for unavailable stocks, only 90% of the total emergency stocks can be counted for meeting the obligation. Whereas this deduction seems justified in the IEA system, this is much less so in the EU system.	With all other things equal the 10% deduction, in effect, increases the obligation and hence the availability of emergency stocks, and has no impact on efficiency. However, if the 10% deduction is deemed not justified and was no longer applied, the storage costs would go down considerably while the contribution to the security of supply would still be at least as much as under the IEA system.
1 st of April compliance date	MSs should comply not later than the 1st of April (was 31 st of July) with the obligation for that particular year, whereas members of the IEA effectively have to comply on the 30 th of April (was 31 st of January). Given that the stockholding obligation is based on data for the year before and that the total stockholding obligation for a Member State needs to be subdivided over the CSE/government and economic operators, the time for making the necessary adjustments is very short.	The period available for making the necessary adjustments in emergency stock levels may well be too short to make the necessary adjustments in a cost-effective manner, particularly when the obligation goes up. This increases costs and because the benefits of meeting the obligation a few months earlier are relatively minor, this has a negative impact on efficiency.

Table 1. Effects of harmonisation with the IEA, as commented by the contractor. Source: Contractor's study (p. 116).

The Commission agrees that, as highlighted in the contractor's study and confirmed by the public consultation, the alignment to the IEA methodology led to some unexpected results, such as undesirable fluctuations in the annual oil stock holding obligations resulting from the existence of two formulas applicable for deducting the naphtha yield from the crude oil equivalent of imports³³ or the impact of applying a 10% deduction over the total of emergency oil stocks held³⁴. These difficulties are well known by the Commission services, as they had been presented and discussed at different meetings of the Oil Coordination Group. They had been also summarised in the joint document presented by a group of nine Member States to the Commission on 19th February 2016.

Stakeholders coincide in estimating that the *rationale* of such rules is not clear and plead for changes in the relevant methodologies. A majority of respondents call for revising the methodology to limit the trigger effect of the 7% naphtha yield (59 % of answers) and consider that the 10% deduction is no longer justified (66 % of answers). A minority (15 %) of respondents state that such changes are not necessary.

³³ The formula is explained in Annex I, on the method for calculating the crude oil equivalent of imports of petroleum products, which serves to calculate the 90-day obligation. The naphtha yield is deducted from the total sum of imports to take account of the naphtha's use for non-energy applications. Two different formulas apply, depending on whether the average naphtha yield in the past year was smaller or greater than 7%; this may lead in practice to fluctuations in the emergency stocks obligation for Member States where the average naphtha yield is close to 7%.

³⁴ See Annex III of the Directive.

One can therefore conclude that whilst the 2009 Directive achieved some alignment with the IEA methodologies and procedures, some unexpected effects have also been produced. It is worth recalling that the EU legislator had already in mind the potential difficulties that might result from the alignment with the IEA methodology and the need to address them in the future,³⁵ and the Directive foresees the procedure for amending those, via the so called "comitology procedure".

The Commission services will analyse the impact of revising the relevant methodology and, based on the regulatory power recognised to the Commission in the Directive, they might propose amendments to Annexes I and III.

7.1.3. Was the administrative burden reduced?

The Directive's declared objective was to reduce the administrative burden that resulted mainly from the double reporting to the Commission and the IEA (for those Member States that are also member countries of this organisation). The 2008 Impact Assessment did not provide the details for a baseline against which the current administrative burden linked to reporting could be assessed. Moreover, the administrative burden assessment needs to consider that the Directive introduced a number of new reporting obligations, aiming at improving transparency.

In order to assess whether the Directive had still been effective in reducing the administrative burden, the contractor carried out an ad hoc survey devoted to assess and measure this element, considering on the one hand the benefits of further alignment with the IEA reporting methodology and, on the other hand, the administrative burden resulting from new reporting obligations. Its general conclusion is that "the administrative burden related to reporting has increased. This conclusion is backed up by the fact that most respondents to the survey (58% of all economic operators and public authorities) do not believe that the Directive led to a reduced administrative burden".

In their answers to the public consultation, a majority of respondents stated that, as a result of the Directive, the administrative burden had increased slightly (45 % and 37,5 %, respectively) or largely (6,45 % of public administrations and 8,33 % of economic operators). Some respondents (3,22 % in the case of the public administrations and 16,66 %, for the economic operators), stated that the Directive had had no impact on the administrative burden. Discrepancies on the assessment of the administrative burden resulting from the Directive might result from the type of questions asked or their formulation, giving rise to possible

³⁵ Recital (5) of the Directive states: "... the way in which stockholding obligations and Community emergency stocks are calculated should be brought more into line with the calculation methods used under the IEA Agreement, notwithstanding the facts that the IEA calculation methods may have to be evaluated in light of technological improvements during the last decades, and that non-IEA members that are fully dependent on imports may require a longer period for adapting their stockholding obligations. Further amendments to the methods and procedures for calculating stock levels may prove necessary and beneficial in order to further increase coherence with IEA practice, including, for example, changes that lead to a lowering for certain Member States of the reduction percentage of 10 % applied in the calculation of stocks, that would allow a different treatment of naphtha stocks, or that would allow the stocks held in tankers in territorial waters of a Member State to be counted."

different interpretations. More than 36 % of respondents from one and another group did not provide any answer to this question.

Answers reflect stakeholders' perception that new reporting requirements represent an unnecessary burden; quantitative evidence is missing though, in particular in view of the benefits resulting from the new reporting obligations in terms of availability and transparency (or in terms of security of oil supply at large). No clear conclusion can thus be drawn concerning the Directive's impact on the administrative burden linked to the new reporting obligations.

The Directive certainly reduced the administrative burden for those Member States that are member countries of the IEA, which now report statistics based on a standardized transparent calculation at EU level based on similar methodology. The introduction of an electronic platform to receive, store and processing the statistical data also contributed to simplifying the administrative burden. This was reflected in the public consultation, where 73 % of respondents stated that the Directive improved efficiency through better harmonisation with the IEA system.

Concerning, in particular, the annual report under Article 9(5),³⁶ it is worth mentioning that this annual report has a concise and simplified structure.³⁷ Member States have submitted the reports since 2014 (information for 31/12, relating to 2013). The document contains factual and regulatory information and can be easily updated every year.

The Commission services believe that the perception of the administrative burden linked to this exercise might change if stakeholders were aware of the rationale of the reporting obligations and benefits in terms of transparency. Reports are made available to the members of the Oil Coordination Group in the special CIRCABC platform and are a source of information about possible best practices.

The Commission services will explore how to make best use of Article 9(5) reports, especially in the context of the Oil Coordination Group.

7.1.4. Transparency was improved

Transparency is, first of all, about more accurate and timely data reporting. Regulation (EC) No 1099/2008 of the European Parliament and of the Council, of 22 October 2008, established a common framework for the production, transmission, evaluation and dissemination of comparable energy statistics. It consolidated the Member States reporting via

³⁶ "A Member State for which less than 30 days of specific stocks are held shall draw up an annual report analysing the measures taken by its national authorities to ensure and verify the availability and physical accessibility of its emergency stocks referred to in Article 5 and shall document in the same report arrangements made to allow the Member State to control the use of these stocks in case of oil supply disruptions. That report shall be sent to the Commission by the end of the first month of the calendar year to which it relates."

³⁷ See structure in Annex 2 of this SWD.

the standardised questionnaires³⁸, and clarified the type of information to be submitted in the short term, or on a monthly and annual basis.

The Directive requires Member States to draw up and submit to the Commission, on a monthly basis, statistical summaries on the levels of emergency stocks actually held on the last day of the calendar month. Relevant information shall be given where emergency stocks are held outside the national territory (in another Member State) as well as where the reporting Member State holds in its territory any stock on behalf of another Member State. Moreover, the Directive introduced the obligation of monthly reporting about the levels of commercial stocks held within the national territory.

Relevant statistics on oil stocks are publicly available in the website of Eurostat.

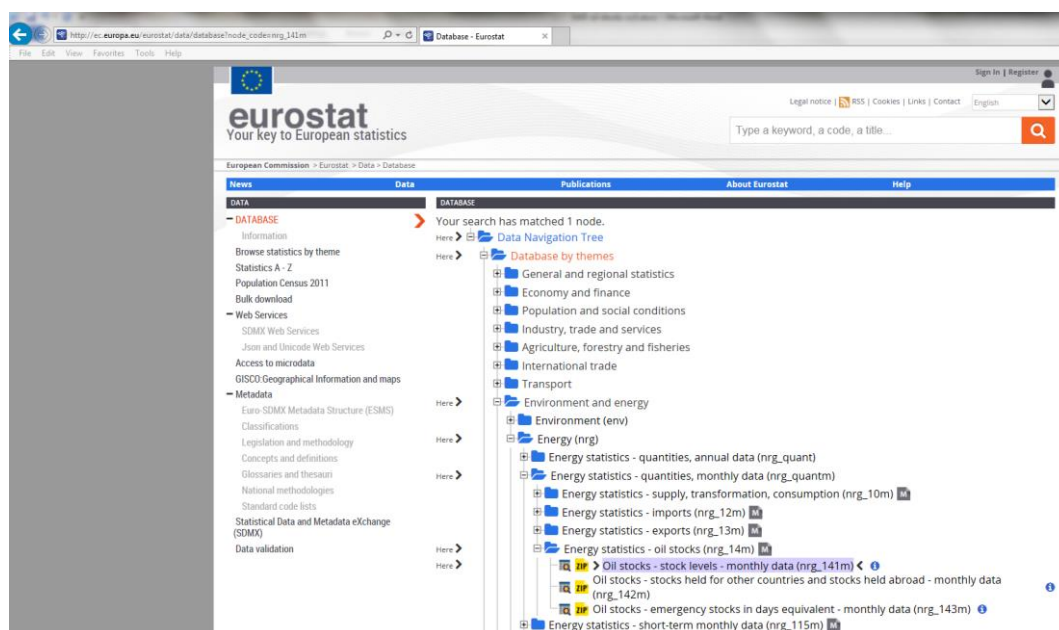


Figure 4. Example of publicly available information in Eurostat's website.

