

<b>Title:</b> IA No: BEIS003(C)-17-CNR  <b>RPC Reference No:</b>  <b>Lead department or agency:</b> Department for Business, Energy and Industrial Strategy.  <b>Other departments or agencies:</b>	<b>Impact Assessment (IA)</b>			
	<b>Date:</b> 22/03/2017			
	<b>Stage:</b> Development/Options			
	<b>Source of intervention:</b> Domestic			
	<b>Type of measure:</b> Primary legislation			
<b>Contact for enquiries:</b> James Steel				

**Summary: Intervention and Options** **RPC Opinion:** RPC Opinion Status

Cost of Most Likely Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANDCB in 2014 prices)	One-In, Three-Out	Business Impact Target Status
£591.8m	£-24.0m	£2.4m	In scope	Qualifying provision

**What is the problem under consideration? Why is government intervention necessary?**

There is a risk of disruption to the UK fuel supply market from the sudden loss of one of a number of critical supply infrastructure sites. In recent years there have been a number of operational and financial events leading to sudden closures of or disruption at GB oil refineries, terminals and pipelines. Market failures in the sector prevent consumers from insuring themselves against fuel supply disruptions and limit the incentives on suppliers to mitigate these risks. The assessment is that this risk justifies government action.

**What are the policy objectives and the intended effects?**

To improve the resilience of the downstream fuel supply market and reduce the risk of disruption of economic activity from the loss of fuel supplies. A package of measures will improve the ability of government and industry to manage these risks. Mandating the provision of information to government will allow better risk assessment and design of mitigating measures. Mandating industry investment in resilience measures, such as an emergency tanker fleet will transfer responsibility to industry who are best placed to manage a reduction in the impact of events. Backstop spending, change of ownership and direction powers will enable government to facilitate or intervene where industry is unwilling or unable to take action.

**What policy options have been considered, including any alternatives to regulation? Please justify the most likely option (further details in Evidence Base)**

Government has explored the scope for encouraging voluntary action by the sector but there is insufficient support from the market participants as the necessary investments would not have a commercial return. This reflects the market failures in the sector.

Another option considered was full regulation of the downstream oil sector with a licensing regime and a new regulatory body to enforce standards and mandate resilience solutions. This is the model which applies to gas, electricity, telecoms and water sectors among others. Unlike these networked sectors, there is no natural monopoly in the downstream oil sector and therefore the underlying rationale for an economic regulator is missing. Such a regulatory regime does not seem proportionate to the risk.

The most likely option is therefore a targeted package of measures which will enable government to collect evidence on the risks to the fuel supply chain and, subject to individual value for money assessments, take action to mitigate these when required. The only substantial measure identified at present is for industry to provide a reserve tanker fleet from 2020 to replace the existing government lease contract. This addresses the logistical shortfall from a point failure of a major infrastructure node, such as a refinery or import terminal.

<b>Will the policy be reviewed?</b> It will be reviewed. <b>If applicable, set review date:</b> December/2021				
Does implementation go beyond minimum EU requirements?			N/A	
Are any of these organisations in scope?			<b>Micro</b> Yes	<b>Small</b> Yes
			<b>Medium</b> Yes	<b>Large</b> Yes
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)			<b>Traded:</b> N/A	<b>Non-traded:</b> N/A

**I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.**

Signed by the responsible Minister: Richard Harrington Date: 08/09/2017

## Summary: Analysis & Evidence

## Policy Option 2

**Description:** Enable government to collect evidence on risks to fuel supply chain and take action to mitigate these (including requiring industry to provide a reserve tanker fleet). Costs and benefits expressed relative to “do nothing” option.

### FULL ECONOMIC ASSESSMENT

Price Base Year 2015	PV Base Year 2019	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: 105.3	High: 600.7	Best Estimate: 591.8

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	1.8	15.7
High	0	3.2	27.1
Best Estimate	0	2.7	24.0

#### Description and scale of key monetised costs by ‘main affected groups’

The main element is the cost to the downstream oil industry of paying for a reserve emergency tanker fleet from 2020. This will provide sufficient supply chain capacity to enable the shortfall from any single supply point’s sudden closure to be made up by transporting fuel from other (more distant) supply sources. There is also a smaller cost element from providing information to government (best estimate of £0.2m).

#### Other key non-monetised costs by ‘main affected groups’

The costs that will be incurred by the downstream oil industry through the creation of an industry body to organise the tanker fleet are uncertain at this stage and have not been monetised. Use and impact of some of the new powers government will have is too uncertain to be able to monetise impacts at this stage. Some of the cost of information provision is non-monetised (but judged likely to be negligible).

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	15.7	132.4
High	0	73.3	n/a
Best Estimate	0	73.3	615.8

#### Description and scale of key monetised benefits by ‘main affected groups’

The monetised benefit is reduced risk of disruption of fuel supplies to consumers and business. Oil products remain essential to much of national economic activity. Without these measures, we judge the closure of some key supply points would lead to a shortfall in supply and breakdown of oil product markets in their regional supply envelope for 3 to 10 days. The estimated benefits reflect our assessment of the likelihood of supply disruptions and a greater impact of disruptions in the absence of the proposed measures.

#### Other key non-monetised benefits by ‘main affected groups’

Increased public confidence of national fuel supply resilience, may reduce the risk of panic buying during an incident. This has not explicitly been monetised.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5
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The analytical framework for estimating the economic cost of an oil disruption is stylised and as such, the quoted economic impact should only be considered indicative. The range given provides an indication of what the economic impact due to an oil product disruption could be and highlights that impacts are likely to be non-trivial. The frequency of oil product disruptions is also uncertain.

### BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: 2.4	Benefits: 0	Net: -2.4	£12m

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## Evidence Base (for summary sheets)

### 1. SUMMARY

#### 1.1 PROBLEM UNDER CONSIDERATION

1. The UK downstream fuel (oil) market is extremely competitive and efficient<sup>1</sup> which has resulted in the closure of redundant and uncompetitive assets. There is therefore an increasing reliance on a few key assets resulting in reduced resilience to sudden supply shocks.
2. A number of risks can lead to supply disruption, including accidents, industrial action, security threats including cyber attack, insolvency leading to liquidation, severe weather and more. Owners of key assets take steps to mitigate risks where possible but cannot avoid them entirely.
3. Although the market can adapt to the loss of a key asset, it cannot do this immediately. Over time, supply chains would adjust and oil product flows would be redirected to deliver to customers from alternative sources – although, transporting fuel over greater distances places increased strain on the remaining assets. In the short term however, logistical and contractual constraints may make it impossible for the market to fulfil normal levels of demand. An infrastructure failure resulting in a regional market supply disruption could be large enough to impact on the efficiency of the market mechanism. Substantial economic and social impacts would occur in the event of loss of a functioning market, which reduces the ability of the system to allocate scarce supplies. For example, this would be the case if “panic buying” led to widespread stock outs (i.e. when forecourts run out of fuel) and motor fuels were unavailable at any price in a region for a period of days. While these are low-probability, infrequent events, key sectors (such as transport) continue to depend on oil products and oil is therefore critical for a large part of total economic activity, so disruption events would have very substantial economic costs.
4. Recognising the above, government has put in place a reserve fuel tanker fleet under a government lease contract until December 2019.

#### 1.2 RATIONALE FOR INTERVENTION

5. There are a number of market failures in the sector that mean that consumers cannot effectively “insure” themselves against fuel supply disruptions and which limit the incentives on suppliers to invest to mitigate these supply risks.
6. Consumers cannot effectively express their willingness to pay for secure fuel supplies. Final consumer private vehicle motor fuel purchase is overwhelmingly on “spot” contracts, there is no long term contracting. Access to secure fuel supplies is available to all and security of fuel supplies is in some sense therefore a public good.

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<sup>1</sup> For example, with regards to competitiveness of the market and retailers passing through changes in crude prices, in January 2013, the Office for Fair Trading published the results of a Call for Information to investigate whether or not competition problems existed in the road fuels market. This included investigating concerns that pump prices rise quickly when the wholesale price goes up but fall more slowly when it drops. Their analysis found very limited evidence of this, and in general found that at a national level competition in the market is working well. <http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.offt.gov.uk/OFTwork/markets-work/othermarketwork/road-fuel-CFI/>

7. Within the supply chain, fuel suppliers typically cannot increase prices in the short term, as their supply contracts are tied to international traded prices, but can invoke force majeure contract clauses in the event of major disruptions enabling them to “walk away” from their supply obligation. Limited liability and the limited residual economic value of some older assets in the sector limits incentives to mitigate disruption, for example in scenarios when the assets will have zero value.
8. Retailers may not expect to capture the full value of scarcity during a disruption. For example, given the speed with which fuel stations might empty before pricing decisions respond. Also the larger players in the sector (e.g. oil majors, supermarkets) might be expected to be sensitive to media reporting of price rises in these scenarios.

### **1.3 POLICY OBJECTIVE**

9. BEIS is reviewing potential new powers and process in the downstream oil sector alongside wider reforms to government’s approach to protecting critical infrastructure. BEIS has a primary objective of ensuring that the UK has secure energy supplies that are reliable, affordable and clean. As part of this objective, BEIS works with the downstream oil sector to improve fuel supply resilience.
  - The **downstream oil sector** refers to any persons involved in any part of the: import, supply, storage, distribution and or retail of petroleum and or petroleum products, into or within the United Kingdom (UK).
  - **Fuel supply resilience** is defined for the purposes of this consultation as: the ability of the downstream oil sector to protect against, react to, and recover from any fuel supply disruptions; in order to ensure the reliable and continuous supply of fuel across the UK.<sup>2</sup>
10. BEIS is proposing to introduce new legislation to improve fuel supply resilience in three main areas:
  - **Monitor:** enable BEIS to collect information from the downstream oil sector to better understand the impact of potential disruptive events, and to use the information to support industry in improving fuel resilience.
  - **Protect:** to align this sector with protections that apply in other critical service sectors, by enabling Government to ensure that new owners of critical fuel infrastructure are financially sound and operationally capable; and to take a Government spending power to enable HMG to support supply resilience improvements and schemes.
  - **Insure:** to enable industry to create and operate collective, sector-wide industry-led schemes to maintain fuel supply in case normal supply arrangements are seriously disrupted; and a Government power to direct individual companies to participate in such schemes and take other action that may be necessary to ensure resilience.

