Impact Assessment "Measures resulting from the mid-term evaluation of the Oil Stocks Directive 2009/119"

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List of acronyms

BPFC	Base period final consumption
COE	Crude oil equivalent
CSE	Central Stockholding Entity
CSO	Compulsory Stockholding Obligation (the total volume of emergency oil stocks that Member States are obliged to hold)
DG	Directorate General
DG ENER	European Commission, Directorate General for Energy
EC	European Commission
EU	European Union
IA	Impact assessment
IEA	International Energy Agency
IEP	International Energy Programme
JRC	Joint Research Centre
MS	Member State (of the European Union)
MOS	Monthly joint Eurostat and IEA Oil and Gas Questionnaire / Monthly Oil Statistics
MOR	Minimum operating requirements
OCG	Oil Coordination Group (created by Article 17 of Directive 2009/119)
ToR	Terms of Reference

EXECUTIVE SUMMARY

This is the final report of the study Impact assessment of the main measures resulting from the mid-term evaluation of the Oil Stocks Directive 2009/119/EC. The impacts of various options of changing the following four measures were analysed:

1. Changing the methodology for calculating the crude oil equivalent (COE) of imports of petroleum products (naphtha yield rule) (Annex I);
2. Changing the 10% deduction applicable when calculating the level of emergency stocks held (Annex III);
3. Moving the date of start of the yearly stockholding obligation from 1st April to 1st July (as resulting from Article 3(3);
4. Clarifying the Directive's rules on holding cross-border stocks.

Which impacts have been assessed?

The most significant impacts concern economic impacts. No major environmental or social impacts from potentially adjusting the four above measures Directive have been identified. The main impacts considered are:

- the impact on the stockholding obligation per country and for the EU as a whole;
- the impact on the total costs of holding emergency stocks;
- the impact on the security of supply;
- the impact on compliance with IEA obligations (and benefits of IEA alignment in general);
- the impact on the administrative burden.

Definition of the problem, considered options and their impacts

Measure 1: Changing the naphtha yield rule

What is the problem?

Annex I of the Directive sets out the methodology for calculating the net imports of petroleum products, determining the volume of emergency stocks to be held by Member States. The methodology behind this stipulates that if the naphtha yield is smaller than 7%, countries deduct 4% naphtha yield from their net oil imports to calculate their annual obligation. If the yield is higher than 7%, either the average naphtha yield or the actual net consumption of naphtha can be deducted from the obligation. As a result, the outcome (the resulting obligation) can change considerably if the naphtha yield moves across the 7% threshold. Hence, the stockholding obligations can change from year to year for certain countries purely because of the need to apply a different methodology and not because of a significant change in the dynamics behind national oil demand and supply. This in turn leads to cost inefficiencies related to adjusting the level of emergency oil stocks in those countries. In the last six years, five Member States have crossed the 7% threshold (Belgium, Hungary, France, Czech Republic and Slovakia), while Germany's and Portugal's naphtha yields have been just above the 7% threshold. Survey respondents in these seven countries indicated that it is likely that the naphtha yield will be between 6% and 8% in one or more of the coming 5-10 years.

Which options have been assessed?

The options assessed for their impacts, if potentially adopted, include:

- Option 1 - Countries with a naphtha yield lower than 4% apply a 4% deduction; countries with a naphtha yield higher than 4% deduct the actual naphtha consumption or actual naphtha yield (whichever is smaller) from the net imports;
- Option 1b - This would imply removing the trigger from the calculation and basing the calculation of the Compulsory Stockholding Obligation (CSO) on the lowest value from two calculations:
    - Obligation = actual naphtha yield deducted from net imports, but if the actual naphtha yield is <4%, the average naphtha yield of 4% is deducted;
    - Obligation = net imports – actual naphtha consumption;
- Option 2 - Actual naphtha yield deducted from the COE of net imports;
- Option 3 - Actual naphtha consumption deducted from the COE of net imports;
- Option 4 - Actual naphtha yield or consumption would be deducted (whichever is smaller);
- Option 5 - No naphtha yield correction;
- Option 6 – The share of naphtha used for energy purposes will be included in the calculation of the CSO (Annex I) and stocks of naphtha used for energy purposes will be included as eligible to meet the CSO (annex III).

