



# **Post Implementation Review of the UK's Transposition of the EU Oil Stocking Directive (2009/119/EC)**

Presented to Parliament  
by the Secretary of State for Energy and Climate Change  
by Command of Her Majesty

December 2015



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# **POST IMPLEMENTATION REVIEW OF THE UK'S TRANSPOSITION OF THE EU OIL STOCKING DIRECTIVE (2009/119/EC)**

## **INTRODUCTION**

1. This document provides an overview of the Post Implementation Review (PIR) of the UK's transposition of the EU Oil Stocking Directive 2009/119/EC. The UK was required to transpose this Directive by 31 December 2012, which replaced the commitments placed on the UK through the previous EU Directive 2006/67/EC.
2. Transposition was carried out within the required timeframe, and in line with the approach considered within the original Impact Assessment<sup>1</sup>. It was completed primarily through the continued use of the Energy Act 1976, and the introduction of a new Oil Stocking Order (2012), which revoked the Petroleum Stocks Order 1976 and the Petroleum Stocks (Amendment) Orders of 1982 and 1983.
3. This legislation forms the Government's continued commitment to ensure that adequate emergency stocks of oil are held, in order to release in a co-ordinated fashion with other EU Member States to defend against the harmful impacts of major disruptions to global oil supply.
4. This Command Paper and associated PIR (found at Annex 1) evaluates the effectiveness of our actions and decisions, set out in the original Impact Assessment, now the Directive has been transposed and operational for a period of time. It covers:
  - The extent to which the regulation is achieving its objectives;
  - The impacts and costs that have resulted, and in particular, to what extent the effects anticipated in the regulation's original Impact Assessment actually occurred.
  - Whether there have been any unintended consequences.

## **BACKGROUND TO OIL STOCKING AND THE EU OIL STOCKING DIRECTIVE**

5. Emergency oil stocks are a critical tool to defend against harmful impacts of major disruptions to global oil supply. The UK is obligated to hold emergency stocks of oil – by both the EU and the International Energy Agency (IEA) – primarily to release in a co-ordinated fashion with other members to the international market in the event of a major supply disruption. Each EU Member State must hold stocks totalling the higher volume of 61 days of total inland consumption or 90 days of net imports. For the UK, our obligation is currently based on 61 days of inland consumption.
6. To meet our obligations, DECC directs oil companies (refiners and non-refiners) who supply significant amounts of oil products in the UK to hold stocks that could be released in an emergency. Company obligations currently differ between refiners and non-refiners. Refiners are currently obligated at 67.5 days of supply while non-refiners are obligated at 58 days of supply.

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<sup>1</sup> [http://www.legislation.gov.uk/ukia/2012/411/pdfs/ukia\\_20120411\\_en.pdf](http://www.legislation.gov.uk/ukia/2012/411/pdfs/ukia_20120411_en.pdf)

7. A meeting of the European Council in March 2007 highlighted the need to review the EU's oil stockholding mechanism, with special reference to the availability of oil in the event of a crisis, stressing complementarities with the similar oil stocking crisis mechanism of the International Energy Agency (IEA). The European Council adopted a new Directive in September 2009 (2009/119/EC) (hereafter referred to in this document as "the Directive"), which replaced the previous European legislation in the field of emergency stocks of oil, namely Directive 2006/67/EC.

### **SUMMARY OF THE DIRECTIVE'S OBJECTIVES**

8. The objectives of the Directive were to introduce revisions which enhance the EU oil stocking system, bringing it into line with the existing rules of the International Energy Agency (IEA), and optimise the administrative obligations on Member States.
9. The objective of transposing the Directive was to ensure that the UK could meet its EU and international oil stocking obligations and be able to participate effectively in maintaining the security of supply for oil. The Directive introduced several changes to this effect. They included:
- Moving from three categories of oil stocks (i.e. light distillates, middle distillates and fuel oil) to individual product types (e.g. petrol, gasoil/diesel and aviation fuel);
  - Moving away from the requirement for stocks to be held in the three broad categories of oil in proportion to consumption in each category. Instead, a Member State must either hold one third of its oil stocks in the form of the most consumed finished products or commit to holding a minimum level of 'Specific Stocks' (which are state-owned or agency-owned (See paragraph 24) stocks of finished products);
  - Requiring deliveries of oil for non-energy use and to national shipping and the Armed forces to attract an obligation to hold stocks;
  - Reducing the number of days of stocks required to be held (from 67.5 days to 61 days of inland consumption), but offsetting this by including an additional 10 per cent on stocking obligations for oil that is deemed inaccessible because it is held in the bottom of tanks;
  - Requiring stocks to be reported as crude oil equivalent.

### **SCOPE OF THE POST IMPLEMENTATION REVIEW**

10. The PIR considers the Directive as a whole, through a cost/benefit analysis (see section 5b of PIR, and associated section on page 8 below). It also considers the various options within the Directive that Member States had some direct control over. These were:
- 1) Whether the stocks are held by an agency or by an industry.
  - 2) How stocks are calculated.
  - 3) Whether or not to hold 'specific stocks'.
  - 4) The products each Member State obligates that equate to at least 75% of inland consumption.
  - 5) The inclusion of bio-fuels.

11. As set out in the original Impact Assessment, DECC's aim when initially considering these options during transposition was to avoid any gold plating on top of the requirements of the Directive and ensure options were chosen which provide the greatest flexibility for oil suppliers in the UK, onto whom Government passes the UK obligation. In addition, best practice objectives such as minimal market distortions and disproportionate small firm impacts were considered.

## **ASSESSMENT OF OPTIONS AVAILABLE WITHIN THE DIRECTIVE**

12. The following sub-sections consider each of the options outlined in the previous section, the decisions that were made during transposition of the Directive, and whether there have been any unintended consequences or impacts that may require a change or amendment to be made.