The Directive's rules on data reporting have contributed considerably to adding transparency to the actual levels of stocks held in the EU, by providing data comparability (by cross checking information from different Member States, and by comparison with IEA data) and, thus, avoiding double accountancy of stocks.

The analysis of the evolution of discrepancies in reporting stocks held abroad and domestically for other countries since 2013 shows that in the EU-28, between 1% and 6% of the total stocks held abroad are still double counted,³⁹ which represents a significant reduction compared with the situation prior to the Directive; the impact assessment carried out by the Commission before proposing the Oil Stocks Directive quoted indeed IEA figures that

³⁸ For the purpose of the Directive the questionnaire of monthly oil statistics (MOS) which is defined in Annex C of the energy statistics regulation is relevant. To reduce burden for Member States the streamlined MOS questionnaire includes tables for the calculation of the obligation and the reporting of emergency and commercial stocks under the directive.

³⁹ See p. 60 of the contractor's study, based on Eurostat's data.

estimated those discrepancies at 10% - 20% of the total emergency stocks in Europe for the period 2003/2004⁴⁰.

Other provisions contributed to enhanced transparency, thus improving the legal certainty and guaranteeing the equal treatment of economic operators, such as the detailed rules on the setting up, role and services of the Central Stockholding Entities and on the possibility for economic operators to delegate the stockholding obligations imposed on them by the Member States.

The Directive removed the obligation, until then imposed by Article 7(2) of Directive 2006/67, to have a bilateral agreement in place between the Member States concerned as a precondition for holding stocks abroad. The suppression of such obligation was closely linked to the right of economic operators to delegate at least part of their stockholding obligation⁴¹, thus facilitating a level playing field. The Directive's recitals however remain silent about the rationale and extent of this legislative change.

The Directive does not have one single article devoted to cross border stocks, but the provisions applicable in this case are contained in separate articles.

⁴⁰ p. 13 of the Impact Assessment

⁴¹ See p. 5 of the Commission's Proposal; "On the other hand, should a Member State choose to impose a stockholding obligation on companies, the companies will be given the right to delegate their obligation to a central stockholding entity. This option will remove some types of potential discrimination between categories of operators and will allow eradication of the problematic use of 'ticket' contracts and burdensome bilateral agreements." <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2008:0775:FIN>
According to the Impact Assessment, eliminating the mandatory bilateral agreements would also reduce the administrative burden. See p. 21.

rules relevant for cross border emergency stocks	Art. 3: stocks have to be maintained within the European Union	
	Art. 5(1): stocks need to be available and accessible at any time	arrangements for identification / control / accounting
		stocks should be able to verified at any time
		Member States may put limits or conditions for holding stocks abroad
	Art. 5(2): in case of emergency, Member State may not hinder the transfer, use or release of stocks held in its territory for other Member States	
	Art. 8: Economic operators' right of delegation to CSEs or operators abroad	as approved by the relevant Member States
		possibly, within a set limit (minimum 10% of the operator's obligation / 30% as from 12/2017)
Art. 10(3): Member States to grant immunity from enforcement action on all specific stocks maintained or transported within their territory, irrespective of whether they are owned by them or by other Member States		
Art. 12 + Annex IV / Art 13: monthly statistical summaries to contain details on cross border emergency / specific stocks		

Table 2. Provisions of the Directive applicable to cross border stocks. Source: DG Energy

The fact that the provisions applicable on cross-border stocks are not grouped in one single Article, but are presented in different provisions of the Directive, has created among public authorities and stakeholders in general, some uncertainties as to whether bilateral agreements are actually forbidden under the Directive, and – if so – on how to allow Member States to fulfil their obligations on stocks availability (Article 5) and make sure that stocks can be duly checked and identified at any time.

These uncertainties are especially relevant as far as the use of the so-called "tickets" is concerned. They are not explicitly covered in the enacting terms of the Directive, but defined in recital 13 as "contractual rights to purchase certain volumes of stocks", which, where they fulfil all the obligations set by the Directive, are considered as useful instruments compatible with the Directive's aim of greater convergence.

The Commission services understand that stakeholders would appreciate additional clarity on cross border stocks, and will examine the most appropriate instrument, possibly in the form of a guidance document.

7.2. Efficiency

To what extent has the intervention been cost effective (cost/benefit ratio)? Is the administrative burden (including its costs) imposed on Member States and economic operators justified? Is there room for simplification?

Analysing the efficiency is basically carrying out a cost-benefit analysis of the resources used in implementing the Oil Stocks Directive and the benefits that result from it for the different stakeholders. Quantifying the efficiency of a measure is therefore closely linked to quantifying its effectiveness.

A series of costs are linked to the implementation of the Directive (financial costs, storage costs, costs for management, costs for tickets and costs linked to policy implementation and monitoring). The contractor's study analysed the evolution of the costs linked to storing emergency stocks in four member States,⁴² based on the results of the survey. In combination with the results from the interviews, it concludes that "most Member States have not experienced major changes in the average costs of storing since 2009, but for some Member States the Directive did cause some small increases in the cost of storage."⁴³

Moreover, the additional requirements introduced in the Directive seem to have led to some one-off incremental costs, mainly due to the fact that many countries needed to change the type and /or volume of product stocks. As product storage facilities are on average 25% more expensive than crude oil facilities⁴⁴, the acquisition and initial storage construction costs seem to have implied a significant cost item for some countries depending on the type and volumes of product that needed to be stored. The study acknowledges that "stakeholders were reluctant to share the precise details of these costs".

When consulted, a majority of stakeholders answered that the costs linked to the implementation of the Directive had been very high (12 % of respondents), high (36 % of respondents) or moderate (25 % of respondents), and only 8 % of respondents answered that implementation costs were low. However, a majority of stakeholders believe that these costs resulting from the Directive are justified and are proportionate to the benefits for the security of supply, in particular because transparency was increased. Industry representatives believe that efficiency might be improved if operators could fully benefit from the flexibility that the internal market offers. Stakeholders' answers are neither documented nor supported by figures, though. 83% of the respondents to the public consultation agree that the EU would be more vulnerable in case of oil disruption should Member States no longer be required to hold emergency stocks.

Some provisions in the Directive have given rise to unexpected effects and uncertainties, such as the impact of the 7% "naphtha trigger" in the annual stockholding obligation, the need to comply with the stockholding obligation by 1st April (both referred to under point 7.1.2.), or the perceived ambiguity of the provisions on cross-border stocks (referred to under point 7.1.4.); all these uncertainties may imply extra costs for those obliged to hold stocks (whether

⁴² As explained by the contractor, only respondents from Belgium, Cyprus, Germany and the Netherlands provided the relevant information.

⁴³ See pages 69 and 70 of the study.

⁴⁴ Source referenced in footnote 71 of the contractor's study.

public and private bodies) and additional unnecessary administrative burden and put therefore into question the Directive's efficiency.

The study commissioned by DG Energy in support of the recent Fitness check on Reporting, Planning and Monitoring Obligations in the EU Energy acquis⁴⁵, estimated the median annual costs of meeting the obligation contained in article 6(2) of the Directive at EUR 2,410 and 10 man-days, as Member States have established a lean processes for the collection of the needed data.

As mentioned under point 7.1.3., some public bodies consider the provisions on reporting contained in the Directive, in particular the annual report on the measures taken to guarantee the availability, physical accessibility and control of the emergency stocks, foreseen in Article 9(5), as being non-cost-effective and would like to have them removed or simplified.

It is worth recalling here that these reporting obligations relate to a core requirement of the Directive: the obligation for Member States to make sure that emergency stocks are available and physically accessible for the purposes of the Directive. They shall establish arrangements for the identification, accounting and control of these stocks so as to allow them to be verified at any time. This requirement applies also to emergency stocks that are commingled with other stocks held by economic operators.

The Directive defines "physical accessibility" as the arrangements for locating and transporting stocks to ensure their release or effective delivery to end users and markets within time frames and conditions conducive to alleviating the supply problems which may have arisen. Member States are obliged to keep a continually updated and detailed register of all emergency stocks held for its benefit, which shall include information needed to pinpoint the exact location of the stocks and the quantities, the nature of the stocks and the owner.

These provisions on availability and accessibility represent the backbone of the EU stockholding mechanism, because they contribute to build the necessary confidence of economic operators and stakeholders. It is therefore of utmost importance to make sure that Member States duly comply with them. The reporting obligations in Articles 6(2) and 9(5) are meant to facilitate the control by the Commission of the implementation by Member States of the relevant obligations.

The results of the public consultation confirm the stakeholders' scepticism about the benefits of reporting, as only 36 % of the respondents believe that the Directive improved efficiency by simplifying reporting (at least partly). The same percentage (36 %) stated that the Directive had not improved efficiency by simplifying reporting. However, when answering to the general question about whether the costs of implementing the Directive are proportionate to the benefits achieved, only 17% of respondents think that this is not the case.

Finally, by explicitly referring to the IEA procedures, the Directive facilitated cooperation at operational level with the IEA Secretariat, leading to additional efficiencies. As stated under point 7.1.3., at the public consultation, 73 % of stakeholders stated that the Directive improved efficiency through better harmonisation with the IEA system.

⁴⁵ http://ec.europa.eu/energy/sites/ener/files/documents/2_en_autre_document_travail_service_part1_v3.pdf

The International Energy Agency conducts Emergency Response Reviews (ERR) on a regular basis in all IEA countries to ensure that the measures taken for emergency responses remain effective. As mentioned under point 6., in agreement with the Oil Coordination Group, and in close cooperation with the IEA Secretariat, the Commission participates in the relevant IEA reviews for the twenty EU Member States that are also IEA member countries, thus avoiding duplication of efforts.