What are the impacts?

Table 0-1 summarises the expected impacts per option.

Table 0-1 Impacts of changing the naphtha yield rule at EU level

Option	Baseline	1/1b	2	3	4	5	6
CSO level	100%	99.2%	104%	100.2%	99.7%	110.1%	NA
Additional cost (M EUR)	Baseline	-17 to -24 (Savings)	84 to 120	4 to 5	-7 to -9 (Savings)	214 to 305	NA
CSO volatility	100%	84%	74%	87%	85%	95%	NA
Security of supply	Baseline	No impact	+	No impact	No impact	+	NA
Compliance /Alignment with IEA	Yes	Commercial stocks to cover CSO decrease	Misaligned	Misaligned	Commercial stocks to cover CSO decrease	Misaligned	Misaligned
Administrative burden	Baseline	Minor one-off costs	Minor one-off costs	Minor one-off costs	Minor one-off costs	+ (Simplified reporting)	- Complex additional reporting

Note: Green shaded cells indicate option with 'best' impact per indicator, red shaded cells indicate option with 'worst' impact per indicator (vis-à-vis the other options).

When comparing the different obligation levels per country, option 1 and 1B lead to the same or lower obligations than the baseline, while option 5 leads to a significantly increased obligation for all Member States. The impact on costs of holding emergency stocks is proportional to these changes in obligations (cost increase for option 5 and decrease for all other options). When quantifying the impact on the volatility of the stockholding obligation[1], none of the options consistently outperforms all other options at individual Member State level. At EU level, though, option 2 leads to the least average volatility. Impacts on security of supply, administrative burden, compliance with IEA obligations and alignment with the IEA methodology were assessed qualitatively.

We conclude that the preferred options are options 1 and 1B, which lead to lower CSOs and reduced volatility, while having no impact on the security of supply when compared

[1] Volatility is quantified as the accumulated absolute annual variation from 2014 to 2017, adjusted for the CSO level and indexed. This allows us to observe the variation without the CSO level effect.

to the baseline. While the quantitative assessment of options 1 and 1B are the same, it is important to highlight that option 1B removes the threshold and provides equal treatment to all MSs; while option 1 has two different approaches and moves the threshold from 7% to 4%. We do not recommend options 2, 5 and 6. Option 1B is therefore more robust than option 1. Option 1(B) leads to the lowest overall stockholding obligation and to the one but last lowest level of expected volatility in the stockholding obligation at EU level. Options 3 and 4 produce comparable, but slightly worse, results as option 1(B): instead of an annual cost saving in the range of €17-24 million, there is a cost saving of €7-9 million (option 4) or a cost increase of €4-5 million (option 3).

Options 2 and 5 result in considerably higher annual stockholding costs (€84-120 million for option 2 and €214-305 million for option 5), which is far from sufficiently compensated by the benefits of higher security of supply (both options, as the obligation rises above the current obligation, which we assume is the 'optimal' level) and low volatility (option 2). Option 6 proved not realistic because of the unavailability of data and complex additional reporting.

Measure 2: Changing the 10% deduction rule

What is the problem?

Not all of the oil stocks (emergency stocks plus commercial stocks) held in a country are fully available. Stocks may be unavailable because it is technically impossible to recover all stored oil (products) from a storage facility (i.e. tank bottoms) or stocks may be needed by economic operators for an uninterrupted production or supply process (working stocks). In the IEA system, all stocks can be counted for meeting the obligation. Therefore, to calculate the amount of eligible oil stocks present in a country for the purpose of meeting the 90 (or 61) day obligation in the IEA system, all available stocks are added, after which 10% is deducted to arrive at the volume of stocks that are 'available' in an emergency situation. According to the EU Oil Stocks Directive, however, commercial stocks may not be counted for meeting the obligation and emergency stocks should specifically be identified. All of these emergency stocks should be accessible and available at all times. Yet at the same time, the Directive also applies the 10% deduction for unavailable stocks (as in the IEA system). The justification for the 10% deduction is hence much weaker in the EU system than in the IEA system.