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<sup>2</sup> In the event of an unavoidable fuel supply disruption, BEIS’ civil contingency planning process aims to ensure that an appropriate response will be taken by all necessary parties.

**1.4 SUMMARY OF OPTIONS CONSIDERED:**

11. Two policy options are presented in this Impact Assessment (including the “Do nothing”), as detailed in Table 1 below. These options will be explored during the consultation to gather more detailed information and evidence on the costs and benefits of measures to improve or/maintain the United Kingdom’s fuel supply chain resilience.
12. In these options, measures in the following five areas are proposed:
- i. Monitoring fuel supply resilience
  - ii. Insuring fuel supply resilience: Industry-led resilience improvement
  - iii. Insuring: fuel supply resilience: Resilience direction
  - iv. Protecting fuel supply resilience: Government spending
  - v. Protecting fuel supply resilience: Ownership test

**Voluntary Action**

13. Government has analysed and explored the scope for encouraging voluntary action by the sector in these areas, but reflecting the market failures in the sector there is insufficient support from the market players and the evidence suggests it would not be effective.

Monitoring fuel supply resilience proposals

14. BEIS is the only body that has an overarching view of the entire downstream oil supply system. Information would be used to identify critical points, failure of which may give rise to disruptions, develop contingency plans and support decision making during an emergency. The benefits from the information provision in the most likely option, by improving the security of the UK’s fuel supplies, have the characteristics of a public good. The benefit to society is therefore greater than the private benefit to the companies, and we would expect information to be under-supplied on a voluntary basis. This is the current situation: there are several companies that have told us they could and would comply with a statutory instrument, but refuse to provide the information government requires to conduct supply risk analysis on voluntary terms.

Insuring fuel supply resilience proposals

15. BEIS has explored and considered whether voluntary action to invest in fuel supply resilience could be promoted and developed including in the mid-stream (business to business) elements of the supply chain or the retail elements.
16. Both these elements of the supply chain face intense competition and supply an essentially homogenous product. Companies participating in voluntary schemes and incurring additional costs would therefore see their competitive position in normal market conditions undercut by those that decided not to participate or to free ride. Insights from game theory suggest that any voluntary agreement would therefore be inherently instable, due to the high incentive to cheat.
17. Nor would participants in voluntary schemes be likely to recoup these costs during periods when the market was under stress or during disruptions, reflecting the market failures in the sector. Within the supply chain, fuel suppliers typically cannot increase prices in the short term, as their supply contracts are tied to international traded prices, but can invoke force majeure contract clauses in the event of major disruptions enabling

them to “walk away” from their supply obligation. To maximise return on their investments, companies must strive to maximise utilisation of their assets as no revenue is generated by maintaining excess supply capability which is not utilised. This, along with limited liability, limits incentives to mitigate disruption.

18. During a disruption retailers may not expect to capture the full value of scarcity, which again limits incentives to mitigate. For example, fuel stations, particularly if there is panic buying, might empty before pricing decisions respond. Also it is plausible that the larger players in the sector (e.g. oil majors, supermarkets) might be sensitive to reputational damage from media reporting of price rises in these scenarios. Further the benefits from voluntary action e.g. to provide an emergency tanker fleet would be likely to accrue to non-participants as well as participants enabling encouraging “free riding” and further incentivising non-participation.
19. Feedback from stakeholders in the midstream and retail parts of the supply chain was they were very reluctant to incur any additional cost and would not contribute to replacing the tanker fleet on a voluntary basis, i.e. without legislation that obliges them all to participate.
20. The ownership test could not be replaced by voluntary action as this is a principal agent problem, with the agent (in this case the company owning the infrastructure asset) able to make decisions that expose the principal to risk (in this case the fuel security of society at large).

### **Full Regulation of the Sector**

21. Another option considered was a full regulation of the downstream oil sector with a licensing regime and new regulatory body to enforce standards and mandate resilience solutions. This is the model which applies to gas and electricity, telecoms and water sectors among others. Unlike these networked sectors however there is no natural monopoly in the downstream oil sector and therefore the underlying rationale for an economic regulator of this type is missing, as such a regulatory regime does not seem proportionate or appropriate to the risk.

***Consultees are invited to offer further evidence on the scope for voluntary action or full regulation of the sector.***



**Table 1: Summary of Options**

	<b><u>Option 1- Do nothing</u></b>	<b><u>Option 2- The most likely option</u></b>
Monitoring fuel supply resilience	<p>BEIS continues to collect data submitted as part of other regulatory requirements which are submitted as part of the Downstream Oil Reporting (DORS) and Oil Stocking System (OSS) returns – the templates can be found <a href="#">here</a>.</p> <p>Other information is provided on a voluntary basis.</p>	<p>BEIS collects additional data as outlined in Annex A “<i>Proposed Reporting Requirements to BEIS</i>”.</p> <p>There are some exemptions to reduce the burden on small and micro businesses. UK refiners, importers, wholesalers and resellers supplying less than 50,000 tonnes to the UK market annually are not required to fill in the monthly survey, and forecourt owners with no monitoring technology currently installed do not have to provide daily fuel stock management data to BEIS.</p> <p>Estimated costs: £0.2m</p> <p>Estimated benefits: See Section 3.4</p>
Insuring fuel supply resilience: Industry-led resilience improvement	<p>The reserve tanker fleet will remain in place until 2020, under the existing government lease contract. After 2020, this contract is not renewed.</p>	<p>The reserve tanker fleet will remain in place until 2020, under the existing government lease contract. After 2020, an industry led fuel supply and distribution scheme is implemented.</p> <p>Estimated costs: £23.8m (Low £14.9 to High 26.9m)</p> <p>Estimated Benefits: £615.8m (Low £132.4m)</p>
Insuring fuel supply resilience: Resilience Direction	<p>BEIS continues to engage with the sector and encourage voluntary arrangements to improve resilience for downstream oil supply.</p>	<p>In addition to Option 1, BEIS has the power to use the resilience direction (for example, a direction to resolve a known physical security issue, or to meet a technical standard as a back-stop measure).</p> <p>Estimated Costs: Not Estimated</p> <p>Estimated Benefits: Not Estimated</p>
Protecting fuel supply resilience: Government Spending	<p>BEIS has no spending powers in the downstream oil sector for the purpose of downstream resilience.</p>	<p>BEIS has the power to spend. As an example BEIS could provide spare capacity in the supply chain against the potential failure of existing infrastructure by investing in an extra jetty, or additional road rack capacity. Government intervention would need to be fair, reasonable and proportionate.</p> <p>Estimated Costs: Not Estimated</p> <p>Estimated Benefits: Not Estimated</p>

<p>Protecting fuel supply resilience: Ownership test</p>	<p>BEIS has no powers to intervene for the purposes of downstream oil resilience in the event that ownership of critical infrastructure changes to a higher risk company.</p>	<p>BEIS Secretary of State would be able to block takeovers or impose conditions where thresholds of owner/operator financial soundness or operational competence are not met.</p> <p>Estimated Costs: Not Estimated</p> <p>Estimated Benefits: Not Estimated</p>
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## 2. ASSESSMENT OF BASELINE LEVELS OF RISK AND IMPACT

### 2.1 EVIDENCE BASE

22. General supply risks in the sector include:

- **Major operational incidents** e.g. there have been fires at three refineries as well as the Buncefield terminal over the last 15 years. The Buncefield fire disrupted fuel supply to Heathrow for months although the airport has multiple supply routes and suppliers were able to find work-rounds over time. The 2007 fire at Coryton refinery on the Thames estuary (which closed in 2012) reduced fuel throughput by >50% and led to local shortages.
- **Insolvency** e.g. Petroplus, which led to Coryton refinery’s closure in 2012 (without supply disruption).
- **Malicious /criminal disruption**, including cyber and conventional attack, control by unfriendly states and illegal pipeline tapping. The cyber threat is currently being assessed. Risks are low but can change. Tappings<sup>3</sup> have become more frequent although there is some indication that rapid detection due to new industry investment in leak detection systems has started to reverse this trend and none has yet led to major incidents.
- **Industrial action** e.g. tanker drivers. This has been the major cause of supply disruption in recent years, with tanker driver disputes leading to the establishment of operation ESCALIN<sup>4</sup>.

23. The constraint in responding to supply incidents is on supply logistics within the UK. Given oil product markets are global in scope we judge there is no plausible prospect of shortage of fuel to the UK as a whole.

24. This section summarises how BEIS has quantified the scale of infrastructure risks which is a combination of: the likelihood of a sudden interruption or closure due to operational or financial risk; the estimated typical supply shortfalls and durations of such disruptions; and the estimated economic impact of a given supply disruption.

25. The key evidence sources used for this IA are:

<sup>3</sup> Hot tapping, or pressure tapping, is the method of making a connection to existing piping without the interruption of emptying that section of pipe or vessel.

<sup>4</sup> As part of its contingency planning, the government is working with the downstream oil industry, including haulage companies, to maintain a capability within the Armed Forces to make fuel deliveries in the event of a serious disruption to normal deliveries due to industrial action by fuel tanker drivers. <https://www.gov.uk/guidance/preparing-for-and-responding-to-energy-emergencies#downstream-oil>.

- Statistical data collected by BEIS on the supply chain through surveys (some on a statutory basis some voluntary).
- Data from external commercial providers.
- External expert reports such as Study of the UK petroleum retail market<sup>5</sup>  
For more information on data sources see Annex B, “Key Definitions and Data Sources”.