The IEA conducts every 2 years an Emergency Response Exercise (ERE) with all the IEA countries to test how to effectively deal with an oil supply disruption and communicate in real time. The Commission services participated since 2012 in three EREs, which allowed simulating and testing the emergency procedures in the event of an effective international decision to release stocks, as foreseen in Article 20(3) of the Directive, as well as to coordinate the emergency decisions (stocks release) with the non-IEA EU Member States.

7.3. Relevance

To what extent is the intervention still relevant? Do the objectives of the Directive still correspond to the needs of the policy area?

The needs that led to the adoption of the Oil Stocks Directive remain and are addressed by its objectives.

EU dependency on crude oil and petroleum products imports remains high (the EU imports 89% of its demand). Domestic oil supplies have declined at a faster rate than demand.

**1.2.4 EU-28 Energy Import Dependency
BY FUEL – (%)**

	1995	2000	2005	2010	2014	2015
Total	43.1	46.7	52.1	52.6	53.4	54.0
Solid Fuels	21.5	30.6	39.4	39.4	45.7	42.8
of which Hard Coal	29.7	42.6	55.7	57.9	68.0	64.1
Petroleum and Products	74.1	75.7	82.1	84.5	87.5	88.8
of which Crude and NGL	73.0	74.4	81.3	84.6	87.9	88.4
Natural Gas	43.3	48.8	57.1	62.2	67.3	69.1

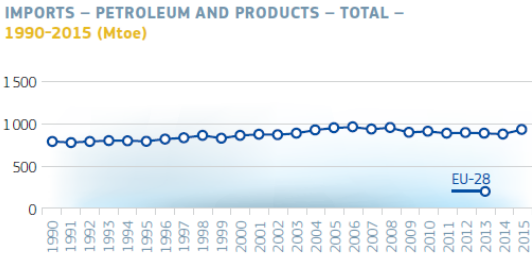


Figure 5. EU import dependency. Source: EU Energy in figures 2017 (Statistical pocket book)

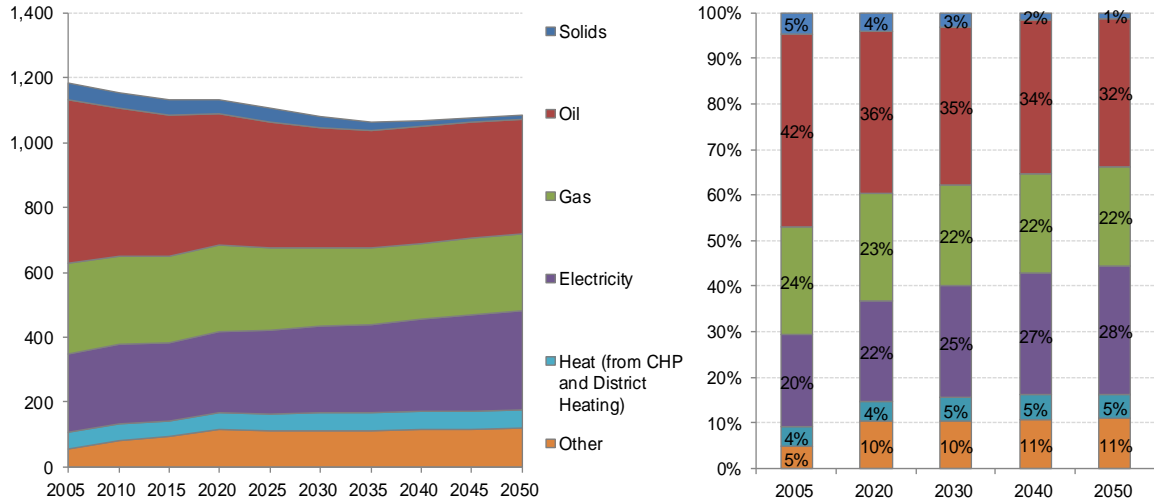
While oil consumption in power generation and heating has fallen, oil continues to have a dominant role in the transport sector. Liquid fuels, with their high energy content, are particularly suited for mobility uses and have displaced most alternatives over time. Today, transport⁴⁶ relies on oil for 94% of its energy needs. According to Eurostat, most energy consumed in air and waterborne transport was petroleum-based in 2014. While air transport relies mainly on kerosene, inland navigation uses few types of fuels, but all petroleum-based. Road transport depended on oil products for 95% of its energy use and rail transport for 33%. Overall, transport represents 65% of total final demand (energy and non-energy) for petroleum products while road transport alone accounts for 54%.

⁴⁶ Including bunker fuels for international shipping.

The Commission's Communication on a European Strategy for Low-Emission Mobility⁴⁷ sets out a framework for reducing greenhouse gas emissions from the transport sector. The implementation of this Strategy is expected to lower levels of oil consumption in the EU by reducing energy needs in the transport and by switching to alternative types of energy. This is also expected to positively contribute to energy security.

Assuming current trends and policies, oil remains an important source of energy over the coming decades, although consumption in absolute terms is projected to decrease.⁴⁸ In transport, oil products would still represent about 90% of the sector needs in 2030 and 86% in 2050, despite the renewables policies and the deployment of alternative fuels infrastructure which support some substitution effects towards biofuels, electricity, hydrogen and natural gas. The contribution of transport to the total final demand (energy and non-energy) for petroleum products is projected to increase over time under current trends and adopted policies, reaching about 67% by 2050.

Figure 6: Evolution of final energy demand by fuel (Mtoe – left, shares – right)

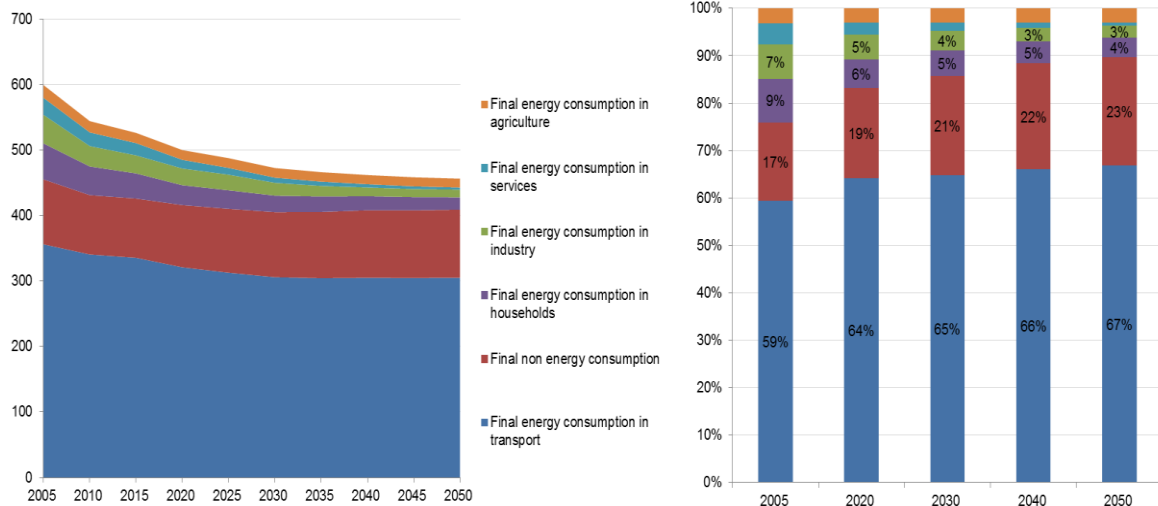


Source: PRIMES model, EU Reference Scenario 2016 Energy, transport and GHG emissions Trends to 2050

⁴⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, A European Strategy for Low-Emission Mobility (SWD(2016) 244 final) <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016DC0501>

⁴⁸ EU Reference Scenario 2016 Energy, transport and GHG emissions Trends to 2050, https://ec.europa.eu/energy/sites/ener/files/documents/ref2016_report_final-web.pdf

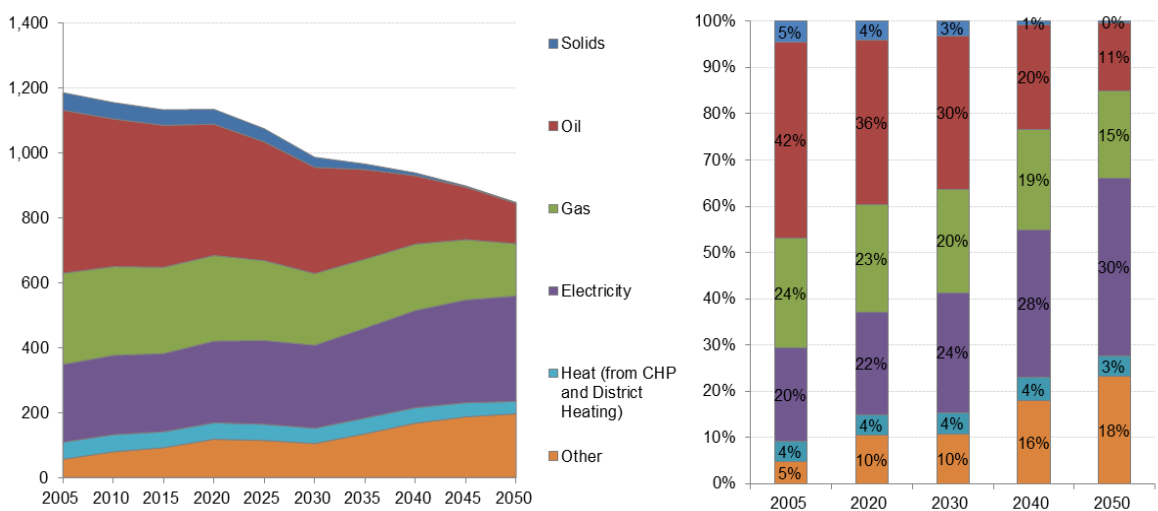
Figure 7: Demand for petroleum products by sector (Mtoe – left, shares – right)



Source: PRIMES model, EU Reference Scenario 2016 Energy, transport and GHG emissions Trends to 2050

However, in a context where the EU would reach its medium to long term climate and energy targets and objectives⁴⁹, a stronger decline in the use of oil over the coming decades is projected. Although petroleum products will remain widely used until 2030, notably due to demand in the transport sector, demand decreases thereafter, because of overall energy efficiency gains, and it is expected that by 2030 about 15-17 % of the transport energy demand would be provided by low-emission alternative energy, such as advanced biofuels, electricity, hydrogen and renewable synthetic fuels. Conversely, final non energy consumption remains broadly stable over the period, therefore increasing in share by 2050.