13. To carry out this assessment, data from UK oil suppliers' monthly data returns to DECC was utilised. This covers the types of products being stored, the volumes, location and the details of any stock being held. Furthermore, DECC statisticians considered stock trading and price information, provided to them by industry broker contacts. Finally, stakeholder engagement regarding this analysis was carried out with all obligated companies in the UK, as well as discussions with Government contacts from other EU Member States.

### **Whether stocks are held by an agency or by industry**

14. During the transposition it was noted that, whilst there was significant interest by industry in establishing an agency to hold stocks known as a 'Central Stocking Entity', the UK intended to retain its current industry based system. At the same time, the government committed to assess in the medium-term whether setting up a Central Stocking Entity (CSE) was feasible and would deliver greater efficiencies and benefits for industry compared to the current system.

15. In 2014, following a public consultation in 2013, DECC published a Government Response on possible changes to how the UK manages its oil stocking obligations<sup>2</sup>. This set out an in principle agreement that an industry-owned and operated CSE may be a better mechanism than our current approach of individual company obligations. Any CSE would need to have compulsory membership for member companies to ensure its effectiveness. Specifically a public body CSE was not considered an appropriate mechanism in the consultation, given the additional government spending involved. It was noted, however, that before government could agree to legislate for any private CSE there remained several questions about how this might operate which needed to be answered and industry would need to prepare a 'roadmap' setting out how a private CSE could be established. If this were agreeable to government it would look to legislate for the CSE when parliamentary time was available.

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<sup>2</sup> <https://www.gov.uk/government/consultations/future-management-of-the-compulsory-stocking-obligation-in-the-uk>

16. Industry delivered a roadmap in February 2015. However, in August 2014, Eurostat guidance on classifying CSEs in national accounts was published which concludes that a CSE managing an obligation from government and with compulsory membership would be a public body whose costs would count as government spending. DECC has worked with all stakeholders to consider the impact of this guidance. However, in October 2015, Ministers decided that there was not a strong enough case to establish a new public body nor to take on substantial additional government spending for this, and instead the UK will continue with its existing approach to manage the obligation through legally-binding directions to hold stocks on industry.

#### How stocks are calculated

17. The Directive offers Member States the option of choosing one of two lists of products which they can count towards their obligation. One of these lists (Method A) allows all petroleum products under the Directive to be counted. The other list (Method B) is a shorter subset of those stocks within the Method A list.
18. Whilst Method A provides a larger, more comprehensive list of products that can be counted by companies towards their obligation, the factor applied to the stocks to transform the petroleum products volume to crude oil equivalents (COE) volume – which is the form in which the UK is required to report its stocks to the EU – is lower. Under Method B, there is a smaller choice of products which can count towards an obligation, but they attract a higher COE conversion factor. This essentially means that under Method B you have less choice of stocks but can hold less of it to meet the obligation than under Method A.
19. In 2013 Method A was chosen by the UK, with industry approval, during transposition given the flexibility around product selection that it offers.
20. A full assessment has been conducted within the PIR (section 4.2) to determine the use of products by companies between January 2013 and April 2015. A summary of the assessment is set out below.

#### Use of stocks under Method A and B by companies to meet obligations

21. Between January 2013 and April 2015, only 8% of stock held towards the UK's obligation were products exclusively from the longer Method A list, demonstrating that companies primarily used those products available under both the longer and shorter lists. However, while products exclusive to the longer list only account for a small proportion, 95% of obligated companies have used them, albeit to a small extent.

#### Cost saving associated with using the shorter Method B list

22. Since 92% of stocks held towards company obligations have fallen under the shorter list of Method B (also available in Method A) across the assessment period, companies could have held less stock in volume terms and still been compliant due to the increased multiplier of Method B, with potential associated savings to industry as a result.

23. DECC estimated the associated cost saving per month at the company level between January 2013 and April 2015. Based on historical data, and assuming ticket<sup>3</sup> prices remain relatively stable, individual companies could save, on average, £42,000 per year, or £850,000 per year across industry as a whole under Method B.

#### Whether or not to hold 'specific stocks'

24. The Directive offers Member States the option of either holding 'Specific Stocks', or holding at least 1/3 of their emergency stocks as finished products. Very few EU Member States have opted to hold stocks in this way. The UK opted not to hold specific stocks as this would require minimum levels of state-owned or agency-owned stocks in specific product to be held.

25. As the UK was not proposing to set up a Central Stocking Entity at the time of transposition or to have Government-owned stocks, the UK opted to ensure industry held 1/3 of obligated products as finished products. The Directive required Member states to obligate this third as oil products in those categories which equate to at least 75% of inland consumption (see below).

#### Products equating to 75% of consumption

26. At the time of transposing the Directive the UK's consumption broke down as 44% for gas and diesel oil, 26% for gasoline, 19% for aviation fuel, with the remainder being made up of heating oil (7%) and fuel oil (4%). It was therefore appropriate at the time to ensure 1/3 of stocks held by companies was held as gasoline, gas/diesel oil and aviation fuel.

27. Analysis of UK consumption since the Directive's implementation indicates that these products have continued to make up at least 75% of UK inland consumption. See Table 1, Section 4.4 of the PIR for further details.