**Likelihood of Loss of Operations and Financial Failure leading to a loss of supply**

26. BEIS has assessed both the risk of loss of operations resulting from a catastrophic event (e.g. explosion) and the risk from financial failure of the operating company followed by an inability to maintain supply. We have assessed the evidence on both the risk of serious operational disruptions and the risk of financial failure for different elements of the supply chain infrastructure. Our assessment distinguishes between refineries, terminal and jetties and involved consulting the Health and Safety Executive as well as officials across BEIS. Our high level assessment for UK as a whole is summarised in the tables below, with further details given in Annex C, “Likelihood of Loss of operations and Financial Failure”.
27. These estimates are based on the best available evidence. For the risk of operational failure this takes account of the historical reporting of significant incidents as well as stakeholder expectations. Table 2 below implies that the likelihood of a loss of operations incident leading to loss of supply at a national level is 1 incident every 10 years spread across the 6 UK refineries. Table 3 shows the corresponding estimates for a financial failure incident leading to loss of supply at a national level is 1 in 25 years. Estimates of the risk are lower for smaller terminals and jetties (ports).

**Table 2: Likelihood of Loss of Operations leading to loss of supply**

Asset type	National Risk 1 in X years	Evidence
Refinery	10	Deloitte 2010 Report <sup>6</sup> and historical experience.
Terminal	115	Terminals should be lower risk than refineries as they avoid the high-temperature and high-pressure refining processes and are typically smaller, with less product on site. We judge the national risk of loss of operations to be every 1 in 25 years, but that this will only lead to a loss of supply in around 20% of cases as products should be able to be supplied out of an alternative.
Jetties	Immaterial	Judgement informed by stakeholder feedback.

28. For the risk of financial failure, a key uncertainty is future changes to market conditions. Northwestern European refineries are known to be under financial pressure due to international competition, aging assets now producing a mix of fuel products which does not match demand, falling demand (at least for petrol) and tightening environmental standards. Future oil prices and refining margins are uncertain and hard to predict, but increased volatility may also increase the risk of insolvency. While the long term trend of decreasing oil demand<sup>7</sup> leads to short-term increases in spare capacity in existing infrastructure which might appear to reduce risk, however under-utilised infrastructure

<sup>5</sup> “Study of the UK Petroleum Market”, Deloitte, 2012

<sup>6</sup> Deloitte 2010 report - Downstream oil – short term resilience and longer terms security of supply.

<https://www.gov.uk/government/publications/downstream-oil-short-term-resilience-and-longer-term-security-of-supply>

<sup>7</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/541332/LONG\\_TERM\\_TRENDS.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/541332/LONG_TERM_TRENDS.pdf)

ceases to be economical to run and tends to close either through managed closures to reduce costs or through insolvency.

**Table 3: Likelihood of Financial Failure leading to a loss of supply**

Asset Type	National Risk 1 in X years	Evidence
Refineries	25	Judgement informed by stakeholder feedback. Aggregate assessment as ownership patterns and structures vary across the sector.
Terminals	92	Terminals should be lower risk than refineries, as they are not exposed to refining margins for example and those terminals that are critical for supply are likely to have healthy throughput volumes. We judge the national risk of financial failure to be every 1 in 20 years, but that this will only lead to a loss of supply in around 20% of cases as products should be able to be supplied out of an alternative.
Jetties	Never	Typical owners e.g. ports are unlikely to be at risk of sudden insolvency and liquidation

***Given the inherent difficulties in judging low probability high impact events we would welcome responses from the consultation with comment and evidence in this area.***

Estimates of typical supply shortfalls and durations of supply disruptions

Typical Supply Shortfalls

29. Using the methodology described in Annex D, “Estimating Supply Shortfalls: Methodology”, we have estimated the immediate term supply shortfalls to their regional supply envelopes that would be likely to result from disruptions to the UK refineries. Due to the commercially sensitive nature of the information which leads to this analysis government can neither disclose the individual sites nor the impacts broken down by region (which might allow the individual sites and magnitude of disruption to be calculated). Allowing for the variation between refineries, for the purpose of this IA we have used a figure of 6 to 7 million litres/day (2 to 3%<sup>8</sup> of total daily supply to the UK market) for the immediate term supply shortfall from a “generic” refinery disruption (with an estimated aggregate annual operational plus financial risk of such a disruption of around 1 in 7 years or 14%).

30. For terminals and jetties, the majority of assets could close and the intra-regional infrastructure would have sufficient spare capacity to maintain supplies. However there is a significant minority of assets, which if one was to close suddenly would lead to a shortfall of supply. For these sites the average immediate impact is calculated as being around 3 million litres/day (with an estimated aggregate annual operational plus financial risk of such a disruption of around 1 in 50 years – 2%).

Duration

31. “Duration” for the purposes of this Impact Assessment is defined as: the period of adjustment following a market disruption before a functioning fuel market is re-established. Duration does not necessarily imply supply of fuel is restored to pre disruption levels by that point, but that a functioning fuel market has been re-established.

<sup>8</sup> total daily supply to the GB market averaged 243 million litres/day in 2015  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/540915/DUKES\\_3.2-3.4\\_alternative\\_units.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/540915/DUKES_3.2-3.4_alternative_units.xls)

32. As outlined in Annex E, “Market Response to a Supply Disruption”, it seems unlikely that widespread disruption would persist for a long period of time (e.g. weeks) as commercial incentives should be strong enough to incentivise additional supply into tight local markets. However, this will come at a price and retailers are unlikely to fully ration demand using price increases and shortages therefore remain possible for longer. The ability of the system to respond will depend on the quantum of the supply loss and a number of factors which are location specific, such as but not limited to the availability of trucks to supply current volumes from alternative supply points.
33. Given the uncertainties we have assumed a range of possibilities: a best case of 3 days; a central case of 6 days; and a higher case of 10 days.
- **3 Days** – based on a very rapid response by the hauliers to re-optimize and re-allocate tankers from other areas in the UK, leading to a very diffuse supply shortfall spread out across the whole of UK. Supply chain is assumed responsive and wider logistics infrastructure is favourable while prices are able to ration demand quickly without there being an extended disruption.
  - **6 days** – Hauliers and other suppliers take a couple of days to react and then re-optimize the supply chain. Supply responsiveness is “sticky” and prices take longer to adjust fully to ration demand.
  - **10 Days** – industry response is focused on using resources local to a discrete failure and supply chain adjustment is unwilling to compromise existing delivery patterns in other regions or constrained by other logistical factors. Supply chain is unresponsive and prices cannot adjust sufficiently to avoid an extended disruption.
34. This assessment of the duration of disruptions is before the mitigation from the BEIS tanker fleet.

Economic Impact of a Disruption

35. The analytical framework is based on Deloitte's approach in their report for DECC "Downstream oil - short term resilience and longer term security of supply", 2010, section 7.2<sup>9</sup>, in which UK energy intensity, or in this case oil intensity, is used to derive the cost to the economy of a disruption to oil product supplies.
36. Oil intensity is defined as the ratio of oil product consumption to economic output, as measured by Gross Value Added (GVA)<sup>10</sup> (Ratio A):

$$\text{Oil Intensity} = \text{Ratio A} \left( \frac{\text{Oil product demand}}{\text{GVA}} \right)$$

37. If we assume that oil product intensity is fixed in the “immediate term”, then this ratio can be given a causal interpretation: that a fall in available refined product will restrict economic activity in proportion to the oil intensity of output:

$$\text{Ratio B} \left( \frac{\text{GVA}}{\text{Oil product demand}} \right)$$

Therefore we can determine Economic Impact as a function of: volume of oil loss as a result of a disruption event and the economic activity restriction per volume.

<sup>9</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69758/1779-downstream-oil-short-term-resilience.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69758/1779-downstream-oil-short-term-resilience.pdf)

<sup>10</sup> Gross Value Added (GVA) is the value generated by any unit engaged in the production of goods and services. GVA plus taxes (less subsidies) on products is equivalent to Gross Domestic Product (GDP). The main input datasets for regional GVA include administrative data and data from structural surveys.

**Volume of oil disruption x Ratio B (Inverse of Oil Intensity) = Economic Impact**

38. This gives our best estimate of the economic impact of the supply disruption. This assumes that all economic activity requires some oil product inputs (either directly or indirectly) in fixed proportions, i.e. that there is no scope to vary factor inputs or substitute away from oil, and that there is no scope to reallocate oil product stocks between sectors of the economy to those with the highest value. As we are interested in the immediate term, this is a reasonable assumption to make. Therefore, a reduction in product available will reduce economic activity in proportion to oil product intensity.
39. As an indicative sensitivity to the basic methodology, we have relaxed the assumption of no substitution and therefore complete dependency on oil. We have removed economic output (GVA) generated by sectors that are likely to be less oil dependent, to create a low estimate for sensitivity testing. This estimate is useful for illustrative purposes, but there is a risk that it may underestimate the economic impact of an oil product disruption because in the immediate term substitution is limited in all sectors.
40. It has not been possible to construct a high estimate with the available information. In theory, this might involve examining indirect costs associated with the oil supply disruption, such as the impact of a potential sustained period of high oil prices after a functioning fuel market has been re-established. Our best estimate on the other hand assumes that once the fuel market has been re-established, the impact on economic activity is likely to be much reduced, as fuel will be available and economic activity generating uses are likely to have a corresponding willingness to pay to purchase such fuel even if prices are at elevated levels.