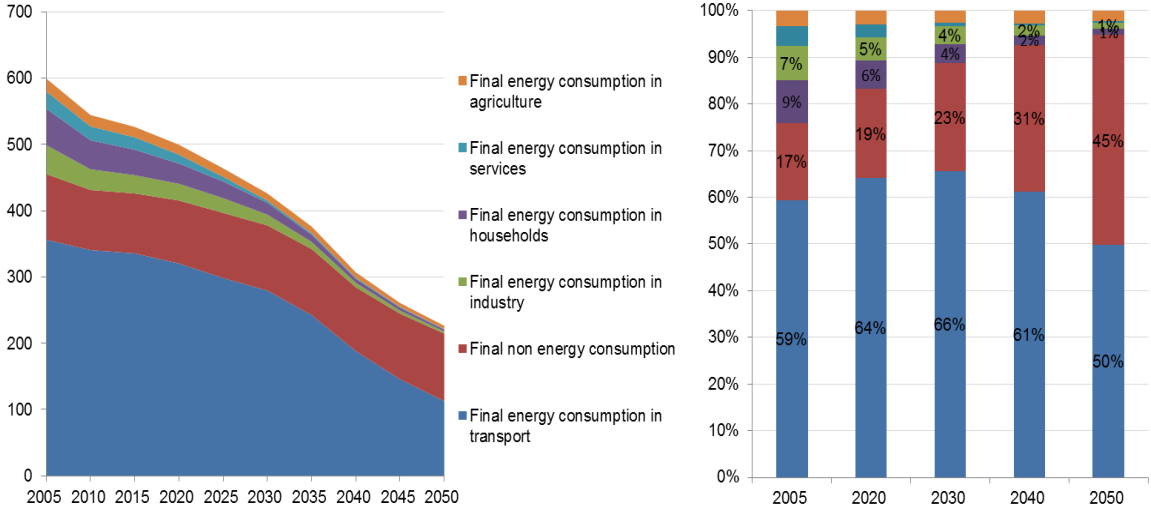
Figure 8: Evolution of final energy demand (Mtoe -- left, shares -- right) - EUACO30 scenario



⁴⁹ The results are based on the PRIMES EUACO30 modelling scenario, a scenario in which, in 2030, greenhouse gas emissions are decreased by 40%, where the RES share reaches 27% and where energy efficiency improves by 30%. This scenario is also in line with long-term decarbonisation objectives, but for the period after 2030 the policy scenario is much more stylised, not fully reflecting a potential future policy or energy mix, but merely overall consistent with reaching 2050 GHG objectives. Detailed assumptions and results can be found in the Impact Assessment accompanying the proposal for the revised Energy Efficiency Directive.

Source: PRIMES, EUCO30 Scenario

Figure 9: Demand for petroleum products by sector (Mtoe) - EUCO30 scenario



Source: PRIMES, EUCO30 Scenario

The EU exposure to security of supply risks has increased in recent years as supply sources have shifted towards more geopolitically unstable regions (the share of oil from Russia increased from 22% in 2001 to 30% in 2015). 40% of EU oil imports come from the Middle East and North Africa. Member States most exposed to security of supply risks are those that rely on crude oil supplied via pipelines from one single country.⁵⁰ The reduction of demand for petroleum products (Figure 9) that is projected to result from the implementation of a 30% energy efficiency target is expected to greatly enhance the security of supply. By 2030, oil consumption is projected to be reduced by about one third of the 2005 level and petroleum products import bills are projected to be decreased by EUR 19 billion per year, on average, over the 2021-2030 period, as compared to a business as usual scenario⁵¹

⁵⁰ This vulnerability was illustrated by EP written question E-001141/2016, in August 2016 <http://www.europarl.europa.eu/sides/getDoc.do?type=WQ&reference=E-2016-005178&language=EN>

–See also the Commission's press release on 9 January 2007, on cuts in oil supplies from Russia via Belarus http://europa.eu/rapid/press-release_IP-07-24_en.htm?locale=en

⁵¹ IMPACT ASSESSMENT Accompanying the Proposal for a revised Directive on Energy Efficiency SWD/2016/0405 final

2.2.5 Imports by Country of Origin

EU-28 – CRUDE OIL AND NGL

TOP 15 EXTRA-EU – (ORDERED BY 2015 VOLUME)

kton	1995	2000	2005	2010	2014	2015
Russia	76349	120165	191504	182879	150984	153913
Norway	102382	115861	97606	73406	67131	66019
Nigeria	28633	22530	18617	21783	45170	44276
Saudi Arabia	82630	65089	60740	30759	44218	41728
Iraq	0	31317	12290	16945	22836	40019
Kazakhstan	78	9993	26386	29701	32621	35104
Azerbaijan	0	3712	7255	22922	21940	27296
Algeria	17069	21434	22776	8252	22915	24518
Angola	4758	3861	7065	8479	16486	22167
Mexico	7247	9770	10647	6782	10851	13114
Libya	47978	45883	50681	53751	16828	12816
Egypt	6950	5579	1716	4654	5975	7794
Kuwait	12239	9741	7618	3420	4816	6649
Venezuela	9929	6944	6988	5001	6183	5502
Other African countries*	0	0	510	553	3627	5052
other extra-EU	114269	71106	62082	61804	29162	28290
kton						
Extra-EU	510511	542985	584481	531091	501743	534257
Intra-EU	50375	62254	48269	39612	30055	30286
Total Intra-EU and Extra-EU	560886	605239	632750	570703	531798	564543
Mio barrels						
Extra-EU	3743	3981	4285	3894	3678	3917
Intra-EU	369	456	354	290	220	222
Total Intra-EU and Extra-EU	4112	4437	4639	4184	3899	4139

Figure 10. Source: EU Energy in figures 2017 (Statistical pocket book)

According to the latest EU Reference Scenario⁵², the EU dependence from oil imports is expected to reach 97% in 2050.

7.4. EU added value

What is the additional value resulting from the Directive, compared to what could be achieved by Member States at national and/or regional levels? What is the additional value resulting from the Directive compared to the IEA system?

The mid-term evaluation has been able to confirm that the Directive generates an added value above and beyond what Member States' individual measures and the IEA framework could have achieved.

According to the results of the public consultation, a majority of stakeholders see a clear added value in having emergency oil stockholding rules at EU level. 88 % of respondents considered that the levels of oil stocks available in case of disruption would be lower if the EU rules no longer required Member States to hold emergency oil stocks; 83% of the respondents stated that, without such EU rules, the security of oil supply in the European Union would be more vulnerable. Moreover, 78% of respondents (10 public authorities, 7 Central Stockholding Entities, 9 private enterprises and 13 professional organisations)

⁵² EU Reference Scenario 2016, Energy, transport and GHG emissions Trends to 2050, https://ec.europa.eu/energy/sites/ener/files/documents/ref2016_report_final-web.pdf

answered that the existence of an EU system for emergency oil stocks separate from the IEA's mechanism is (at least partially) justified, while 12 % of respondents don't think it is justified.

This confirms the Directive's rationale that a truly European framework on emergency oil stocks represents an added value compared with Member States' individual actions, whether or not they are member countries of the IEA.

The Commission's vision of the Energy Union is one of an Energy Union "where Member States see that they depend on each other to deliver secure energy to their citizens, based on true solidarity and trust, and of an Energy Union that speaks with one voice in global affairs".⁵³ This vision was materialised in recent legislative proposals made by the Commission on gas⁵⁴ and electricity⁵⁵ security of supply. The mechanism set up by the Directive responds to this same rationale, as enounced in its Article 1: "This Directive lays down rules aimed at ensuring a high level of security of oil supply in the [Union] through reliable and transparent mechanisms based on solidarity amongst Member States, maintaining minimum stocks of crude oil and/or petroleum products and putting in place the necessary procedural means to deal with a serious shortage".

The mechanism put in place by the Directive corresponds to the idea of emergency preparedness. A review of its provisions on emergency procedures shows the extent and added value of this EU mechanism.