#### The inclusion of bio-fuels

28. The Directive allows Member States to count bio-fuels to meet obligations when they have been blended with the petroleum products concerned, or when they are stored on the territory of the Member State and the Member State has adopted rules ensuring they are blended with their associated products, and that they are used in transportation. The UK proposed to allow bio-fuel stocks to be counted where they have been blended with petroleum products or where they are stored in the UK and:

- They are held with the intention of being blended with petroleum products and

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<sup>3</sup> Companies can meet their obligations through stocks held in the UK or through contractual arrangements with other companies either within the UK or based elsewhere in the EU, determining that they will hold relevant products for a specified period of time. These "tickets" are rights to withdraw oil stocks held under the CSO Reservation Agreement

- The ratio of biofuels to the relevant petroleum products is such that when blended they may be used as a transport fuel.
29. The UK decided not to specify a maximum ratio for the blending proportion and considers that it will be for obligated companies to ensure that the ratio they apply is appropriate.
30. DECC analysis, set out in the PIR, found that there has been a relatively low proportion of bio-fuels used to meet obligations in the UK. We will keep this policy under review, but do not consider any action is necessary at this time.

## **COST/BENEFIT ANALYSIS**

31. In addition to considering the specific options chosen by the UK during transposition, the PIR considers the Directive's impact through a cost/benefit analysis. In carrying this out, a comparison with original costs and benefits predicted in the Impact Assessment is made.
32. The costs included in the original Impact Assessment are closely associated with ticket prices which reflect the supply and demand for storage/tickets and so should reflect the cost of storing fuel. Changes to market dynamics that reduce/increase the ticket price is out of DECC's control.

### **Benefits**

33. The total benefits for the PIR were calculated as being £50m for 2015. The difference between this number and the Impact Assessment (which estimated £59.4m in the central scenario) is fundamentally driven by actual ticket prices being lower than was assumed in the Impact Assessment's central scenario. It should be noted that the £50m falls within the high-low range implied by the IA although there was no high/low presented.

### **Costs**

34. The Impact Assessment estimated that the UK obligation would increase by 250,000 tonnes or around 3% of the UK's total obligation. Actual data shows that the additional obligation brought about by the new Directive was actually 237,000 tonnes (in 2015) as companies were able to take advantage of efficiencies.
35. The actual cost is calculated as the additional obligation multiplied by the average ticket price. This is around £2.5m for 2015. The majority of difference between this and the IA estimate of £11.7m is attributable to differences in ticket prices between the IA assumptions and real data. Predominantly, the market for middle distillate tickets has been looser than the IA assumed driven by the evolution of market fundamentals for middle distillates. i.e. the cheaper tickets reflect greater supply of jet and diesel in the market.



**Table 1: Cost and benefits of the 2009 directive (IA v PIR)**

<b>Annual (2015)</b>	<b>IA</b>	<b>PIR</b>	<b>Difference</b>
Benefits	£59.9m	£50m	- £9.9m
Costs	£11.7m	£2.5m	- £9.2m
Net	£48.2m	£47.5m	+ £0.7m

## **NEXT STEPS FOR THE REGULATION & CONCLUSION**

36. It should be noted that (aside from being strongly in favour of a CSE) industry were broadly supportive of DECC's chosen options during transposition and the Government's decision to avoid any gold plating on top of the requirements of the Directive. DECC therefore considers that the majority of the options chosen remain appropriate and have not introduced any unintended effects with the possible exception of the choice of methods for calculating stocks: Method A.
37. Furthermore DECC considers that international oil stocking obligations remain a critical tool to ensure the UK's security of supply in the event of a global supply disruption. Government intervention is therefore still required to maintain these stocks.
38. The regulation and policies set out in this Post Implementation Review will remain in place. However, the following steps is being considered:
- Continued engagement with industry on the possibility of a change to the way companies calculate stock levels, and the products used to meet their obligations; in particular whether a switch to the shorter list of products in Method B would bring fair and balanced benefits across industry.

## **ANNEX 1 – POST IMPLEMENTATION REVIEW**

<b>Title:</b> Review of the UK's transposition of the EU Oil Stocking Directive (2009) <b>IA/PIR No:</b> RPC-DECC-3131(1) <b>Lead department or agency:</b> DECC <b>Other departments or agencies:</b>  <b>Contact for enquiries:</b> Will Mullins, Oil Stocking Policy, 0300 068 5614	<b>Post Implementation Review</b>
	<b>Source of intervention:</b> EU
	<b>Type of regulation:</b> Secondary legislation
	<b>Type of review:</b> Statutory - other
	<b>Date of implementation:</b> 1/1/2013
	<b>Date review due (if applicable):</b> 31/12/15
<b>Summary</b>	<b>RPC: GREEN</b>

**1a. What were the policy objectives and the intended effects? (If policy objectives have changed, please explain how).**

The objectives of the 2009 EU Oil Stocking Directive (the Directive) were to introduce revisions which enhance the EU oil stocking system, bring it into line with the existing rules of the International Energy Agency (IEA), and optimise the administrative obligations on Member States. It is important to note that, at the time the Directive was introduced, oil stocking was a well-established policy instrument enforced by pre-existing EU and IEA requirements, and is considered a useful emergency response tool in the UK.

The objective of transposing the Directive into UK law, as referenced in the associated Impact Assessment, was to ensure that the UK could meet its EU and international oil stocking obligations and be able to participate effectively in maintaining the security of supply for oil. The Directive introduced several changes to this effect. They included:

- Moving from three categories of oil stocks (i.e. light distillates, middle distillates and fuel oil) to individual product types (e.g. petrol, gasoil/diesel and aviation fuel);
- Moving away from the requirement for stocks to be held in the three broad categories of oil in proportion to consumption in each category. Instead, a Member State must either hold one third of its oil stocks in the form of the most consumed finished products or commit to holding a minimum level of 'Specific Stocks' (which are state-owned or agency-owned stocks of finished products);
- Requiring deliveries of oil for non-energy use and to national shipping and the Armed forces to attract an obligation to hold stocks;
- Reducing the number of days of stocks required to be held (from 67.5 days to 61 days of inland consumption), but offsetting this by including an additional 10 per cent on stocking obligations for oil that is deemed inaccessible because it is held in the bottom of tanks;
- Requiring stocks to be reported as crude oil equivalent.