**Estimated Economic Impact of Supply Disruption:**

- **Best Estimate:** In this estimate all economic output (GVA) was included, reflecting the established Deloitte methodology. This is the best estimate as it assumes that substitution is limited in the immediate term, which is likely to be the case.
  - **Low Estimate:** In this estimate all economic output (GVA) generated in the “commercial”, “public administration”, and “air transport<sup>11</sup>” sectors was assumed to be unaffected by an oil supply disruption, leaving only 26% of GVA included. It is therefore assumed that substitutes are available, and it is only the remaining sectors where economic activity is completely dependent on oil consumption in the very short/immediate term.
  - **High Estimate:** n/a
41. Assessments of impacts on economic output and prices are highly uncertain but nonetheless provide an illustration of the potential magnitude a fuel supply disruption might have, and emphasise that impacts are likely to be non-trivial even in the low estimate. Further details on the methodology, including a discussion on the substitution, are in Annex F: “What would be the economic impact of a downstream oil disruption?”. The estimated range of impacts for the generic volume disruptions considered in this analysis for different durations are summarised in the table below (not risk adjusted)

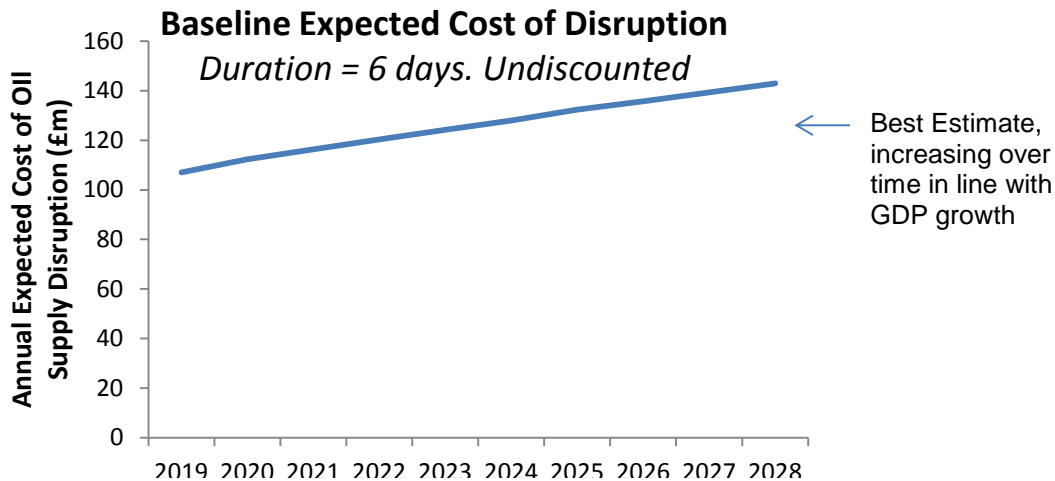
11

In the air transport sector, it was assumed that, as the market for jet fuel is national rather than sub-national, planes should be able to refuel in alternative locations if necessary and the cost of these is likely to be relatively marginal. In practice this will vary depending on location, and for example, the mix of short and long haul flights with refuelling in alternative locations more practical for short haul flights.

**Table 4: Potential Economic Impact of Supply Disruptions**  
 (£mn 2015 prices, using Oil Intensity Ratio in 2019 )

	3 day disruption	6 day disruption	10 day disruption
Refinery	100 – 500	200 - 950	350-1600
Terminal or Jetty	50 – 200	100-450	150-750

42. Allowing for the assessment of the likelihood of supply disruptions generates the estimates of the baseline expected cost of disruptions in the chart below. To extrapolate to future years and allow for GDP and oil demand evolving we have used BEIS energy and emission projections for assumptions on future changes in GDP, industrial output and oil demand. Growth in industrial output was used as a proxy for the change in economic activity for the sectors included in the low estimate.



**2.2 RISKS AND ASSUMPTIONS**

43. The analytical framework is stylised and as such, the economic impact should only be considered indicative. In summary key uncertainties when estimating the economic impact of fuel supply disruptions include the likelihood of future disruptions, the scale of future disruptions and the duration of future disruptions. The key assumption is the breakdown of the price mechanism, and that substitution away from oil is not possible in the immediate term. The latter assumption has been relaxed in sensitivity testing. A remaining limitation is that within a given locality, every standardised unit of fuel consumed is assumed to have a constant associated value added, so every unit of fuel foregone as a result of the disruption has a constant cost. Clearly some consumption will be purely for “leisure” activities but will nonetheless have welfare associated with it.

44. Despite these limitations, the analytical framework uses the available evidence to create a range of estimates of the daily cost of an oil product disruption. The range given provides an indication of what the economic impact due to an oil product disruption could be, and emphasises that impacts are likely to be non-trivial.

**Consultees are invited to provide further information on the expected cost of fuel supply disruptions.**

### 3. MONITORING FUEL SUPPLY RESILIENCE (INFORMATION AND DATA REPORTING)

#### 3.1 DESCRIPTION & RATIONALE

45. Section 1 of the Consultation Document sets out the detail of this option but in summary it is designed to enable BEIS to collect, compile, retain and share (with other government departments only) information from the downstream oil sector for the purposes of fuel supply resilience. We envisage two elements to this regime, a regular reporting of technical data and event-based reporting of incidents or risks of disruption to fuel supplies.
46. BEIS is the only body that has an overarching view of the entire downstream oil supply system. Information is used to identify critical points which may give rise to disruptions, develop contingency plans and support decision making during an emergency. BEIS needs to be able to look at the aggregated supply requirements across all companies in order to understand the ability of infrastructure assets to increase or maintain supply in the event of a disruption event. Without a complete, accurate and holistic view of the downstream oil system, there is a risk that government cannot support industry in responding to a disruption in an effective and timely manner, leading to unnecessary disruption.

#### 3.2 OPTIONS CONSIDERED

##### **Option 1 – Status Quo or do nothing**

BEIS continues to collect data submitted as part of other regulatory requirements which are submitted as part of the Downstream Oil Reporting (DORS) and Oil Stocking System (OSS) returns – the templates can be found here. Other information is provided on a voluntary basis.

##### **Option 2 – The most likely Option**

The eight main areas BEIS are seeking powers to reserve the right to request additional information for the purpose of downstream oil resilience are detailed in Table 1 Annex A of the consultation document. They include:

- Monthly, quarterly and annual surveys (1, 2, 3, 4 and 5 in Annex A)
- Provision of Daily Forecourt Wet Stock Management Data (6 in Annex A)
- Other data provision (7 and 8 in Annex A).

There are some exemptions to reduce the burden on small and micro businesses. UK refiners, importers, wholesalers and resellers supplying less than 50,000 tonnes to the UK market annually are not required to fill in the monthly survey, and forecourt owners with no monitoring technology currently installed do not have to provide daily wet stock management data to BEIS.

***BEIS welcomes comments and feedback on the impact of these proposals on business and on the approach and assumptions used to quantify benefits.***

#### 3.3 COSTS

47. BEIS is committed to minimising the burden its surveys place on businesses and that proposals for new surveys are closely assessed. Information that is already collected



under existing legislation has been taken into account, and BEIS have looked to ensure that additional requests are proportionate to risks. More information is given in Annex A.

48. We have drawn on the UK Statistics Authority’s (UKSA) Code of Practice<sup>12</sup> for survey control and the ONS recommended methodology for estimating the cost of complying with data reporting requirements<sup>13</sup>.
49. The calculated compliance costs combines estimates of the time taken to complete existing surveys with estimates of the opportunity cost of that time, which is based on the wage (excluding overtime) and non-wage cost of workers of different skills/functions by using data published in the Annual Survey of Hours and Earnings<sup>14</sup> (ASHE; Table 14.6a).

The wage rates used were as follows:

**Table 5: Occupation SOC10(4) Table 14.6a - Hourly pay - Excluding Overtime**

Civil Servant Description	ASHE Employment Description	2015 rate (£/hr)
Director	Directors and chief executives of major organisations (code 1115)	42.42
Senior Manager	Managers and Senior Officials (code 1)	19.42
Middle Manager Junior Manager	Associate Professional and technical occupations (code 3)	15.00
Clerical	Administrative and secretarial occupations (code 4)	10.28

***Consultees are invited to offer evidence on wage rates to verify the estimates above.***

**Monthly, Quarterly and Annual Surveys (1, 2, 3, 4 and 5 in Annex A)**

**Monetised Costs:**

50. The additional time (mins) per reply that the downstream oil sector would have to spend completing surveys has been estimated, as detailed in Table 6 below. From this, we have calculated the opportunity cost of the time taken to comply with the data reporting obligations, by combining with an expected response rate (based on existing Downstream Oil Reporting returns) and an indicative wage rate per hour (based on the ASHE data above) and assumed to increase in line with wage inflation projected by the OBR over the course of the period).

<sup>12</sup> <https://gss.civilservice.gov.uk/wp-content/uploads/2012/12/Code-of-Practice-for-Official-Statistics.pdf>

<sup>13</sup> Further details can be found at <https://gss.civilservice.gov.uk/about/surveys/survey-control-unit/online-list-of-government-statistical-surveys/>

<sup>14</sup> ASHE Table 14.6a

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010asheta/ble14>

Table 6

Annex A References 1 -3 , Survey on Supply and Demand	Monthly Reporting	No. of Survey Returns / Month <sup>15</sup>	Additional Time (Mins) per reply	Reference in Annex A	Level Of Respondent completing Survey
	Refiners	8	210	1	Middle Manager 60%, Clerical 40%
	Importers / Wholesalers	30	84 <sup>16</sup>	1	Middle Manager 60%, Clerical 40%
	Commercial Resellers	20	105	1	Middle Manager 60%, Clerical 40%
Annex A References 4 – 5 Surveys on Infrastructure and Logistics	Quarterly Reporting	No. of Survey Returns / quarter	Additional Time (Mins) per reply	Reference in Annex A	Level Of Respondent completing Survey
	LPG	26	0	2	Middle Manager 60%, Clerical 40%
	Annual Reporting	No. of Survey Returns / yr <sup>17</sup>	Additional Time (Mins) per reply	Reference in Annex A	Level Of Respondent completing Survey
Commercial Resellers	38	60	3	Middle Manager 60%, Clerical 40%	
Annex A References 4 – 5 Surveys on Infrastructure and Logistics	Annual Reporting <sup>18</sup>	Number of Survey Returns / Quarter <sup>15</sup>	Additional Time (Mins) per reply	Reference in Annex A	Level Of Respondent completing Survey
	Refiners	8	120	4	Senior Manager 80%, Middle Manager 20%
	Import Terminals	36	120	4	Senior Manager 80%, Middle Manager 20%
	Inland Terminals	19	120	4	Senior Manager 80%, Middle Manager 20%
	Regional Depots	10	120	4	Senior Manager 80%, Middle Manager 20%
	Pipeline Operators	10	120	4,5	Senior Manager 80%, Middle Manager 20%
	Airports	26	120	4,5	Middle Manager 60%, Clerical 40%
	Hauliers (inc LPG & Commercial)	20	180	5	Senior Manager 80%, Middle Manager 20%
Port Authorities	20	240	4,5	Middle Manager 60%, Clerical 40%	