Emergency procedures	"major supply disruption"	A substantial and sudden drop in the supply of crude oil or petroleum products to the EU or to a Member State, irrespective of whether or not it has led to an effective international decision to release stocks
	Procedures to be in place allowing Member States to	release oil stocks quickly, effectively and transparently impose general or specific restrictions on consumption (e.g. by allocating petroleum products to certain groups of users on a priority basis)
	"Contingency plans"	They include organisational measures To be notified to the Commission upon request

Figure 11: Emergency procedures foreseen by the Directive. Source: DG Energy

⁵³ COM(2015) 080 <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=COM%3A2015%3A80%3AFIN>
⁵⁴ COM(2016) 052 <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1481047140770&uri=CELEX:52016PC0052>
⁵⁵ COM (2016) 0862 <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1481047219386&uri=COM:2016:862:FIN>

Based on the definition of "major supply disruption", and assuming that the necessary procedures and powers are in place at national level, the Directive differentiates 3 possible emergency scenarios and the role for the Commission and the Oil Coordination Group (OCG):

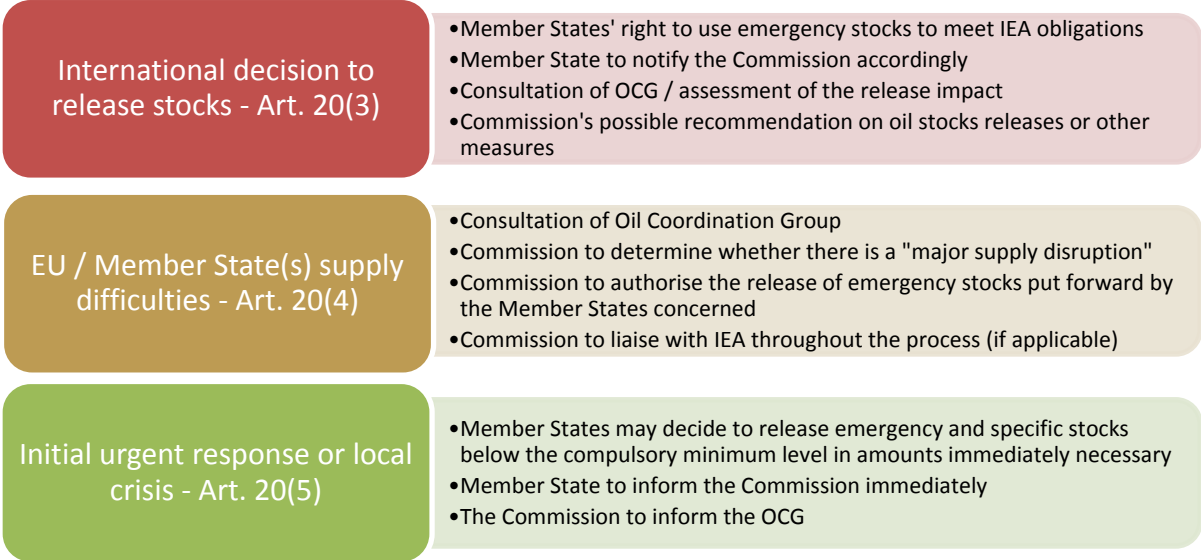


Figure 12: Directive's emergency scenarios. Source: DG Energy

In all three scenarios, Member States may temporarily hold stocks below their obligation. If they do so, the Commission sets a reasonable time frame within which the Member State stocks shall meet the obligation.

It is important to highlight the role of the Oil Coordination Group under all three scenarios, but also in normal situations. This standing advisory group is made up of representatives of the Member States and has as a mandate to help the Commission in analysing the situation within the Union with regard to security of supply for oil and petroleum products and to facilitate the coordination and implementation of measures in this field. This broad mandate is important against the background of the Energy Union objectives and has the potential to facilitate best practices exchange and policy coordination, especially in situations where the solidarity principle would need to be translated in practice.

The Commission services will fully use the potential of the Oil Coordination Group to promote good practices.

7.5. Coherence

Coherence. To what extent is this Directive coherent with other interventions which have similar objectives and with wider EU policy? To what extent is the Directive coherent with international obligations (harmonisation with the IEA system)?

Evaluating coherence involves looking at how well the provisions of the Directive work together to achieve the Directive's objectives (internal coherence), but also to check how well they work with other EU policies, especially in the energy sector, but not only, as well as whether they are consistent with international commitments and texts (external coherence).

Based on the conclusions of the contractor's study and the public consultation, the Commission services understand that stakeholders perceive some lack of internal coherence, as follows:

- the 10% deduction in Annex III, applicable when calculating the level of stocks held to take account of quantities that might be unavailable, might contradict the Member States' obligation laid down in Article 5 to guarantee availability and accessibility of the stocks;
- overlapping reporting obligations.

These topics are dealt with under other evaluation criteria.

Concerning the external coherence, the Commission services conclude that the Directive is fully coherent with the Energy Union policies.

The Energy Union aims at making energy more secure, affordable and sustainable. The Energy Union strategy is made up of 5 dimensions: (1) energy security, solidarity and trust; (2) a fully integrated European energy market; (3) energy efficiency contributing to moderation of demand; (4) decarbonising the economy and (5) research innovation and competitiveness.

The public consultation showed that a large majority of respondents consider that the Directive is coherent with the dimension related to energy security, solidarity and trust (only 5% of respondents clearly considered that this is not the case). Ensuring a high level of security of oil supply is indeed the declared objective of the Directive, which was proposed back in 2008 as a part of a set of EU rules aiming at guaranteeing the security of supply, and which included Regulation No 994/2010, on security of gas supply⁵⁶. Based on the experience, the Commission presented in February 2016⁵⁷ a legislative proposal that led to the adoption of Regulation (EU) No 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010⁵⁸. These new rules put solidarity first when it comes to dealing with disruptions to gas supply and ensure a regionally coordinated and common approach to security of supply measures among EU Member States, which places the EU in a better position to prepare for and manage gas shortages if a crisis occurs. As a part of the "Clean Energy for all Europeans" package⁵⁹, the Commission presented in December 2016 a proposal for a Regulation on risk-preparedness in the electricity sector and repealing Directive

⁵⁶ Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC, OJ L 295, p. 1
<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1505411200557&uri=CELEX:32010R0994>

⁵⁷ See reference under point 7.4.

⁵⁸ http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.280.01.0001.01.ENG&toc=OJ:L:2017:280:TOC

⁵⁹ COM(2016) 860 http://eur-lex.europa.eu/resource.html?uri=cellar:fa6ea15b-b7b0-11e6-9e3c-01aa75ed71a1.0001.02/DOC_1&format=PDF

2005/89/EC, aiming at ensuring that all Member States put in place appropriate tools to prevent, prepare for and manage electricity crisis situations.

Contrary to the gas and electricity sector, the security of supply rules under Directive 2009/119 are basically limited to the setting up, management and procedure for release of strategic oil stocks. The question might therefore be asked whether a more detailed EU framework might be appropriate, e.g. similarly to the existing one in the gas sector. The Commission services share the assessment of the contractor's study that the existing differences between both sectors limit the comparability and transferability of experience between oil and gas security of supply. These differences, as explained in a study carried out for the Commission in 2015⁶⁰, are recalled in the contractor's study.

As for the other dimensions, a number of respondents consider that the Directive is not consistent, to different extents, with the objectives of decarbonising the economy (40% of respondents), research, innovation and competitiveness (32%) and energy efficiency (30%). In most of the cases, however, this lack of coherence is not perceived as a problem, because the Directive is merely about security of supply and does not have any impact on the other dimensions. A sharp majority of respondents (58%) consider that the Directive is (at least partly) coherent with the objective of a fully integrated EU energy market, but 20% of them consider that this is not the case, mainly because of the different approaches followed by Member States on cross-border stocks.

As part of the decarbonisation objective of the Energy Union and in an effort to reduce the consumption of fossil fuels, the Union has set itself ambitious renewable energy target of at least 27% of final energy consumption in the EU and at least 27% energy savings as a whole by 2030. In its Clean Energy for all Europeans package of November 2016, the Commission proposed to increase this target to 30%. In particular, in the European Strategy for a Low-Emission Mobility (COM(2016) 501 final) the Commission established the objective to reduce greenhouse gas emissions from transport by 60% in 2050 (as compared to 1990), and to be firmly on the path to zero emissions. This entails a reduction of energy need by optimising the transport system and improving its efficiency, scaling up the use of low-emission alternative energy for transport and the development of the necessary infrastructure and moving towards zero-emission vehicles.

In the Mobility package "Europe on the move"⁶¹ of May 2017, the Commission adopted further proposals that will contribute to implementing these objectives. In particular, the Commission proposed a monitoring and reporting mechanism for heavy duty road transport, which will set the ground for developing vehicle emission standards for this transport sector. Such standards will complement already existing standards for low duty vehicles. The Commission also issued a Recommendation for better informing consumers on fuel consumption by using an improved test procedure (World Harmonised Light Vehicles Test Procedure).

⁶⁰ "The role of gas storage in internal market and in ensuring security of supply"
<https://ec.europa.eu/energy/sites/ener/files/documents/REPORT-Gas%20Storage-20150728.pdf>

⁶¹ https://ec.europa.eu/transport/modes/road/news/2017-05-31-europe-on-the-move_en

The Oil Stocks Directive remains coherent with the energy and climate goals for 2030,⁶² as it does not provide for increased oil consumption but rather foresees measures to ensure the security of the oil supply, another objective of the Energy Union. Indeed, the compulsory emergency stocks are recalculated every year based on annual consumption, meaning that the oil stockholding obligation diminishes as the share of renewable sources of energy increases in the national energy mix. The two are therefore complementary: while renewable energies will contribute to reducing our fossil fuel consumption, including oil, they cannot fully substitute oil products, even less so in case of supply disruption. Oil remains an important energy source when it comes to diversifying Member States' energy mixes, without impeding in any way the development of cost-efficient renewable energy sources.

The recent Commission's proposal for a revised Directive on the promotion of the use of energy from renewable sources contains measures aiming at promoting low-emission and renewable fuels, including advanced biofuels. Under the Oil Stocks Directive, biofuels and additives shall be taken into account for calculating the oil stockholding obligation only where they have been blended with the petroleum products concerned. When calculating the stock levels actually maintained, biofuels and additives shall be taken into account when they have been blended with the petroleum products concerned or when they are stored in the territory of the Member State concerned and the necessary rules are in place ensuring that they are to be blended with petroleum products held pursuant to stockholding requirements and are to be used in transportation. These rules may be amended in accordance with the regulatory procedure foreseen in the Oil Stocks Directive ("comitology"). In any case, the compulsory oil stocks are based on actual consumption, a decrease in oil consumption in the transport sector would be reflected by decreased emergency oil stocks levels.

The Commission services understand also that the Oil Stocks Directive is consistent with the EU policy on energy efficiency. Under the Directive, the relevant authorities should have the power, in the event of a major supply disruption, to release emergency stocks, but also to impose general or specific restrictions on consumption in line with the estimated shortages, inter alia, by allocating petroleum products to certain groups of users on a priority basis. It is up to the relevant national authorities to judge on the suitability and timeliness of the measures to be taken.