Whilst this PIR considers the Directive as a whole, through a cost/benefit analysis (see section 5b), much of the PIR focuses on the various options within the Directive that Member States had some direct control over. These were:

- 1) Whether the stocks are held by an agency or by an industry.
- 2) How stocks are calculated.
- 3) Whether or not to hold 'specific stocks'.
- 4) The products each Member State obligates that equate to at least 75% of inland consumption.
- 5) The inclusion of bio-fuels.

DECC's aim when considering these options was to avoid any gold plating on top of the requirements of the Directive and ensure options were chosen which provide the greatest flexibility for oil suppliers in the UK, onto whom Government passes the UK obligation. In addition, best practice objectives such as minimal market distortions and disproportionate small firm impacts were considered.

**1b. How far were the objectives and intended effects expected to have been delivered by the review date? If not fully, please explain expected timescales.**

As set out in Section 1a the objectives of the 2009 EU Oil Stocking Directive (the Directive) were to introduce revisions which enhance the EU oil stocking system, bring it into line with the existing rules of the International Energy Agency (IEA), and optimise the administrative obligations on Member States. The UK was required to deliver these revisions through transposing the Directive by 31 December 2012. Transposition was completed primarily through the continued use of the Energy Act 1976 and directions given to companies under the Act – used to impose the Compulsory Stocking Obligations (CSO) on UK companies – and the introduction of a new Oil Stocking Order (2012), which revoked the Petroleum Stocks Order 1976 and the Petroleum Stocks (Amendment) Orders of 1982 and 1983.

A UK objective of transposing the Directive was to ensure that the UK could meet its EU and international oil stocking obligations and be able to participate effectively in maintaining the security of supply for oil. Whilst the UK can effectively participate in an internationally co-ordinated stock release, a review is underway to ensure compliance with the EU obligation going forward. Further details on this are set out below.

**UK Compliance with its EU and international oil stocking obligations**

Each EU Member State must hold stocks totalling the higher volume of 67.8 days of total inland consumption or 100 days of net imports. For the UK, our obligation is currently based on 67.8 days of inland consumption, but will eventually switch to the 100 day net import level as UK crude oil production declines.

To meet our obligation, DECC directs oil companies (refiners and non-refiners) who supply significant amounts of oil products in the UK to hold stocks that could be released in an emergency. Company obligations currently differ between refiners and non-refiners. Refiners are obligated at 67.5 days of supply while non-refiners are obligated at 58 days of supply. The difference (or the differential) has historically been based on the different Minimum Operating Requirements (MOR) of the two types of suppliers.

Prior to 2013, the obligation had been covered, in part, by commercial stocks (stocks held by companies over and above their obligation) and offshore stocks (constantly replenished stocks related to North Sea production). Since the 2009 Directive came into force in 2013, commercial stocks are no longer permitted to be counted toward the UK's obligation. This has affected the UK's compliance with its EU obligation.

Another key factor affecting the UK's compliance is the substantial changes to the UK midstream oil market in recent years. These changes include several UK refineries ceasing to operate, a scaling back of UK refining capacity, and their market share being, in part, picked up by importers. This has resulted in more of the UK's obligation-being met by companies obligated at the lower level (58 days), which has exacerbated UK non compliance. The gap between company and the total UK obligation is likely to grow in the medium to long term as a result of: (i) a continued decline in refinery market share (because refiners are obligated at a higher level than non refiners); (ii) the growth of the import market (obligated at lower level); and (iii) and, the switch of the UK obligation to a requirement to hold 100 days of average net daily imports rather than 67.8 days of average daily inland consumption (expected to happen in 2021).

The UK Government takes compliance issues very seriously, and a review of the levels of obligation on UK companies, and options for ensuring compliance has therefore been necessary. A consultation, published on the 28 October 2015, sets out 4 policy options for re setting the levels of obligation on UK companies, which, as part of an Impact Assessment, have been assessed against the objectives of:

- Ensuring that the UK is compliant with the EU Directive in the near term; and
- Ensuring that the UK policy is such that compliance is guaranteed in the future. This takes into consideration the likely change of the level of UK obligation in 2024, and the need to be resilient to changes in the relative market share of refiners and non refiners in the UK.

The policy options that have been chosen test various ways to meet these objectives, including with either a 9.5 day differential between refiners and non refiners or no differential at all.

More details on this review/consultation can be found at:

<https://www.gov.uk/government/consultations/levels-of-oil-stocking-obligations-on-uk-companies>

## **2. Describe the rationale for the evidence sought and the level of resources used to collect it, i.e. the assessment of proportionality.**

As set out in section 1b, DECC's Secretary of State directs oil companies (refiners and non-refiners) which supply significant amounts of oil products in the UK to hold stocks that could be released in an emergency. The Secretary of State legally requires these companies to provide monthly data returns on the types of products being stored, the volumes, location and the details of any stock being held through the use of oil stocking 'tickets' – stocks held by one company on behalf of another company. Furthermore, DECC statisticians have access to regular oil stock trading and price information from industry broker contacts. This monitoring data has been used to conduct this PIR and allowed a light-to-moderate level of additional evidence to be sought.

Stakeholder engagement was carried out with all obligated companies in the UK. Specifically, all CSO stakeholders such as UK oil importers and refiners were emailed to gather views and comments on DECC's own analysis of Method A/B<sup>4</sup>, and whether a change of method was suitable (see section 4). DECC also discussed the Method A/B analysis through telephone conversations on an ad-hoc basis, where stakeholders felt this was necessary. Furthermore, DECC ensures we maintain regular engagement with obligated companies on oil stocking through bi-annual roundtable events and ad-hoc conversations. Issues raised during these engagements have been taken into consideration.