**Non-monetised Costs:** n/a

**Consultees are invited to provide analysis of company costs, and how they may differ from the estimates above.**

**Provision of Daily Forecourt Wet Stock Management Data (6 in Annex A)**

**Monetised Costs:**

51. Data feeds with a number of third party wet stock management companies have been developed to supply appropriate daily forecourt data. These feeds have been designed with industry members for activation during an emergency, however, for operating companies / suppliers / owners who use these companies to manage their wet stocks, they would have the option to instruct the 3rd party wet stock management companies to release data directly to BEIS and utilise the secure data feeds already established. For

<sup>15</sup> This is based on our best current estimate of the number of companies and is subject to change

<sup>16</sup> This is the average time assumed for importers/ wholesalers (additional time per reply will be greater for large importers than small importers).

<sup>17</sup> This is based on our best current estimate of the number of companies and is subject to change

<sup>18</sup> After the first year, it is assumed that the time per reply reduces by 50% for the annual survey, as respondents will not have to significantly amend responses submitted the previous year.

these companies there would be minimal / no additional cost or burden to meet this data obligation, so costs have been assumed to be zero.

52. In Option 2, all significant forecourt owners and operators with the monitoring technology currently installed have to provide daily wet stock management data to BEIS, but forecourt owners with no monitoring technology currently installed do not. Without this exemption, all forecourt owners would have been expected to provide daily wet stock management data. This would increase the costs significantly compared with Option 2, as forecourts without the monitoring technology would be required to purchase it annually, an additional cost of around £10,000 per forecourt. It is estimated that currently around 25% of forecourt owners do not have the monitoring technology, and this percentage is assumed to fall to 5% by 2030 in the counterfactual.

***Consultees are invited to provide evidence of the costs of providing wet stock management data.***

**Non- monetised Costs:**

53. There may also be on-going costs associated with the daily data feed, due to the administrative burden of maintaining the system, either to be borne by the forecourts themselves, or the providers of the monitoring system. However, as the data is to be provided electronically to BEIS via data feed we have assumed that these will be negligible so on-going costs have not been monetised.

**Other data provision (7 and 8 in Annex A).**

**Monetised Costs:** n/a

**Non- monetised Costs:**

54. Data provisions 7 and 8 in Annex A have not been monetised in the impact assessment.
- Provision 7 relates to BEIS requesting information from the Downstream Oil Sector in the case of an actual or threatened fuel disruption. The scale and scope of these data requirements will depend on the nature of the Downstream Oil Event, which is highly uncertain by definition. The time taken to comply could potentially represent a significant cost to business in absolute terms. However, relative to the counterfactual the cost is assessed to be negligible, since in an actual or threatened emergency situation it is likely that the downstream oil sector would monitor risks in any case as part of internal business contingency planning. BEIS would request that industry voluntarily provide this data but there is a risk that industry do not. This data provision would therefore be unlikely to increase the amount of information the sector would need to collect, but rather increase the amount of this information that is provided to BEIS.
  - Provision 8 relates to the EU Network and Information Security (NIS) Directive which aims to achieve a high common level of network and information security across the EU. It applies to operators of essential services and digital service providers. Among a number of measures, the Directive introduces security and incident reporting requirements for operators of essential services which will be enforced by nominated competent authorities. The UK approach to implementation of the Directive has not yet been finalised and therefore the costs of implementation will be considered separately as part of a Department for Culture Media and Sport (DCMS) led Impact Assessment to be published later this year, alongside a consultation on NIS implementation

**Table 7: Summary of monetised costs, Monitoring Fuel Supply Resilience (£m):**

Option 2	2019	2020	2021	2022	2023	2024	2025	2026	2027	2029
Monthly and Annual Surveys Undiscounted	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Provision of Daily Forecourt Wet Stock Management Data Undiscounted	0	0	0	0	0	0	0	0	0	0
Total Undiscounted	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
<b>Sum- Present value (2019 - 2028) (2015 prices, 2019 PV)</b>				<b>0.17</b>						
<b>EANCB (2019-2028) (2014 prices, 2015 PV)</b>				<b>0.0 (less than 0.05)</b>						

### 3.4 BENEFITS

55. The additional information requirements requested would reduce risk and impact of a downstream oil disruption, by enabling BEIS to identify potential supply outages, and target emergency response measures more appropriately. Benefits may therefore arise through a reduction in the likelihood of a disruption, the volumes affected or the duration of a disruption.

56. There is also an interaction with the proposed industry-led resilience improvement measure (including the tanker fleet) as this information would ensure full benefits both in understanding the optimal number of tankers to procure and optimising the benefits from their deployment.

57. To show the balance between costs and benefits from this measure, a reduction of one day in the duration of disruptions as a result of this measure has been considered, though as this is illustrative it has not been included in the overall NPV. This has a quantified annual benefit (risk adjusted) of £5m to £23m, in 2017, see the table below. This draws on the analysis of the baseline risk presented above, and the range is given by the high impact scenario and the lower impact scenario.

**Table 8: Illustrative Reduction in cost of expected annual disruption, Monitoring Fuel Supply Resilience (Undiscounted, 2015 prices)**

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Best Estimate (£m)	23	24	25	26	26	27	28	29	29	30
Low Estimate (£m)	5	5	6	6	6	6	6	6	6	6

58. Comparing with the estimated annual cost of the measure (less than £0.05m), it would only require a reduction of a fraction of a day on average in the length of disruptions for benefits to exceed the costs of this measure.

***Consultees are invited to provide further evidence on the benefits.***

### **3.5 RISKS AND ASSUMPTIONS**

59. Key assumptions on costs are outlined in tables 5 and 6 above. The other key assumption is that there will be no on-going cost associated with providing data monitoring feeds. Following consultation these will be reviewed and updated if necessary.

## **4. INSURING FUEL SUPPLY RESILIENCE: INDUSTRY-LED RESILIENCE IMPROVEMENT**

### **4.1 DESCRIPTION**

60. Section 3 of the Consultation Document sets out the detail of this proposal, but in summary it aims to support sector wide industry-led measures to improve fuel supply resilience, to allow industry-wide measures to be put in place, owned and managed by the fuel supply industry, to maintain fuel supply during a disruption. At present BEIS has one measure in mind, a reserve tanker fleet similar to that currently managed by the department.

### **4.2 RATIONALE**

61. Given the market failures identified earlier in this Impact Assessment, industry is likely to under invest in resilience measures and mitigation which is a serious concern given the scale of the potential impact to the economy, and therefore has potential to provide value for money. The use of the industry body rather than government procurement could potentially provide resilience measures more efficiently and at lower cost.

62. The requirement on industry to pay is likely to result in the costs being borne by the consumers of fuel products broadly in proportion to their consumption, though at this consultation stage this is as yet uncertain. This is more equitable than the costs being borne by the taxpayer in general (as is the case for the current tanker fleet contract) as those who benefit most from more secure fuel supplies will pay a greater share of the costs. See also the discussion in section 3 of the Consultation Document.

### **4.3 OPTIONS CONSIDERED**

#### **Option 1: Status Quo**

No creation of an industry led body. It is assumed the reserve tanker fleet remains in place until end 2019 under the existing government lease contract and that from 2020 this contract is not renewed.

#### **Option 2: The most likely option**

Creation of an industry led body to lead in developing and implementing schemes to improve resilience in the downstream oil sector. In the first instance, arrangements are made to replace the existing BEIS reserve tanker fleet contract, when it expires end 2019.

#### **4.4 COSTS**

63. There are significant uncertainties around the costs that will be incurred through the creation of the industry body, as the costs will depend on how industry decides to operate the scheme following the consultation. Therefore the cost of setting up and running an industry-led fuel supply and distribution body has not been monetised due to lack of available evidence. Government intervention would need to be fair, reasonable and proportionate acting as a constraint on the potential impact.

#### ***Consultees are invited to offer evidence on the cost of running the industry-led fuel supply and distribution resilience scheme***

64. The quantification of this section of the Impact Assessment therefore focuses on the impact on the costs and benefits of the BEIS reserve tanker fleet and the decision to extend the contract. The existing government lease contract runs until 2019, so until 2019 there is no additional impact from the two options and therefore no additional monetised costs or benefits.

65. After 2019, the cost of leasing or purchasing a fleet of 80 tankers has been monetised. A Fleet size of 80 tankers was selected in order to mitigate the risk of the greatest UK single point supply asset failure. For more detail on the analysis to determine the tanker fleet size, see Annex G.

66. The current government lease contract costs the exchequer £3.7m a year. In Option 2, the cost of leasing the reserve tanker fleet is borne by the industry. Replacement of the current contract on similar costs and terms but with costs borne by industry is one possibility. It has been assumed for modelling purposes that the size of the tanker fleet required will not change going forwards. It is assumed that when contracts are renewed costs are uprated in line with general inflation. We have used this as the high cost estimate. With industry management and with greater levels of expertise in the area there is scope to find efficiencies and the cost of procuring a reserve tanker fleet is expected to be lower.