Higher coherence with respect to the decarbonisation objective of the Energy Union could be potentially achieved by including incentives to reduce oil demand in case of emergency. In case of a supply disruption, demand-side measures could spur on large consumers to reduce their consumption to the benefits of consumers providing essential services. This would also contribute to diversifying the measures ensuring the security of supply.

The Commission services consider that harmonising the national practices on demand restraint would also be in line with the solidarity principle; the Oil Coordination Group may play an important role in sharing best practices and aligning national policies.

⁶² COM(2014) 015 <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52014DC0015>

Some EU rules that dated back to 1977 and 1979⁶³ provided the possibility and procedure for setting a target for reducing consumption of petroleum products in the Community as a whole by up to 10% of normal consumption, as well as some measures aiming at ensuring that all energy consumers in the Community would "bear their fair share of the difficulties arising from the crisis". In the context of the Commission's Regulatory Fitness and Performance Programme, these rules were repealed by the Council in April 2015,⁶⁴ for considerations related to the key role that emergency stocks play under Directive 2009/119.

The Commission services will promote the exchange of best practices among Member States and will explore how to take better into account considerations related to energy efficiency and the solidarity principle.

8. CONCLUSIONS

The mid-term evaluation of the Oil Stocks Directive has concluded that, over the period 2009 to 2016, the Directive has facilitated the achievement of its objectives. In particular, the Directive has been successful in enhancing the credibility of the EU oil stockholding system, by improving the availability and transparency of stocks, facilitating synergies with the International Energy Agency and guaranteeing appropriate mechanisms for oil stocks release in case of disruption. At the same time, the mid-term evaluation of the Directive has identified a series of areas for improvement and makes suggestions to be appraised in ex-ante analysis.

Due to the limitations in the evidence base and methodology followed, the conclusions of the mid-term evaluation are very much dependent on how stakeholders perceive the effectiveness, efficiency, relevance, EU added value and coherence of the Directive. The mid-term evaluation has showed that, despite the possible difficulties encountered when implementing some provisions, stakeholders do not question the relevance and EU added value of the Directive and therefore it provides a basis for further work to clarify the Directive's provisions – where appropriate – and to facilitate the stakeholders' understanding of the relevant rules, thus leading to a more effective implementation of the Directive.

8.1. Effectiveness

The mid-term evaluation concludes that the Directive has been effective, but the degree of uncertainty around this conclusion is medium to high, due to the lack of validated data to support it and the fact that the Directive's effectiveness has not been tested in practice. The mid-term evaluation shows that the Directive has achieved its objectives to different extents.

The availability and accessibility of the emergency stocks have been improved, as a result of a comprehensive set of measures making stocks available and accessible at all times, in particular the provisions on ownership and nature of the emergency oil stocks, as well as

⁶³ Council Decision 77/706/EEC on the setting of a Community target for a reduction in the consumption of primary sources of energy in the event of difficulties in the supply of crude oil and petroleum products (OJ, L 292, p. 9), and Commission Decision of 15 June 1979, laying down detailed rules for the implementation of Council Decision 77/706 (OJ L 183, p.1).

⁶⁴ Council Decision (EU) 2015/632 of 20 April 2015, OJEU L 104, p. 2.

those on identification, accounting and control, which have improved the stakeholder's confidence on the availability of stocks in case of need.

The mechanism resulting from the Directive is better coordinated with the IEA mechanism. The methodologies were aligned for calculating the "crude oil equivalent" of imports of petroleum products and for calculating the level of stocks held. The rules for the preparation and submission to the Commission of statistical summaries of oil stocks are harmonised and the Commission and the IEA use the same reporting methodology. The Directive moreover put an end to the uncertainties existing under the previous rules, by expressly referring to the possibility for Member States to participate in collective actions initiated by the IEA while complying with the Directive.

The alignment of the methodology has however led to some unexpected results, such as undesirable fluctuations in the annual oil stock holding obligations resulting from the existence of two formulas applicable for deducting the naphtha yield from the crude oil equivalent of imports or the impact of applying a 10% deduction over the total of emergency oil stocks held, among other.

The Directive might not have fully achieved its objective of reducing the administrative burden, or, at least, this is how stakeholders perceive the additional reporting obligations introduced by the Directive. Discrepancies on the assessment of the administrative burden resulting from the Directive might result from the type of questions asked to stakeholders, or their formulation, giving rise to different interpretations. While the administrative burden certainly diminished for those Member States that are IEA members, no valid conclusion can be drawn concerning the Directive's impact on the administrative burden linked to the new reporting obligations, lack of a proper quantification of the benefits resulting from them in terms of stocks availability and transparency (or in terms of security of oil supply at large).

Finally, the Directive's rules on data reporting have contributed considerably to adding transparency to the actual levels of stocks held in the EU, by allowing to crosscheck information from different Member States and ensure comparability with IEA data, thus, avoiding double accountancy of stocks.

8.2. Efficiency

The mid-term evaluation was not conclusive about the efficiency of the Directive, mainly due to the limitations in the methodology and the lack of quantification of the Directive's costs and benefits linked to the security of oil supply.

Stakeholders assessment of the costs related to the Directive's implementation range from moderate to high or very high, but a majority of stakeholders believe that these costs are proportionate to the benefits for the security of supply, especially because transparency about the actual level of stocks held was increased. Some inefficiencies arise however from the unexpected results of the methodologies foreseen in the Directive to calculate the level of the stockholding obligation or the level of stocks actually held, the date of compliance with the stockholding obligation or the perceived ambiguity of the provisions on cross border stocks. The potential additional cost of these issues could however not be quantified.

8.3. Relevance

The mid-term evaluation has found evidence that the Directive is relevant. The needs that led to the adoption of the Oil Stocks Directive remain and are addressed by its objectives. While oil consumption in power generation and heating has fallen, transport relies on oil for 94 % of its energy needs. Assuming current trends and policies, oil will remain an important source of energy over the coming decades and EU dependency on crude oil and products imports remains high (EU imports 88% of its demand) and is expected to reach 93% in 2030.

8.4. EU added value

The mid-term evaluation has confirmed that the European framework for emergency oil stocks generates added value above and beyond what Member States' individual measures and the IEA framework could have achieved.

8.5. Coherence

The mid-term evaluation did not identify any major issue of internal or external coherence of the Directive. It concludes that the Directive is coherent with the EU energy policy and the five dimensions of the Energy Union, in particular with its objectives on energy security, solidarity and trust, energy efficiency and decarbonisation.

Contrary to the gas and electricity sector, the security of supply rules under Directive 2009/119 are basically limited to the setting up, management and procedure for release of strategic oil stocks. The question might therefore be asked whether a more detailed EU framework might be appropriate, e.g. similarly to the existing one in the gas sector, but existing differences between both sectors need to be taken into consideration.

The Directive also remains coherent with the decarbonisation objective of the Energy Union and its efforts to reduce the consumption of fossil fuels, to the extent that the Directive does not promote increased oil consumption but rather just focuses on emergency preparedness. Indeed, the emergency stocks are calculated based on annual consumption. As the share of clean energy will increase in the Member States (e.g. as a result of EU initiatives on clean energy and low-emission mobility), the levels of emergency oil stocks to be held are expected to fall accordingly. Higher coherence might however be achieved by including incentives to reduce oil demand in case of emergency or harmonising national practices on demand restraint, among other measures.

9. NEXT STEPS

The mid-term evaluation of the Directive has identified a series of areas for improvement and possible follow-up measures that might increase the Directive's effectiveness and efficiency, as follows:

- Changing the methodology for calculating the crude oil equivalent of imports of petroleum products (Annex I), in particular by modifying the formula allowing to estimate the naphtha yield that does not have an energy related use. Special attention

should be paid to the other alternative methodology proposed by some stakeholders and analysed in the contractor's study.⁶⁵

- Changes related to the 10% reduction applicable when calculating the level of stocks held (Annex III). Special attention should be paid to the three options suggested by the stakeholders and analysed in the contractor's study.⁶⁶
- Replacing the date of the start of the stockholding obligation (currently 1st April) by 1st July, as demanded by some Member States and supported in the contractor's study.⁶⁷
- Harmonising the conditions for holding cross-border stocks. Special attention should be paid to the options suggested in the contractor's study, among other options.⁶⁸

Appropriate means need to be identified to address the necessary adaptations; some of them (e.g. changes to the Directive's Annexes) can be made using the Commission's regulatory powers foreseen in the Directive⁶⁹ or possibly through "soft law" (e.g. in the form of a Commission's recommendation). Should the required measure imply amendments to the enacting terms of the Directive, a legislative proposal would be needed based on the codecision procedure.

⁶⁵ Pages 82 to 84 and 117.

⁶⁶ Pages 78, 79 and 118.

⁶⁷ Pages 83 to 85 and 117.

⁶⁸ Page 119.

⁶⁹ "Comitology" procedure, as foreseen in Articles 3(4), 4(4) and Article 23(2) of the Directive.