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<sup>4</sup> The Directive offers Member States the option of choosing one of two lists of products which they can count towards their obligation. One of these lists (Method A) allows all petroleum products under the Directive to be counted. The other list (Method B) is a shorter subset of those stocks within the Method A list.

Information and analysis was also sought from other EU Member States who have taken a range of different approaches to transposing the Directive (including establishing a CSE and holding Government owned specific stocks). Information on specific findings from EU engagement can be found at Annex B.

Overall, the level of evidence sought and resource used was deemed to be adequate and proportionate, in particular because oil stocking is well established in the UK, and considered to be an essential energy security of supply measure. Furthermore, the Directive built on existing well established policy, introduced by the previous EU oil stocking Directive. It should also be noted that the UK, along with all other EU Member States, are taking part in an EU wide evaluation of the Oil Stocking Directive this year, led by the Commission.

### **3. Describe the principal data collection approaches that have been used to gathering evidence for this PIR.**

As set out above, the majority of data used for the PIR's analysis was obtained through regular, mandated reporting by industry. This data is collected using DECC's Downstream Oil Reporting System (DORS). DORS is a monthly census of activities by UK refiners and importers. Any company that supplies more than 50,000 tonnes per year of fuel to the domestic market is considered a "Substantial supplier" to the market and is obliged to return a DORS form. The data submitted to DECC through these returns sets out:

- Physical products held towards company obligations
- Tickets held towards obligations.

Also used in analysis is information on CSO ticket prices, provided to DECC on a monthly basis by industry contacts that broker ticket deals between companies on a national and international basis.

In terms of EU Member State data collection, information was gathered through email / telephone conversations and face-to-face meetings with the administrations of Sweden, Netherlands, Germany and France. These Member States were chosen as they give a good cross section of different EU approaches for meeting the requirements of the 2009 Directive.

Government contacts in these Member States were asked the following questions by email, which informed further discussions through telephone conversations and face-to-face meetings where possible:

- *When transposing the Directive was there any 'gold plating' or requirements imposed on a national level which was in addition to the requirements of the Directive itself?*
- *Have you conducted any analysis on the costs on Government/industry of the Directive's transposition which you could share?*
- *Did your Government opt for a public or private/industry led oil stocking system. Has there been a review of this approach?*
- *Is there any analysis or information available on the option chosen for how oil stocks were calculated (Method A/B)?*

The rationale for these questions was to assess the way in which Member states implemented the Directive, and in particular the degree to which other Member States went beyond its minimum requirements.

#### **4. To what extent has the regulation achieved its policy objectives? Have there been any unintended effects?**

A key focus of this PIR was a review of the options chosen by the UK Government in its transposition of the Directive. The following sets out the assessment of these options, and whether there have been any unintended effects.

##### **Assessment of options chosen in the Directive's transposition.**

As set out above, whilst the Directive stipulates the requirements on Member States quite closely there were several choices on how facets of the policy could be implemented. The following subsections consider each of these options, the decisions that were made during transposition of the Directive, and whether there have been any unintended consequences or impacts that may require a change or amendment to be made.

##### **1) Whether stocks are held by an agency or by industry**

During the transposition it was noted that, whilst there was significant interest by industry in establishing an agency to hold stocks known as a 'Central Stocking Entity', the UK intended to retain its current industry based system. At the same time, the government committed to assess in the medium-term whether setting up a Central Stocking Entity (CSE) was feasible and would deliver greater efficiencies and benefits for industry compared to the current system.

In 2014, following a public consultation in 2013, DECC published a Government Response to a consultation on possible changes to how the UK manages its oil stocking obligations<sup>5</sup>. This set out in principle agreement that an industry-owned and operated CSE may be a better mechanism than our current approach of individual company obligations. Any CSE would need to have compulsory membership for member companies to ensure its effectiveness. Specifically a public body CSE was not considered an appropriate mechanism in the consultation, given the additional government spending involved. It was noted, however, that before government could agree to legislate for any private CSE there remained several questions about how this might operate which needed to be answered and industry would need to prepare a 'roadmap' setting out how a private CSE could be established. If this were agreeable to government it would look to legislate for the CSE when parliamentary time was available.

Industry delivered a roadmap in February 2015. However, in August 2014, Eurostat guidance on classifying CSEs in national accounts was published which concludes that a CSE managing an obligation from government and with compulsory membership would be a public body whose costs would count as government spending. DECC has worked with all stakeholders to consider the impact of this guidance. However, in October 2015, Ministers decided that there was not a strong enough case to establish a new public body nor to take on substantial additional government spending for this, and instead the UK will continue with its existing approach to manage the obligation through legally-binding directions to hold stocks on industry.

##### **2) How stocks are calculated**

The Directive offers Member States the option of choosing one of two lists of products which they can count towards their obligation. One of these lists (Method A) allows all petroleum products under the Directive to be counted. This method was originally chosen by the UK, with industry approval, during transposition given the flexibility around product selection that it offers. The other

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<sup>5</sup> <https://www.gov.uk/government/consultations/future-management-of-the-compulsory-stocking-obligation-in-the-uk>

list (Method B) is a shorter subset of those stocks within the Method A list. For a comparison of Method A and B lists, see Annex A.

Whilst Method A provides a more comprehensive list of products that can be counted by companies towards their obligation, the factor applied to the stocks to transform the petroleum products volume to crude oil equivalents (COE) volume – which is the form in which the UK is required to report its stocks to the EU – is smaller. Under Method B, there is a smaller choice of products which can count towards an obligation, but they attract a higher COE conversion factor.