67. We have quantified this in our central case for Option 2 by assuming the industry body would purchase the tanker fleet outright, rather than incur the higher costs of a shorter term rental. This leads to high upfront costs in 2020 (when tractor and trailer units are purchased), and in 2025 (where tractor units are replaced), than in other years where only much lower fixed cost such as Insurance, Registration, Maintenance and Storage are recorded. The detailed assumptions are in the Risks and Assumptions section below.

68. For our low estimate of costs for Option 2 we assume industry would procure a mix of tankers (and trailers) nearer to their end of life (industry would have the expertise and understanding to be confident they could provide the necessary capability in an emergency) which would be lower cost. Again, there are higher upfront costs in 2020 (where tractor and trailer units are purchased), in 2023 (where tractor units are replaced) and in 2024 (where trailer units are replaced). The detailed assumptions are also below.

69. The cost estimates are summarised in the table below. Costs for the first three years are zero as the existing tanker fleet contract runs to 2019.

**Table 9: Summary of Monetised Costs, Industry Led Resilience Improvement**

**(£m) 2015 prices, Undiscounted**

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 2: High (Industry Fleet, Lease)	-	3.7	3.6	3.5	3.4	3.4	3.7	3.6	3.5	3.4
Option 2: Central (Industry Fleet, Purchase)	-	12.0	1.2	1.2	1.2	1.2	6.4	1.2	1.2	1.2
Option 2: Low (Industry Fleet, Older)	-	3.4	1.6	1.6	1.9	1.6	2.2	1.9	1.6	1.6

	Total NPV 2019-2028 (2015 prices, 2019 PV)	EANCB (2014 price base year, 2015 PV)
Option 2: High (Industry Fleet, Lease)	26.9	2.2
Option 2: Central (Industry Fleet, Purchase)	23.8	2.1
Option 2: Low (Industry Fleet, Older)	14.9	1.3

***Consultees are invited to offer evidence on the cost of procuring a fleet reserve tankers***

#### **4.5 BENEFITS**

70. This section quantifies the benefits from the reserve tanker fleet. Based on previous analysis, the fleet of 80 tankers should be sufficient to offset the supply loss resulting from sudden closure of a key asset (see Annex G). Our central baseline assumption is that an oil product disruption would last for 6 days. This is assessed to be reduced by the provision of the reserve tanker fleet by 3 days, which allows for time to deploy the fleet in a no-notice disruption.

71. This reduces the risk adjusted costs of oil disruptions, as shown in the table below. Benefits for the first three years are zero as the existing tanker fleet contract runs to 2019. The range reflects the lower and high scenarios for the economic impact of a given loss of oil product supply.

72. Our low baseline assumption is that an oil product disruption could last 3 days. It is possible this could be reduced to zero i.e. no disruption occurs by the provision of the reserve tanker fleet if there is some notice of the disruption. Similarly we judge a reduction in our high baseline assumption that an oil product disruption could last 7 to 10 days is also plausible.

73. Another benefit of the reserve tanker fleet is that it would be likely to provide public confidence of national fuel supply resilience, thereby reducing the chance of panic buying. However, this has not been monetised.

**Table 10: Summary of Monetised Benefit, Industry Led Resilience Improvement (Risk adjusted , 3 day reduction in duration)**

(£m)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Best Estimate	0.0	72.5	74.8	77.2	79.3	81.5	84.0	85.9	87.9	89.9
Low Estimate	0.0	16.3	16.7	17.0	17.2	17.5	17.8	18.0	18.2	18.4

74. The Net Present Value of the Benefits is therefore estimated to be in the range £132m to £616m, with £616m as the best estimate as it reflects the established Deloitte methodology, as previously discussed. Even using the high cost and lower benefit assumption the Benefit to Cost ratio is substantial (five).

***Consultees are invited to provide further evidence on the benefits of the industry led resilience improvement.***

#### **4.6 RISKS AND ASSUMPTIONS**

75. For risks and assumptions related to monetising the benefits see the “Assessment of Baseline levels of risk and impact” section. In terms of the costs, we have not monetised the cost of setting up and running the industry led body at this consultation stage Impact Assessment, so this is an uncertainty. Other key assumptions for the Option 2 costs include:

- Inflation 2%, Social Discount rate 3.5%
- High: New contracts in 2019 and again in 2025, in each case at £3.7m plus inflation. This assumes that the length of the contracts will be 6 years.
- Central (purchase tanker fleet): Capital cost of a new tractor £75k with residual value of £10k after 5 years. Capex of trailer unit £60k with residual value of £13k after 10 years. Insurance, Registration, Maintenance and Storage annual cost of £15k per tractor+ trailer. All costs rise in line with general price inflation
- Low (older tanker fleet): Capital cost of used tractor £10k depreciates at 15% per annum and is replaced every 3 years. Capex of used trailer £13k depreciates at 15% per annum and is replaced every 4 years. Insurance, Registration, Maintenance and Storage annual cost of £20k per tractor+ trailer (higher maintenance than central). All costs rise in line with general price inflation.

## **5. INSURING FUEL SUPPLY RESILIENCE: RESILIENCE DIRECTION**

### **5.1 DESCRIPTION**

76. This is described in Section 3 of the Consultation Document. To summarise: this is a back stop measure to ensure members of the Downstream Oil Sector take appropriate action to maintain to guarantee that risks to fuel supply are mitigated to acceptable levels. In order to limit impact to the sector, and future policy risk, the use of direction



would be limited to fuel supply resilience, and government intervention would need to be fair, reasonable and proportionate.

## **5.2 RATIONALE**

77. The proposed measure for a resilience direction power would provide government with the tools to ensure appropriate measures are put in place by industry to protect UK fuel supplies. Given the market failures in the sector identified earlier in this Impact Assessment, industry is likely to underinvest in resilience measures and mitigation, which is a serious concern given the scale of the potential impact to the economy. Depending on the implementation of the contingency schemes to ‘insure’ the sector, such as the reserve tanker fleet discussed above, a direction power could also be used to ensure industry-wide participation. See Section 3 of the Consultation Document for more detail.

## **5.3 OPTIONS CONSIDERED**

### **Option 1 – Status Quo - Voluntary improvements**

BEIS continues to engage with the sector and encourage voluntary arrangements to improve resilience for downstream oil supply. BEIS has engaged with the industry to understand their appetite for resilience improvements. This work has explored the potential for improvements such as: fixed infrastructure upgrades, and improvements to business continuity plans. Findings so far suggest that there is limited commercial appetite to make these investments and therefore limited scope for resilience improvements to occur without the direction and/or support from UK Government. BEIS has also consulted with the owner/operators of assets, but it has achieved limited success in encouraging additional voluntary improvements to resilience. This highlights the status quo maintains an inefficient level of risk of serious supply disruption.

### **Option 2 - Resilience direction**

Based on the above consideration, a resilience direction measure is being suggested as an intermediate, proportionate and appropriate solution. The resilience direction as described above will serve as a back-stop measure to guarantee that risks to fuel supply are mitigated to acceptable levels. It is BEIS’ intention to continue to improve resilience through voluntary means where possible.

78. In order to limit impact to the sector, and future policy risk, the use of direction would be limited to fuel supply resilience, and government intervention would need to be fair, reasonable and proportionate.

## **5.4 COSTS**

79. There are considerable uncertainties around the costs if any that will be incurred as a result of the Resilience direction, although there are a number of factors that suggest that use of the direction power is likely to be limited.

80. As identified above this will be a backstop power, with Government having no immediate intention for use, and any government intervention would need to be fair, reasonable and proportionate.

81. Given levels of competition in much of the sector, the scope for individual operators to bear the costs of resilience measures is often limited. The criteria that proposed measures do not result in undue market competition impacts, is therefore likely to

constrain the potential impact of the direction power, even where there is a strong value for money case for investment as individual operators may not be able to bear these costs while remaining in business. Government may put more reliance on using the proposed power in Section 7 to provide financial assistance to the Downstream Oil sector to ensure resilience measures are implemented.

82. Given that individual interventions and use of the Direction Power will be assessed on a case by case basis, costs will therefore also be case specific and it is difficult to see how an average impact could be reliably estimated.
83. Given these criteria, and with Government having no immediate intention for use, there would therefore be no immediate burden on the sector. We have not therefore sought to quantify costs from this element of the proposals in this Impact Assessment. Given the criteria needed to use it, it is envisaged as a backstop power, and in any future period the most likely level of costs imposed on business from this power may be zero. We do not therefore expect direct costs to arise for businesses.

## **5.5 BENEFITS**

84. Directions would only be made if there was a value for money case has been established. Therefore directions would only be made if benefits were expected to exceed costs. Reflecting the assessment at this consultation stage in the Impact Assessment that we have not quantified costs we have also not scored any benefits.

***Consultees are invited to provide further evidence on the costs or benefits of the resilience direction.***

## **6. PROTECTING FUEL SUPPLY RESILIENCE: OWNERSHIP TEST;**

### **6.1 DESCRIPTION**

85. As described in Section 2 of the Consultation Document. To summarise, an ownership test is proposed to be used where thresholds of owner/operator financial soundness or operational competence are not met. It is expected that it would be used rarely, only in cases where a clear and present risk is demonstrated that threatens the continuity of UK fuel supply.

### **6.2 RATIONALE**

86. Government aims to protect the UK's most critical assets and services, whilst remaining open for business. Financial failure and owner/operator insolvency are challenges that face the Downstream Oil Sector. This measure seeks to protect against supply disruption arising from financial or operator competence risks arising from change of ownership or control without imposing any disproportionate burden on industry.
87. The risk of insolvency in the sector is significant. Government needs to have sight of insolvency and financial risk to operations, and therefore risks to supply. Knowledge of a material insolvency risk would allow BEIS to prepare contingency plans, and/or potentially intervene. Protections against, and pre-warning of insolvency issues could be

achieved through this “ownership test” and the “information and data reporting” measures respectively.