ANNEXES

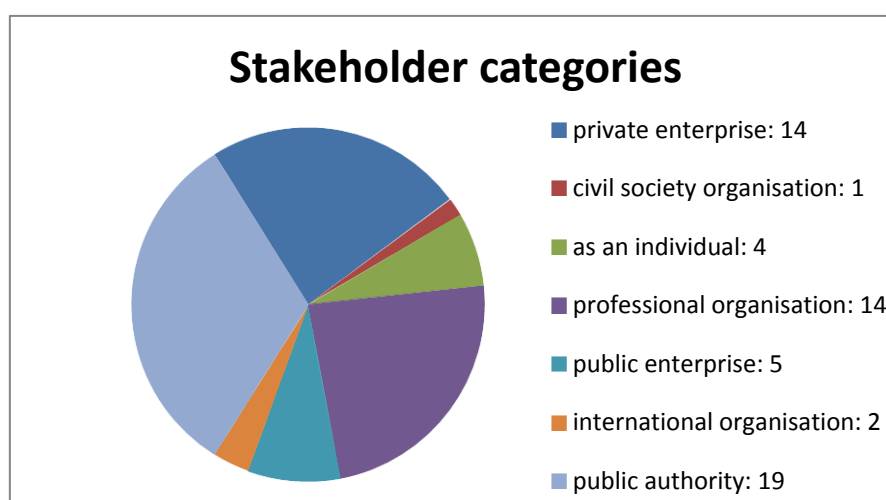
ANNEX 1: STAKEHOLDER CONSULTATION

Public consultation on the Directive imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products (2009/119/EC)

As provided for in the Better Regulation guidelines, a public consultation was launched on 10.08.2016 regarding the Oil Stocks Directive as part of its mid-term evaluation. It remained open until 26.11.2016. The consultation aimed at collecting feedback from stakeholders and general public. Questions in the questionnaire addressed all five evaluation criteria: effectiveness, efficiency, coherence, EU added value and relevance.

○ Who replied

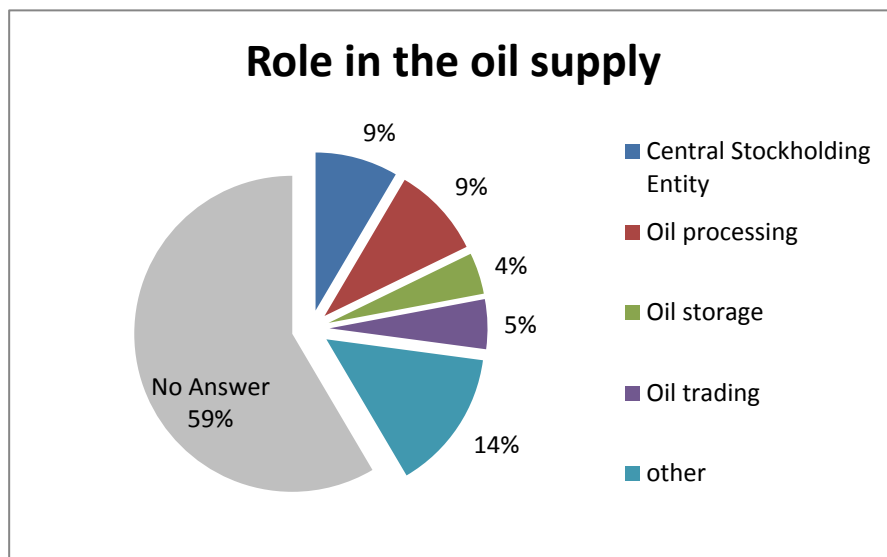
We received 59 answers. 40 % of contributions came from the public sector, including 15 Member States through their competent ministries (Austria, Belgium, Cyprus, France, Germany, Greece,



Lithuania and Sweden, amongst others) and four Central Stockholding Entities ("CSEs"). Five respondents declared to be a public undertaking, including four CSEs. No third country answered to the consultation.

48 % were submitted by private entities. Submissions from the private sector come from stakeholders that declared being established or having interests across all 28 Member States. 14 declared to be a private enterprise, including two CSEs, and 14 declared to be professional organisations.

Two international organisations, including the International Energy Agency (IEA), answered to the consultation. Four submissions came from EU citizens acting in their individual capacity and one from



a non-governmental organisation (NGO); the lack of contribution from the civil society may be owing to the technicality of the subject.

Private and public enterprises declared to be involved in different levels of the oil supply chain (processing, storing and trading). 34 % of respondents declared to be obliged to hold oil stocks and therefore directly concerned by the Directive. Out of the 23 existing CSEs in the EU, 10 replied to the public consultation.

Nine respondents also provided additional comments in a separate document.

A detailed assessment of the replies confirms a general support for the EU intervention as regards emergency oil stocks, even though many respondents brought up several issues that the report conducted by an external contractor had also put forward.

○ **How effective has the EU intervention been?**

Respondents were asked to assess whether the Directive fulfilled its objectives. A majority of them is positive that the Directive was indeed effective.

With regards to the objectives of improving the availability and the physical accessibility of the oil stocks in case of supply disruption, a majority agrees it was at least partly met: 80 % agree the availability increased and 69 % recognize that the physical accessibility improved. Several submissions (Denmark, Germany and Greece and several CSEs) praise the clearer rules as having fostered better coordination between EU Member States and thus contributed to the availability and accessibility.

Professional organisations such as FuelsEurope, as well as Total, consider that the inclusion of "non-strategic products" as emergency stocks undermines the stock's availability. They also identify the lack of clarity with regard to cross-border stockholding as a hindrance to further physical accessibility.

A better harmonization of EU rules with the IEA system is also believed by 78 % to have been achieved by the Directive. The IEA specifically indicates in its submission that the Directive improved

the codification of cooperation and communication between IEA/EU and clarified the role for non-IEA EU member in the collective system. Nevertheless, more than half of the respondents note the existence of remaining discrepancies. Cyprus and its CSE as well as Sweden (amongst other Member States) call for further alignment when it comes to calculation methodologies. Germany argues that the current alignment has brought about appreciable synergies and Denmark insists on the necessity for the EU system to remain slightly different so as to take better account of each Member State's specificities.

Both private and public sector respondents evaluate the overall administrative burden to have increased at least slightly (although two third of the respondents either had no opinion or did not answer). 8 Member States mention the annual reporting obligations under article 9(5) as the main source of increased burden. Germany also refers to the prior authorisation of cross-border agreements as an additional administrative burden created by the Directive. Professional organisations simply indicate that the administrative burden varies between Member States.

As to the objective of increasing transparency of the level of emergency oil stocks held in the Member States and the European Union as a whole, 69 % of respondents are positive the Directive succeeded in that regard, especially by distinguishing commercial stocks and stocks qualifying as emergency stocks. Several note, nevertheless, that this differentiation is subject to different interpretations across Member States. 19 % specifically find that the transparency of cross border stocks did not improve. To tackle this problem, professional organisations suggest setting up an EU-wide registry system and to enforce the prohibition of bilateral agreements that is already in the Directive. Union of European Petroleum Independents (UPEI) recommends doing away with the prior authorisation a Member State has to give when a stockholder wishes to keep emergency oil stocks abroad, but instead to regulate clearly the possibility.

A number of respondents also shared what they perceived as unexpected or unintended effects of the Directive. The volatility of the levels of compulsory stocks to be held as emergency stocks from a year to the next is mentioned in several submissions as an unintended consequence brought about by the 7 % naphtha trigger that is taken into account in the calculation methodology laid out in Annex I.

Most professional organisations, including FuelsEurope, *Union Française des Industries Pétrolières* (UFIP), United Kingdom Petroleum Industry Association (UKPIA) and *Unión de Petroleros Independientes* (UPI), that undertook the consultation, as well the Polish oil refiner and petrol retailer PKN ORLEN and Total raised the issue of dissimilar compulsory stock obligations being imposed on oil refiners and oil importers.

Denmark is concerned that the lack of harmonisation across Member States may distort cross-border competition. Sweden believes that, by spurring Member States on to assign the stockholding obligation to state-managed CSE rather than to the industry, the Directive has the unintended negative effect of aligning the availability and accessibility levels: holding emergency oil stocks mostly in public stockholding entities make them available less immediately (because of longer start-up times), whereas a mix between several stockholding systems (private and public) would ensure various speed of responsiveness thanks to different levels of availability and accessibility. Sweden

fears that this weakens the effectiveness of crisis management as most stocks become available at the same time, where different systems would provide for stocks becoming available throughout a crisis.

Furthermore, a number of CSEs and Member States shared that the current annual compliance date (1st of April) for the constitution of emergency oil stocks is too early and undermines the effectiveness of the Directive.

○ **How efficient has the EU intervention been?**

Respondents were asked to evaluate the compliance costs induced by the implementation of the Directive. Both private and public sectors respondents evaluate costs to be ranging from moderate to very high. Member States and CSEs agree that costs on CSE have increased at least moderately. The most expensive costs induced by the Directive being the constitution of emergency oil stocks, Member States that already had sufficient volume built up were therefore not financially affected. There is no clear trend to emerge from the answers as to who bore most of the implementation costs. Some perceived the financial burden to be higher either on industry and consumers while others find it higher on state finance and tax payers. This is further supported by answers from the 18 respondents under a stockholding obligation: 7 estimate implementation costs to have been high while 9 evaluate them to have been either moderate or low. Nevertheless, several remarks were made regarding these costs.

The 7 % naphtha trigger is again identified as an issue as it may increase the mandatory volume from a year to the next, thus begetting higher costs on the stockholding entities. Three professional organisations indicate that costs are higher for refiners and importers and for that reason demand a level playing field to have costs spread evenly on all parties. They insist however that costs vary not only from one national stockholding system to another but also between the different enterprises under a stockholding obligation in a system where the obligation is borne by the industry: in several Member States oil refiners are required to hold a higher obligation than importers.

Respondents are polarised regarding the simplification of reporting, as 36 % find that it has improved the efficiency to some extent, while the same percentage find it has not. Even though the alignment of the reporting with the IEA requirements is praised by several, the annual reporting provided for in article 9(5) of the Directive is presented as burdensome. Private sector respondents advocate for the installation of an EU-wide reporting scheme so as to simplify this administrative burden and save costs.

73 % of respondents find that efficiency has been improved through better harmonisation with the IEA system. Nevertheless, professional organisations point out that the 10 % deduction rule present in both systems should be revised as it may be technically outdated. They therefore call for both bodies to conduct a study on current practices and BAT.

All in all, only 17 % of the respondents find these cost increases to be unproportioned to the benefits achieved.