An assessment has been conducted to determine the use of products by companies between January 2013 and April 2015 (the assessment period).

#### Use of stocks under Method A and B by companies to meet obligations

Between January 2013 and April 2015, only 8% of stock held towards the UK's obligation was products exclusively from the longer Method A list, demonstrating that companies primarily used those products available under both the longer and shorter lists. However, while products exclusive to the longer list only account for a small proportion, 95% of obligated companies have used them, albeit to a small extent.

#### Cost saving associated with using the shorter Method B list

Since 92% of stocks held towards company obligations have fallen under the shorter list of Method B (also available in Method A) across the assessment period, companies could have held less stock in volume terms and still been compliant due to the increased multiplier of Method B, with associated savings to industry as a result.

DECC estimated the associated cost saving per month at the company level between January 2013 and April 2015. Based on historical data, and assuming ticket prices remain relatively stable, individual companies could save, on average, £42,000 per year, or £850,000 per year across industry as a whole under Method B.

This assessment was shared with all obligated companies in the UK to allow industry views to be considered. Whilst there was a limited response to our engagement on the PIR process (6 responses from 22 stakeholders including trade bodies), in general industry feedback suggests that, whilst DECC's analysis was accurate when considering industry as a whole, there were further considerations that should be taken into account. The following points highlight some of the observations we received (points are anonymised and came from refiners, importers and traders):

- *Some respondents felt that the products excluded by the calculation of Method B are typically held by refineries. Therefore, the gain of the 1.2 coefficient would largely be offset for refineries by the loss of the other downstream products, giving an overall neutral result.*
- *Similarly, others felt that Method A helps ensure a level playing field between importers and refiners, as typically refiners will look to include a bigger range of products covered by Method A due to refining activities.*
- *Some responses noted that if a move to Method B was chosen it would be important that it is managed in a well-considered way, with a suitable timeline to ensure companies can factor in any decision into long-term (often annual) ticket arrangements.*
- *It was also noted that there was a risk that by removing the broad range of fuel grades that constitute Any Oil (exclusive Method A Products), a large number of independent stock-holders/ticket sellers could be removed from the CSO stocking mechanism. This could result in a reduction in the flexibility of the Directive and the purpose it serves.*



*There was an argument too that energy resilience is better served by as wider range of products as possible (that reflect broad market demand), rather than a very narrow band of emergency stocks.*

From the limited responses received, the majority of refiners were not supportive of a move to Method B, whilst importers showed some limited support, but did not see this as a highly significant issue. We are aware though that this is an issue where industry may have further views and we expect to discuss this with the sector further. A decision on a switch between Method A and B is covered in section 8.

### 3) Whether or not to hold 'specific stocks'

The Directive offers Member States the option of either holding 'Specific Stocks', or holding at least 1/3 of their emergency stocks as finished products. Among other EU Member States consulted, only France opted to hold stocks in this way. The UK opted not to hold specific stocks as this would require minimum levels of state-owned or agency-owned stocks in specific product to be held.

As the UK was not proposing to set up a Central Stocking Entity at the time of transposition or to have Government-owned stocks, the UK opted to ensure industry held 1/3 of obligated products as finished products. The Directive required Member states to obligate this third as oil products in those categories which equate to at least 75% of inland consumption (see below).

### 4) Products equating to 75% of consumption

At the time of transposing the Directive the UK's consumption broke down as 44% for gas and diesel oil, 26% for gasoline, 19% for aviation fuel, with the remainder being made up of heating oil (7%) and fuel oil (4%). It was therefore appropriate at the time to ensure 1/3 of stocks held by companies was held as gasoline, gas/diesel oil and aviation fuel.

Analysis of UK consumption since the Directive's implementation indicates that these products have continued to make up at least 75% of UK inland consumption as set out in Table 1 below.

**Table 1: Percentage of UK inland consumption by gasoline, gas/diesel oil and aviation fuel**

<b>Products</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gas/Diesel Oil	48.1 %	49.0%	50.4%
Gasoline	23.8 %	22.7%	22.3%
Aviation fuel	20.2 %	20.3%	20.3%
<b>Total</b>	<b>92.1%</b>	<b>92.0%</b>	<b>92.9%</b>

### 5) Inclusion of bio-fuels

The Directive allows Member States to count bio-fuels to meet obligations when they have been blended with the petroleum products concerned, or when they are stored on the territory of the Member State and the Member State has adopted rules ensuring they are blended with their associated products, and that they are used in transportation. The UK proposed to allow bio-fuel stocks to be counted where they have been blended with petroleum products or where they are stored in the UK and:

- They are held with the intention of being blended with petroleum products and
- The ratio of biofuels to the relevant petroleum products is such that when blended they may be used as a transport fuel.

The UK decided not to specify a maximum ratio for the blending proportion and considers that it will be for obligated companies to ensure that the ratio they apply is appropriate.

The table below demonstrates the proportion of finished products (gasoline, aviation fuel and gas diesel oil) that were made up of bio components.

**Table 2: Proportion of finished products made up of bio components**

	<b>Motor Gasoline (bio)</b>	<b>Kerosene type jet fuel (bio)</b>	<b>Gas/diesel oil (bio)</b>
<b>Average (2013-2014)</b>	2.19%	0.00%	2.04%
<b>Max (2013-2014)</b>	2.93%	0.00%	3.34%
<b>Min (2013-2014)</b>	1.22%	0.00%	1.18%

The table shows that there has been a relatively low proportion of bio-fuels used to meet obligations for these finished products. We will keep this policy under review, but do not consider any action is necessary at this time.