88. An example of the risk is illustrated by the sudden 2012 insolvency of Petroplus the owner of Coryton refinery on the Thames.
89. As previously identified there are a number of market failures in the sector that mean that consumers cannot effectively “insure” themselves against fuel supply disruptions and which limit the incentives on suppliers to invest to mitigate these supply risks. Within the supply chain fuel suppliers can invoke force majeure contract clauses in the event of major disruptions enabling them to “walk away” from their supply obligation. Limited liability and the limited residual economic value of some older assets in the sector limits incentives to mitigate disruption, for example in scenarios when the assets will have zero value. The impact of these market failures will therefore be greater if key assets are owned by poorly capitalised entities at greater risk of insolvency, or with opaque financial structures that make insolvency risk difficult to assess.
90. This measure would enable Government to intervene for the purposes of downstream oil resilience in the event that commercial activity (for example, change in ownership) is deemed to be against UK downstream resilience interests.

### **6.3 OPTIONS CONSIDERED**

91. Government has considered introducing a licensing regime such as exist in other similar sectors (for example, Upstream Oil and Gas) which allow for the financial soundness and level of operator competence to be assessed before any sector activity is carried out. Based on the risk posed and potential burden on industry, Government has no intention to regulate the downstream oil sector in this way.

#### **Option 1 – Status Quo**

#### **Option 2 – Most likely option**

A measure to enable Government to intervene for the protection of fuel supply, where operators or owners of critical downstream oil infrastructure do not satisfactory levels of financial soundness or operator competence.

#### **Impact**

92. The intention is that this measure would only be used in extremis, where there is a significant risk to UK fuel supply as a result of change of control or ownership. This measure would not have an immediate impact on normal downstream oil sector business activities. All business impact would be considered ahead of any interventions, and any Government intervention would need to be fair, reasonable and proportionate.

### **6.4 COSTS**

93. As the intention is that this measure would only be used in extremis, this measure would not have an immediate impact on normal downstream oil sector business activities. It has not been possible to quantify the costs of this measure.

**6.5 BENEFITS**

94. Reflecting the approach to assessing costs it has not been possible to quantify the benefits of this measure. However, reducing the risk of sudden closure of key downstream oil infrastructure resulting from financial risk should reduce the risk of oil supply disruption. There is also a potential benefit to the wider oil supply chain, as it should be easier to assess the financial risks of counterparties and other participants in the supply chain.

**6.6 RISKS AND ASSUMPTIONS****Risks:**

95. Potential risks from this measure include deterring investment and precipitating the closure of assets where the only potential buyers would have highly leveraged or opaque structures and are deterred by the ownership test. However, it is our intention that the other proposed measures would only be used where absolutely necessary for the protection of UK fuel supply, and where impacts to industry are proportionate to identified risks.

**Assumptions:**

96. It has been assumed that use of this ownership test is likely to be limited, as it will only be used in extremis, there is no immediate intention to use.

***Consultees are invited to provide evidence on the potential costs or benefits of the ownership test.***

## 7. PROTECTING FUEL SUPPLY RESILIENCE: GOVERNMENT SPENDING

**7.1 DESCRIPTION**

97. As described in Section 2 of the Consultation Document this measure would enable the Government to provide Financial Assistance to the Downstream Oil Sector for the Provision of Energy Resilience Measures. Where:

- Financial Assistance means loans, guarantees or indemnities, or any other kind of financial assistance (actual or contingent)
- Provisions include acquisition, design, construction, conversion, improvement, operation and repair.
- Energy Resilience Measures is any activity, project or provision carried out for the purposes of, or in connection with, preventing or minimising disruption to the energy sector in UK.

98. This measure has the potential to be used in combination with the resilience direction when implementing resilience improvements. Although this measure seeks to introduce a spending power specifically for the purposes of downstream oil resilience, its use would still be limited to applications which are fair, reasonable and proportionate.

99. The resilience improvement would therefore need to not be commercially viable without Government support. Government would also fully evaluate and avoid market distortion or competition impacts as part of any spend. For example, spend would not be used to

support the development of assets that could then be used by the asset owner to gain commercial advantage over competitors.

100. To provide some context, an example of a resilience improvement that might in principle be within scope would be investing in an extra jetty, or additional road rack capacity to provide spare capacity in the supply chain against the potential failure of existing infrastructure.

## **7.2 RATIONALE**

101. As with the resilience direction, the proposed spending power would provide Government with the tools to ensure appropriate measures are put in place by industry to protect UK fuel supplies. Given the market failures in the sector identified earlier in this Impact Assessment, industry is likely to under invest in resilience measures and mitigation, which is serious a concern given the scale of the potential impact to the economy of a disruption estimated above of over £1bn.
102. BEIS is currently unable to spend for the purposes of large scale or long term downstream oil resilience measures. Existing spending powers are limited in terms of their application to Downstream Oil Resilience, these are provided by (but not limited to) the:
- Infrastructure (Financial Assistance) Act 2012 - financial assistance to any person in connection with the provision of infrastructure. Examples of infrastructure include: water, electricity, gas, telecommunications, sewerage or other services.
  - The Appropriations Act – Enables spends where less than £1.5m per annum or will last for less than 2 years and no specific legislation is before Parliament and existing statutory limits are observed.
  - The Industrial Development Act 1982 – financial assistance to undertakings wholly or mainly located within regions designated as assisted areas for specific purposes such as creating and preserving jobs.

## **7.3 OPTIONS CONSIDERED**

### **Option 1 – Status Quo - Voluntary improvements**

BEIS continues to engage with the sector and encourage voluntary arrangements to improve resilience for downstream oil supply, however BEIS is unable to spend for the purposes of large scale or long term downstream oil resilience measures.

BEIS has engaged with the industry to understand their appetite for resilience improvements. However, following consultation with the owner/operators of assets, BEIS has to date had limited success in encouraging voluntary improvements to resilience. Findings so far suggest that there is limited commercial appetite to make these investments and therefore limited scope for resilience improvements to occur without the direction and/or support from UK Government.

### **Option 2 – Spending Power**

This would give BEIS has the power to spend. In order to limit impact to the sector, and future policy risk, the use of direction would be limited to fuel supply resilience and government intervention would need to be fair, reasonable and proportionate.

#### **7.4 COSTS**

103. There are considerable uncertainties around the cost to the government, if any, that will be incurred. Given that individual interventions and use of the Spending Power will be assessed on a case by case basis, costs will therefore also be case specific and it is difficult to see how an average impact could be reliably estimated.
104. There are however a number of factors that suggest that use of the spending power is likely to be limited. This will be a backstop power, with Government having no immediate intention to use it. It is BEIS' intention that use of the proposed spending power would need to be fair, reasonable and proportionate. A value for money case has to be established before any government spend, which acts to constrain the extent the power would be used.
105. Given these criteria, and with Government having no immediate intention for use, we have not therefore sought to quantify costs from this element of the proposals.

#### **7.5 BENEFITS**

106. Reflecting the uncertainties around the extent to which the spending power will be used and that individual interventions will be case specific in impact, we have also not quantified any benefits.

#### **7.6 RISKS AND ASSUMPTIONS**

107. It has been assumed that use of this spending power is likely to be limited, as it is a backstop power, there is no immediate intention to use it, and any government intervention would need to be fair, reasonable and proportionate. A risk of government spending is that it would cause market competition impacts. To mitigate this government would fully evaluate and avoid market distortion or competition impacts as part of any spend.

***Consultees are invited to provide further evidence on the costs or benefits of government spending.***

## 8. SUMMARY OF MONETISED AND NON-MONETISED COSTS

**Table 12 : Summary of monetised costs (£m) 2015 Prices, PV**

		<b><u>Option 1- Do nothing</u></b>	<b><u>Option 2- The most likely option</u></b>
<b>Monitor: Information and data reporting</b>	Costs (to industry)	ZERO	£0.2m
	Benefits (to society)	ZERO	Not estimated
<b>Insure: Obligation for an industry-led fuel supply and distribution resilience scheme</b>	Costs (to industry)	ZERO	£14.9m to £23.8m
	Benefits (to society)	ZERO	£132.4m to £615.8m
<b>Insure: Direction powers</b>	Costs (to industry)	ZERO	Not estimated
	Benefits (to society)	ZERO	Not estimated
<b>Protect: Ownership test</b>	Costs (to industry)	ZERO	Not estimated
	Benefits (to society)	ZERO	Not estimated
<b>Protect: Spending Powers</b>	Costs (to industry)	ZERO	Not estimated
	Benefits (to society)	ZERO	Not estimated
<b>TOTAL</b>	Costs (to industry)	ZERO	£15.1 to £24.0
	Benefits (to society)	ZERO	£132.4m to £615.8m
	<b>Net Benefit</b>	<b>ZERO</b>	<b>£105.3m to £591.8m</b>

**a. Non-Monetised Costs**

108. Some of the cost of information provision is non-monetised (but judged likely to be small). The costs that will be incurred through the creation of the industry body (which will organise the tanker fleet) are uncertain and these have not been monetised. Use and impact of some of the new powers government will have is too uncertain to be able to monetise impacts.

**b. Non- Monetised Benefits:**

109. Reflecting the approach to assessing costs, it has not been possible to quantify all the potential benefits of the new powers. For example, increased public confidence of national fuel supply resilience may reduce the risk of panic buying during an incident but this has not explicitly been monetised.

**9. RATIONALE AND EVIDENCE THAT JUSTIFY THE LEVEL OF ANALYSIS USED IN THE IMPACT ASSESSMENT (PROPORTIONALITY APPROACH);**

110. The costs and benefits of the different options have been assessed to the fullest extent possible at this stage. In all cases we welcome further evidence on the costs and benefits, and the assumptions used to derive these, which will assist in providing more robust estimates. The level of analysis provided for each product is outlined in the table below.