The problem that emerges is that the emergency stocks might be higher than strictly needed, which leads to higher total costs of holding these emergency stocks. The actual level of unavailability also depends on the type of emergency stocks and the type of contract: stocks owned by Central Stockholding Entities (CSEs) or national authorities in dedicated storage facilities do not include working stocks, but emergency stocks owned by economic operators could potentially also cover their 'working stocks'. These stocks may be technically fully available, but need to be built up after an emergency stock release as quickly as possible to ensure uninterrupted operations of economic operators mitigating or even nullifying the macro level effect of the emergency stock release.

Which options have been assessed?

The options assessed for their impacts, if potentially adopted, include:

- Option 1 - The 10% deduction rule would not be applicable for emergency stocks owned by CSEs, because there would be no doubt about the availability of these emergency stocks;
- Option 2 - The 10% deduction rule would not be applicable for those Member States that commit to make sure that, in addition to the emergency stocks, at least 10 days of commercial stocks (or 6.8 for Member States under 61-day-obligation) will be held;
- Option 3 - The 10% would be replaced by a 5% reduction (or any other percentage figure that can be justified based on existing literature or practices);
- Option 4 - No deduction percentage would be introduced (the last two paragraphs of Annex III would be deleted).

What are the impacts?

Table 0-2 summarises the expected impacts per option.

Table 0-2 Impacts of changing the 10% deduction rule

Option	1	2	3	4
CSO level (mt, base year 2016)	-6.7	-11.9	-6.9	-12.1
Cost savings per year (m €)	160-187	Max [209-298] (3 out of 10 MSs: no savings)	121-174	211-302
Security of supply	Slightly negative [cost savings more than outweigh this]	Slightly negative	Negative [exact impact unclear]	More negative than under option 3
IEA compliance	No, but in practice yes for almost all MSs	Yes	No, but in practice yes for almost all MSs	No, but in practice yes for almost all MSs
Administrative burden / equal treatment of MS	Only minor one-off costs	Only minor one-off costs; no equal treatment	Only minor one-off costs	Only minor one-off costs

Note: Green shaded cells indicate option with 'best' impact per indicator, red shaded cells indicate option with 'worst' impact per indicator (vis-à-vis the other options).

Option 1 is our preferred option: CSE-owned stocks are held on top of what is already available in the market and are therefore not only the most expensive type of emergency stocks, but also the most robust type of emergency stocks. Implementing option 1 could also act as a stimulus to increase the level of CSE-owned stocks in the EU over time. The option would result in annual cost savings of ca. €160-187 million, whereas the impact on the security of supply would only be slightly negative (note that CSE-owned stocks by definition do not include working stocks) and the cost savings would more than outweigh this negative effect.

The analysis of option 2 showed a large uncertainty as to how the option would be implemented in Member States. If the 10 days commercial stocks obligation would be added to the obligation, the situation would not alter as compared to the current baseline situation and no cost savings would be generated. This would be the case for 3 out of 10 Member States that provided information on this option. For the other 18 Member States, the impact is uncertain as the information provided was inconclusive or no answer to the survey question was provided.

In option 3, 10% is replaced by a lower reduction based on existing literature and practices. Using 4% deduction as an alternative figure,[2] the cost savings would be somewhat lower than in option 1 (€121-174m per year), but as working stocks are not accounted for, there is a negative, though uncertain impact on the security of supply from industry emergency stocks and tickets issued by industry. Regarding the latter, the cost reductions do not outweigh this negative impact on security of supply. Consequently, we do not recommend option 3.