#### Conclusion

It should be noted that (aside from being strongly in favour of a CSE) industry were broadly supportive of DECC's chosen options during transposition and the then Government's decision to avoid any gold plating on top of the requirements of the Directive. DECC therefore considers that the majority of the options chosen remain appropriate and have not introduced any unintended effects with the possible exception of the choice of methods for calculating stocks: Method A. Furthermore DECC considers that international oil stocking obligations remain a critical tool to ensure the UK's security of supply in the event of a global supply disruption. Government intervention is therefore still required to maintain these stocks.

#### **5a. Please provide a brief recap of the original assumptions about the costs and benefits of the regulation and its effects on business (e.g., as set out in the IA).**

In terms of costs and benefits, the most important changes introduced by the Directive and the associated assumptions were:

- 1) The requirement of the Directive to include consumption from deliveries for non-energy use, to the Armed forces, and for national shipping, that were previously excluded.
  - *Given the above, the original IA assessed that the UK obligation would increase by 250,000 tonnes or around 3% of the UK's total obligation. An independent study commissioned by DECC in 2010 was used to estimate the cost of the additional obligation, as domestic production declined. The table below summarises the study's estimates of the annual cost of meeting the projected obligation (in 2009 prices). The annual cost of the additional 250,000 tonnes is calculated proportionally to the obligation, at the time of 10.3 million tonnes. The study's estimates cover the period 2015, 2020 and 2023. As the new Directive came into force in 2013, it was assumed that the cost prior to 2015 was equal to that in 2015. A constant annual growth rate in the period 2015-2020 and 2020-2023 was assumed.*

**Table 3: Annual cost of incremental obligation (£m 2010 prices)**

	2010	2015	2020	2023
Total annualised cost of the obligation	481	481	605	696
Annual cost of additional 250,000 tonne obligation	11.7*	11.7	14.7	16.9

\* 0.250ml/10.3mt\*481m=11.7m

2) The requirement for 1/3<sup>rd</sup> of the UK emergency stocks to be held by obligated companies having to take the form of finished products, leaving 2/3<sup>rd</sup> of the obligation to be held in the form of crude oil or any products – increasing the flexibility companies have in meeting obligations when compared to the legislation preceding the UK’s transposition of the Directive.

- DECC assumed three scenarios for ticket prices, as shown in the table below. The price was based on Q4 2011 companies’ and brokers information provided confidentially to DECC.

**Table 4: Ticket Price Assumptions used in the IA (£/t)**

	Current prices (2010)	Future ticket prices (assumed in the IA)		
		Low	Central	High
<b>Petrol</b>	0.6	0.9	1.2	1.8
<b>Aviation fuel &amp; Diesel</b>	2.5	3.75	5	7.25
<b>All other products</b>	0	0.45	0.6	0.9

**Table 5: Monthly Ticket demand assumptions used in IA (Thousand tonnes)**

	Option 1 - Current Directive	Option 2 - New Directive
Petrol	700	310
Jet fuel & Diesel	3210	480
All other products	0	1200
<b>Total</b>	<b>3910</b>	<b>1990</b>

Annual benefits are driven by the flexibility of the new Directive versus the old Directive that enables companies to hold 2/3 of their obligation as “any other products”. In the IA this was quantified by assuming that companies will seek to substitute between higher ticket cost products (e.g. middle distillates) that they had to hold under the old directive with cheaper ticket cost products (e.g. “any oil”/crude).

**Table 6: Average annual benefit (£m 2010 prices)**

	<b>Low Price Scenario</b>	<b>Central Price Scenario</b>	<b>High Price Scenario</b>
Petrol	1.69	0.58	- 1.66
Jet fuel & Diesel	74.70	67.50	54.54
All other products	- 6.48	- 8.64	- 12.96
Total	69.9	59.4	39.9

3) The restriction of Article 8(1) of the Directive limits companies' ability to delegate their stock holding obligation. Prior to the Directive's transposition, companies could buy 'tickets' from companies which did not themselves hold stocks. Under the updated Directive, an obligated company can only buy tickets directly from a company which holds oil stocks.

- As a result of this change, DECC requires there to be a direct contractual relationship between the obligated company and the person/company which has surplus stocks or stockholding capacity. The impact of this has been help to ensure that any stocks held against a company's obligation are physically accessible and available at all times, improving the responsiveness of the oil stocking system, in particular during a stock release. This may have resulted in a one off administrative burden but has not been raised or evidenced by industry. This was not quantified in the original IA.

#### **5b. What have been the actual costs and benefits of the regulation and its effects on business?**

Regarding the costs benefit analysis, the costs included in the original Impact Assessment are closely associated with ticket prices which reflect the supply and demand for storage/tickets and so should reflect the cost of storing fuel. Changes to market dynamics that reduce/increase the ticket price is out of DECC's control. Where possible we have used outturn data to evaluate the impact of the Directive. Some simplifying assumptions have been made where appropriate to determine the counterfactual or estimate impacts.

#### Benefits Methodology

As per the original Impact Assessment (IA) the total benefit in 2015 has been determined by multiplying 2/3rds of the obligation with the difference in the average ticket price of the higher value products (petrol, diesel, jet) and the any oil/crude oil ticket price. This amounts to around £50m for 2015. The difference between this number and the IA (which estimated £59.4m in the central scenario) is fundamentally driven by outturn ticket prices being lower than was assumed in the IA's central scenario (see section 6). It should be noted that the £50m falls within the high-low range implied by the IA although there was no high/low presented.

#### Costs Methodology

The Impact Assessment estimated that the UK obligation would increase by 250,000 tonnes or around 3% of the UK's total obligation. Outturn data shows that the additional obligation brought about by the new Directive was actually 237,000 tonnes (in 2015) as companies were able to take advantage of efficiencies.