**Table 13: Level of Analysis**

	<u>Level of analysis</u>	<u>Rationale</u>
Monitor: Information and data reporting for the purposes of downstream oil resilience;	Costs and Benefits Partially Monetised.	The costs have been monetised, but not the benefits (though an illustrative benefit has been quantified).
Insure: Obligation for an industry-led fuel supply and distribution resilience scheme;	Costs and Benefits Partially Monetised	The benefits and costs have been monetised to the fullest extent possible at this stage.
Insure: Direction of powers to improve resilience and better maintain supply in event of disruptions;	Description of who will be affected by the proposal, and of the costs and benefits.	It is not possible at this stage for the Impact Assessment to monetised the costs and benefits because this is a backstop power with government having no immediate intention for use.
Protect: Ownership test for the purposes of downstream oil resilience;	Description of who will be affected by the proposal, and of the costs and benefits.	It is not possible at this stage for the Impact Assessment to monetise the costs and benefits because this is a backstop power with government having no immediate intention for use.
Protect: Spending Powers to the downstream oil sector for purpose of downstream resilience and	Description of who will be affected by the proposal, and of the costs and benefits.	It is not possible at this stage for the Impact Assessment to provide to monetise the costs and benefits because this is a backstop power with government having no immediate intention for use.



111. We are reliant on stakeholders for much of the quantitative (and qualitative) evidence that is needed to fully analyse costs and benefits of removing exemptions.

## 10. DIRECT COSTS AND BENEFITS TO BUSINESS CALCULATIONS (following BIT methodology)

### Businesses Impacted Directly

112. The businesses impacted directly by the information and data reporting proposal are outlined in Table 14 below.

113. For the industry led fuel supply and resilience scheme, the businesses affected by this measure would depend on the structure of the industry led body, which is to be determined by the consultation. In our two leading scenarios presented, the costs would either be borne by the major hauliers, or the major wholesalers.

### Direct costs

114. The costs of information and data reporting have been estimated based on the standard methodology used across government when calculating compliance costs. The calculated compliance costs combine estimates of the time taken to complete existing surveys with estimates of the opportunity cost of that time, which is based on the wage (excluding overtime) and non-wage cost of workers of different skills/functions.

115. The costs of the obligation for an industry-led fuel supply and distribution resilience scheme are based on the costs government is incurring in the current contract for an emergency tanker fleet.

### Direct benefits

116. The policy will not result in direct benefits to businesses.

### EANDCB position:

117. The total direct impacts for businesses are estimated using the Equivalent Annual Net Direct Costs to Business (EANDCB) calculation methodology. For this policy the EANDCB is calculated using the appraised direct costs and benefits over ten years. A breakdown of the EANDCB is provided in Box 1.

#### Box 1:

Equivalent Annual Net Direct Costs on business ( ) (£m)		
<b>Costs: 2.4</b>	<b>Benefits: 0</b>	<b>Net: -2.4</b>
Of which costs of Data and Information Reporting		
<0.1		
Of which costs of Industry led fuel supply and resilience scheme		
2.4		

### Contribution towards deregulatory targets.

118. The policy is a domestic regulatory provision and as such, the EANDCB will count towards the One-In-Three-Out target and the Business Impact Target (BIT), the two

deregulatory commitments of the government. The current estimate of the EANDCB results in a £12m contribution against the BIT.

## 11. WIDER IMPACTS

### 11.1 Small and Micro Business Assessment

In the most likely Option 2, exemptions mean that the direct impacts on small and micro business are limited and proportionate.

#### Monitor: Information and data reporting for the purposes of downstream oil resilience;

119. Small and micro businesses are expected to be largely exempted from the costs of the surveys due to the threshold of supply of 50,000 tonnes of product per year. Table 14 below shows the estimated number of small and micro businesses in the sector that would be included, based on the number of employees (FTE). It should be noted that the Companies Act 2006<sup>19</sup> define a SME for the purpose of accounting requirements according to turnover and balances sheet total, as well as the number of employees. Using turnover or balances sheet total as the threshold may mean that some of the small and micro businesses (particularly infrastructure operators) listed below would no longer fall into the category. However, it has not been possible to verify this at this stage.
120. The 50,000 tonnes of product per year threshold is preferable to a complete exemption for small and micro businesses, in order to achieve a large part of the intended benefits of the measure while ensuring proportionate burdens across businesses. The threshold captures the majority of fuel supplies in terms of volume, which is essential to monitor fuel resilience consistently across the country. Some small companies may deal with large volumes of throughput (e.g Infrastructure operators), Secondly, small and micro LPG and Commercial suppliers deliver to remote, off-grid locations, meaning that local and vulnerable populations are reliant on these companies for fuel supplies.
121. In terms of costs, 1% of the annual cost of data collection would be borne by micro businesses and 13% by small businesses. Over the appraisal period (2017 to 2026) the sum of the present value of these costs to small and micro businesses is £0.02m. (Without the 50,000 tonne threshold, 50% of the costs would be borne by small and micro businesses, which would sum to £0.05m over the appraisal period).
122. The number of small or micro forecourt operators is unknown, however the following exemption has also been applied: BEIS would not want returns from individual independent stations or small independent retailers with fewer than 10 forecourts unless they already have wet stock monitoring capability installed. As such, there are no additional costs modelled to these businesses in Option 2.

<sup>19</sup> Companies Act 2006, c. 46, Part 15, Chapter 1, Companies subject to the small companies regime, Section 382

Table 14

<i>Note – Figures rounded to the nearest 10</i>	<b>Estimated Number of micro businesses (up to 10 FTE)</b>	<b>Estimated Number of small businesses (up to 49 FTE)</b>	<b>Total Number of businesses to be surveyed</b>
<b>Supply Companies</b>			
Refiners	0	0	<10
Importers / Wholesalers	0	0	<20
LPG Suppliers	<10	<20	<30
Commercial Suppliers	<5	<10	<40
<b>Infrastructure Operators</b>			
Refineries	0	0	<10
Import Terminals	<5	<5	<40
Inland Terminals	0	0	<20
Pipeline Operators	0	<5	<10
Airports	0	0	<30
Port Authorities	0	<5	<20
Hauliers	0	<10	<20
Forecourt Operators	Unknown	Unknown	Unknown

123. The above information was taken from the FAME database<sup>20</sup> of UK and Irish financial company information and business intelligence provided by Bureau Van Dijk. Fame combines comprehensive and detailed company information of current and historical information on nearly nine million companies. There are a number of companies where information on the number of personnel employed was not available in the FAME database, for these companies an estimate has been provided.

**Insure: Obligation for an industry-led fuel supply and distribution resilience scheme;**

124. The number of small and micro businesses affected by this measure would depend on the structure of the industry led body and how it is funded, both of which are being consulted on.

125. It is suggested in the consultation document that contributions could be determined by some measure of the contributing organisation's market share (for example, the number of operating distribution vehicles or volumes qualifying for CSO), which would mitigate the impact on small and micro businesses, ensuring that it is proportionate. In the two leading suggestions presented, costs would either be borne by

<sup>20</sup> <http://www.bvdinfo.com/en-UK/our-products/company-information/national-products/fame>

wholesalers (of which none are none are small or micro, as shown in table 14) or hauliers (of which <10 are small, as shown in table 14).

**Consultees are invited to provide further evidence on the costs to small and micro businesses.**

**11.2 Distribution Impact**

126. The costs of ensuring resilience through the fuel supply and distribution resilience scheme will be paid by consumers of oil products rather than taxpayers in general. Thus those who stand to benefit most from reduced risks (i.e. those who consume most fuel) also potentially stand to benefit the most from reduced impacts of disruptions. However, the proposed option does shift some costs to those who are zero or very low taxpayers (and therefore currently pay few costs) but are consumers of oil.

127. The table below shows household expenditure on petrol, diesel, and other motor oils as a % of total household expenditure. It can be seen that low income households (first, second and third deciles) spend proportionally less on fuel than the national average. The same is true of the highest ten per cent of households. Therefore the burden on these income groups will be less.

**Table 15 Petrol, diesel and other motor oils as % of Total Household Expenditure**  
Source: ONS<sup>21</sup>

All Households	Lowest ten per cent	2 <sup>nd</sup> Decile Group	3 <sup>rd</sup> Decile Group	4 <sup>th</sup> Decile Group	5 <sup>th</sup> Decile Group	6 <sup>th</sup> Decile Group	7 <sup>th</sup> Decile Group	8 <sup>th</sup> Decile Group	9 <sup>th</sup> Decile Group	Highest ten per cent
4.33%	2.76%	2.98%	4.17%	4.48%	5.06%	4.79%	4.89%	4.80%	4.72%	3.52%

**Consultees are invited to provide further evidence on the distribution impact.**

**11.3 Competition Impact**

128. The proposed measures should not result in undue market competition impacts. In particular, a government requirement for the industry led scheme is that control and costs must be equitably distributed so they do not distort competition. For the spending power, government is live to, and would fully evaluate and avoid market distortion or competition impacts as part of any spend.

**Consultees are invited to provide further evidence on the competition impact.**

**12. SUMMARY AND MOST LIKELY OPTION WITH DESCRIPTION OF IMPLEMENTATION PLAN**

129. To deliver an optimal level of resilience and reduce the risk of disruption of economic activity from the loss of fuel supplies, including by provision of information to government; mandating industry investment in resilience measures such as an

<sup>21</sup> Family Spending 2015 (based on LCFS 2014), Appendix A, Table A6

emergency tanker fleet; and backstop spending, change of ownership and direction powers.

130. Following consultation, and assuming Royal assent in mid-2018 and time to implement secondary legislation and guidance we assume all measures will be implemented at the common commencement date April 2019. In practice the industry led resilience measure (tanker fleet) is unlikely to pass fully to industry until the current government tanker lease contract expires in December 2019. The policy will be reviewed 2 years later in in December 2021. The final stage Impact Assessment will set out more information on the implementation plan.