○ **How coherent is the EU intervention internally and with other (EU) actions?**

Respondents had to gauge how the different components of the Directive work together, not only internally but also with other EU policies and other external components .

59 % of the respondents deem the current EU rules to be coherent with the existing IEA system. Currently, IEA members are required to hold oils stocks equivalent to 90 days of net imports, while no obligation is imposed on net oil exporters. Stocks held for commercial or operational use can be counted to this purpose, which is not the case under the Directive. As the stockholding obligation under the EU system is higher than in the IEA system, the EU system is more onerous, point out several of the 17 % that believe the Directive is not coherent with the IEA obligations.

In order to increase coherence, a number of professional organisations call for a full harmonisation of the two systems. The IEA notes that the remaining discrepancies decrease the transparency. 20 Member States are member of the IEA. Private companies subject to a stockholding obligation, or represented through professional organisations, such as FuelsEurope, UKPIA, UFIP, the Swedish Petroleum & Biofuels Institute, Total and PKN Orlen, but also France and Sweden advocate for a full alignment to improve the coherence between the two systems. Denmark, Germany and Cyprus favour a separate EU system to ensure that the specificities of the European context are well taken into account.

When it comes to the coherence of the Directive with the Energy Union objectives, most of the respondents (76 %) find it to be in line with the objective of energy security, solidarity and trust. Opinions are more contrasted regarding the four other objectives. Many respondents find the Directive contributes to the achievement of a fully integrated European Energy market but two professional organisations point out it hinders its full completion, as the possibility to hold cross-border stocks, despite the Directive doing away with bilateral agreements, remains contingent upon agreements at national level, thus impeding free movement of goods. Similarly, Belgium points out that more and more Member States are resorting to Memorandum of Understanding when it comes to cross-border stockpiling, a requirement not in line with the integrated energy market objective.

A short majority (53 %) of respondents find the Directive to be coherent with other EU rules in the energy sector, 58 % with other EU rules related to the oil sector and 42 % with other EU policies. More than a third of the respondents had no opinion with regard to these questions.

Professional organisations welcome the Directive as it recognises the important role for oil in the EU supply and economy. One NGO as well as one individual claim it does not take into account the 2030 climate objectives of the EU.

○ **What is the EU added value of the intervention?**

European added value is defined as the value resulting from an EU intervention which is additional to the value that would have been otherwise created by Member State action alone.

Almost 90 % of the respondents indicate that they perceive an added value in having a coordinated mechanism for emergency oil stocks, while only 12 % are strictly against having an EU system separated from the IEA rules. Most of the stakeholders indeed think the EU system is a good complement to the IEA one, as it provides harmonisation with non IEA Member States, as long as the EU system remains consistent with the IEA.

Should the EU no longer require Member States to hold emergency oil stocks, a vast majority of respondents agree the level of oil stocks held would decrease and the security of supply would be more vulnerable. Indeed, as Sweden notes, it is very unlikely that Member States not parties to the IEA would hold sufficient stocks, as they are costly. 83 % agree it would be detrimental to the security of oil supply in the EU.

Despite agreeing on the added-value of the EU approach, 73 % do not see further need for additional EU policies on emergency oil stocks. Several respondents stress the need to ensure the proper enforcement of the current Directive better.

○ **How relevant is the EU intervention?**

The public consultation asked respondents for their views on the relevance of the objectives of the Directive with regards to the needs and problems it tries to address.

Nearly all respondents are positive that emergency oil stocks are necessary to guarantee the security of the oil supply in the EU and 88 % that the EU therefore needs to have its own rules. 86 % are in favour of EU rules at least partly in line with the IEA rules. In order for the EU intervention to remain relevant, respondents from the private sector insist the Directive should fully align the EU system with the IEA one, whereas several Member States (Germany, Denmark and Cyprus) point out that the intervention should properly reflect the particular European context. Total concedes the EU system may be more restrictive but should not largely differ to remain relevant

The current stockholding obligation foreseen by the Directive specifies that the level of oil stocks must be equivalent to 90 days of average daily net imports or 61 days of average daily inland consumption, whichever of the two quantities is greater. This obligation is overall regarded as appropriate to cope with a serious oil supply disruption in the EU. Nevertheless, respondents indicated that the methodology used to calculate the reference daily averages (imports or consumption) is not necessarily well-adapted. 46 % find the calculation methodology to convert daily petroleum imports in crude oil equivalent to be partly or not well-adapted. 13 respondents specifically pointed the unexpected effects of the methodology linked to the 7 % naphtha yield threshold as an urgent problem to be addressed. The calculation methodology to convert the daily inland consumption in crude oil equivalent is less controversial, as only 19 % find it to be partly or not well-adapted. Respondents shared that the 10 % deduction rates to account for unavailability is too high: several professional organisations, including Central Europe Energy Partner, UKPIA and FuelsEurope outline the relevance of the Directive consistency with the IEA system, but suggest to launch a study to review this deduction rate, several CSEs explain their stocks are virtually immediately available. Denmark and UPEI suggests the potential regular review of stocks level as well as products based on risk assessment and costs.

○ **Recommendations from the study conducted by an external contractor**

A study in support of the mid-term evaluation of the Directive was prepared by an external contractor. The report made four main recommendations to improve the Directive which accurately identified problems respondents raised themselves in their submissions.

The study identified that the 7% naphtha threshold contained in the calculation methodology as laid out in Annex I might have an impact on the stockholding obligation. This issue is mentioned several times by a number of respondents throughout their submissions. 59 % wish Annex I to be amended to tackle this problem. Submissions from across all the categories of stakeholders highlight the differences in volume from one year to the next fluctuations in naphtha yield may bring about. Stakeholders believe it undermines the efficiency of the Directive as it generates uncertainty and costs.

For the sake of legal clarity, a majority (66 %) believes Annex III of the Directive should be amended to explicitly indicate the full name of Crude, NGL, Feedstocks, Additives/oxygenates and Other Hydrocarbons. It would ensure the harmonisation of products kept as emergency oil stocks across Member States. The list of admissible products for the constitution of emergency oil stocks as described in Annex III is overall a contentious concern for a number of stakeholders. A number of respondents, including Cyprus, PKN ORLEN, UFIP, FuelsEurope and one CSE, call for the list to only include "strategic products". Professional organisations specifically point out that the current wording of the list is understood differently from one Member State to another. The transparency objective of the Directive is therefore undermined.

Views are polarised on whether the stocks of naphtha should count as emergency oil stocks as it is the case under the IEA system. 49 % are in favour and 29 % against. While it makes sense technically, several stress that it is actually hard to trace whether naphtha stocks are to be used as a gasoline component or for petrochemical use. Monitoring that the reported naphtha stocks are indeed used as gasoline component would be onerous. Nevertheless, professional organisations and Member States stress that including the naphtha stocks would be consistent with the objective of aligning the IEA and the EU systems.

The 10 % deduction rate to account for unavailable stocks provided for in Annex III is not felt to be justified anymore by a majority of respondents. Several note it undermines the relevance of the Directive. 22 % are in favour of a lower deduction rate. 19 % suggest simply doing away with any deduction rate for unavailability. 15 % of the respondents suggest several deduction rates based on the nature of the stock holders. Denmark suggests having deductions favour CSE to steer national emergency stockholding systems to CSE models. Several professional organisations (UPEI, FuelsEurope, UFIP, UPI) call for the launch of a study to assess an appropriate deduction rate.

○ **Key findings**

Respondents from all the stakeholders' categories widely support the Directive. They praise the relevance of the text when it comes to guaranteeing the security of the oil supply by ensuring

emergency oil stocks are held in all Member States under an efficient system partly aligned the IEA rules in order to minimise costs and administrative burden. The Directive is reckoned to be coherent with the EU policies, and especially with the 'Energy security, solidarity and trust' pillar of the Energy Union. More than 90 % of the respondents find that the coordinated mechanism for emergency oil stocks provided for by the Directive adds value to the security of the EU oil supply and is a good complement to the IEA system. Respondents have raised a number of technical issues, mainly related to the methodologies used to calculate the crude oil equivalent of imports of petroleum products and the level of oil stocks held, as well as remaining obstacles to holding emergency stocks in another Member State, among other issues.

ANNEX 2 CHECK LIST FOR ARTICLE 9.5 REPORTS

Checklist

This is a non-official document to help Member States preparing the annual report foreseen in Article 9(5) of Council Directive 2009/119/EC, listing the main topics the report should ideally cover

Legal basis

"[...] A Member State for which less than 30 days of specific stocks are held shall draw up an annual report analysing the measures taken by its national authorities to ensure and verify the availability and physical accessibility of its emergency stocks as referred to in Article 5 and shall document in the same report arrangements made to allow the Member State to control the use of these stocks in case of oil supply disruptions. That report shall be sent to the Commission by the end of the first month of the calendar year to which it relates." (Article 9(5) of Council Directive 2009/119/EC)

1. Measures taken by the national authorities to ensure and verify the availability and physical accessibility of stocks

- Arrangements for the identification, accounting and control of stocks (Art. 5)
 - Reporting system
 - Arrangements for locating and transporting stocks (Art. 2(m))
 - Physical inspections, audits
 - Arrangements for certain "special" stocks (if applicable)
 - Specific stocks
 - Commingled stocks
 - Cross-border stocks
 - Delegations ("tickets")
 - Penalties applicable to infringements of national provisions (Art. 21)

2. Arrangements made to allow the Member State to control the use of these stocks in case of oil supply disruptions (Art. 20)

- Decision making process about stock release
 - Who is involved, timeline
 - Contingency plans
- Process of releasing stocks
 - Sales, tenders, loans, decreasing the obligation
 - In case of decreasing the obligation, how do you ensure/verify that stocks are put on the market
 - Arrangements for certain "special" stocks (if applicable)
 - Release of cross-border stocks
 - Release of stocks held under delegations ("tickets")
 - Difference between IEA/EU/national actions
- Replenishing stocks