The actual cost is calculated as the additional obligation multiplied by the average ticket price. This is around £2.5m for 2015. The majority of difference between this and the IA estimate of £11.7m is attributable to differences in ticket prices between the IA assumptions and outturn data (see section 6). Predominantly, the market for middle distillate tickets has been looser than the IA assumed driven by the evolution of market fundamentals for middle distillates. i.e. the cheaper tickets reflect greater supply of jet and diesel in the market.

Cost and benefits of the 2009 directive (IA v PIR)

<b>Annual (2015)</b>	<b>IA</b>	<b>PIR</b>	<b>Difference</b>
Benefits	£59.9m	£50m	- £9.9m
Costs	£11.7m	£2.5m	- £9.2m
Net	£48.2m	£47.5m	+ £0.7m

**6. Assessment of risks or uncertainties in evidence base / Other issues to note**

As set out in section 5b above, the costs included within the original Impact Assessment are closely association with ticket prices, which are out of DECC's control. Over 90% of the difference in costs is driven by differences in ticket prices.

2015 Ticket prices (IA v PIR) (£/tonne)

	<b>IA (low)</b>	<b>IA (central)</b>	<b>IA (High)</b>	<b>PIR</b>
<b>Petrol</b>	0.9	1.2	1.8	0.97
<b>Jet fuel &amp; Diesel</b>	3.75	5	7.25	2.2 (jet), 1.02 (diesel)
<b>All other products</b>	0.45	0.6	0.9	0.71

**7. Lessons for future Impact Assessments**

A key lesson is the importance of continuing to log assumptions and perform sensitivity analysis, as is best practice. Outcomes may vary even beyond tested sensitivities and explicit reference to the underlying uncertainty can be helpful in improving understanding of risks – for instance ticket prices for middle distillates was below the low price sensitivity. If sensitivities around assumptions are presented then it can be useful to translate them into high/low sensitivities on the overall NPV. Reference to potential one off admin costs can be helpful even if they are not quantified.

**8. What next steps are proposed for the regulation (e.g. remain/renewal, amendment, removal or replacement)?**

The regulation and policies set out in this Post Implementation Review will remain in place. However, the following steps are being considered:

- Continued engagement with industry on the possibility of a change to the way companies calculate stock levels, and the products used to meet their obligations; in particular whether a switch to the shorter list of products in Method B would bring fair and balanced benefits across industry.

**Sign-off** For Post Implementation Review:

***I have read the PIR and I am satisfied that it represents a fair and proportionate assessment of the impact of the policy.***

Signed: 

Date: 17/12/2015

Method A Products	Method B Products
Crude oil NGLs Additives/oxygenates Other hydrocarbons Refinery gas Motor gasoline Aviation gasoline Gasoline type jet fuel (naptha type or JP4) Kerosene type jet fuel Other kerosene Gas/diesel oil (distillate fuel oil)	Crude oil NGLs Additives/oxygenates Other hydrocarbons Refinery gas Motor gasoline Aviation gasoline Gasoline-type jet fuel (naptha type or JP4) Kerosene-type jet fuel Other kerosene Gas/diesel oil (distillate fuel oil) Fuel oil (high sulphur content and low sulphur content)
Fuel oil White spirit and SBP Lubricants Bitumen Paraffin waxes Petroleum coke Other products (tar, sulphur, aromatics, olefins) Ethane LPG Naphtha	

**Summary of EU engagement**

From the EU Member States contacted (Sweden, Netherlands, Germany, France), it is clear that the UK's transposition has provided a significant level of flexibility (through the avoidance of gold plating), whilst meeting the minimum requirements of the Directive. The following summary highlights some of the decision making on compulsory stockholding in other Member States.

**France**

- During the Directive's transposition in France, it was decided to maintain their pre-existing obligation to hold jet fuel, beyond the requirements of the Directive. France also opted to hold 'Specific Stocks'. This was chosen on the basis that they assumed it would be the most straightforward approach given their pre-existing Central Stocking Entity system.

**Germany**

- Germany sets specific requirements with regards to biofuels. These products are only counted if they are stored in the same refinery or in places connected by operational pipelines – beyond the requirements of the Directive.
- The Advisory Council of Germany's Central Stocking Entity stipulates that 45 % of the obligation has to be fulfilled by finished products – higher than the 33% required by the Directive.
- In terms of stock locations, Germany does not allow stocks in barges, ship bunkers and inter-coastal tankers to be counted towards its obligation.
- Ticket arrangements, both international and domestic must not exceed 10% of the stockholding obligation. International tickets sum up to just one or two percent of the stockholding obligation.
- Method B was chosen as this it fitted their pre-existing system of a CSE and more limited list of accepted products.

**Sweden**

- In a similar style to the UK, Sweden takes a decentralised approach in meeting its obligation. The Swedish Act on the Contingency Storage of Oil and Coal (1984:1049)<sup>43</sup>, places an obligation on those who:
  - o Import fuel into the country, and have sold or consumed storage fuel other than coal during the year;
  - o Operate an oil refinery in Sweden and have sold storage fuel other than coal during the year; and/or
  - o Purchased from an obligated entity above, or sold at least 50,000 m<sup>3</sup> of storage fuel other than coal during the year.
- Industry obligations are set across 4 products only (petrol, diesel, jet, fuel oil) and crude (for refiners only, if they can prove it can be used to create volume of those 4 products).
- Stockholding abroad/international tickets are limited to a maximum of 20% of total stockholding requirements.

**Netherlands**

- The stockholding obligation is met through a mixed approach by both industry and the Netherlands National Petroleum Stockholding Agency, COVA.
- The Dutch 2012 Stockpiling Act places no restrictions on the amount of obligated stocks held abroad, as long as the obligated company fulfils its obligations. However, COVA aims to meet the majority of its obligation in the Dutch market using powers under the Dutch 2012 Act.



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