In option 4 no deduction percentage would be introduced. This option would generate the highest cost savings (€211-302 million per year), but also the highest negative impact on the security of supply.

[2] There are no studies that arrive at a precise estimate for the percentage of technically unavailable stocks. The available information (studies, survey responses, interview responses, practical experience of countries that recently refreshed oil or oil products in storage facilities), point to 3-4% of the stocks being technically unavailable. Within this range we have opted for 4% technically unavailable stocks to analyse option 3.

Impact of combination of options for measures 1 and 2 at EU level

We have analysed the main impacts of combining all the options of measure 1 (changing the naphtha rule) with three options of measure 2, namely option 1 (no 10% deduction for CSE-owned stock), option 3 (4% rather than 10% deduction) and option 4 (no 10% deduction at all). Whereas the absolute impacts obviously differ from the impacts of the options considered on their own, the impacts relative to each other largely (and in many cases fully) remain the same. Hence, the results of the joint impact assessment do not alter our conclusion and underlying arguments on the preferred option per measure discussed above.

EU CSO level (%)	Baseline	M1 /Option 1/1b	M1 /Option 2	M1 /Option 3	M1 /Option 4	M1 /Option 5
M2 / Option 4	100%	89%	94%	90%	90%	99%
M2 / Option 3	100%	93%	97%	94%	93%	103%
M2 / Option 1	100%	94%	98%	95%	94%	105%
EU volatility level (%)	Baseline	M1 /Option 1/1b	M1 /Option 2	M1 /Option 3	M1 /Option 4	M1 /Option 5
M2 / Option 4	100%	84%	74%	87%	85%	95%
M2 / Option 3	100%	84%	74%	87%	85%	95%
M2 / Option 1	100%	87%	78%	90%	88%	100%

Measure 3: Moving the start date of the yearly stockholding obligation

What is the problem?

The problem is related to the current start date of the yearly CSO (April 1st) and the fact that the period between calculating and communicating the new (annual) obligation and when this obligation should be complied with, is very short. This short period does not allow for efficient buying decisions in years when the obligation goes up. Since 2013 the obligation went up in 55% of the cases. This inability to increase the stockholding quickly enough also implies a risk of non-compliance in April in some Member States. The problem does not exist in years when the obligation goes down in comparison to the obligation for the previous year (45% of the cases since 2013).

From the survey, it appears that 80% of the CSEs consider the start date of April 1st to be a problem, whereas 78% of the industry respondents replied that there is not a problem. The problem is connected to the Directive in the sense that the Directive stipulates that the obligation should be met by April 1st. However, the problem is also partially caused by some national procedures for calculating, communicating (and in some cases purchasing) the oil to fulfil the increased obligation.

Which options have been assessed?

The options assessed for their impacts, if potentially adopted, include:

- **Option 1** - Change the start date to July 1st [3 extra months]
- **Option 2** - Change the start date to May 1st [1 extra month]

What are the impacts?

Table 0-3 summarises the expected impacts per option.

Table 0-3 Impacts of moving the start date of the yearly obligation

Option		Baseline	1	2
For years CSO increases	Risk of higher cost oil purchase	A 1% premium implies an extra €4.25m per year	No risk of this	No risk of this
	Security of supply	An average 1% shortfall for 0.5 months	An average 1% shortfall for 3.5 months	An average 1% shortfall for 1.5 months
For years CSO decreases	Cost of holding excess stock [m€/year]	Lowest cost	€18.7m to €26.7m	€6.2m to €8.9m
	Security of supply	An average 5% surplus for 0.5 months	An average 5% surplus for 3 months	An average 5% surplus for 1 months
IEA compliance		Baseline	No	Yes
Administrative burden		High	Lower	Lower

Note: Green shaded cells indicate option with 'best' impact per indicator, red shaded cells indicate option with 'worst' impact per indicator (vis-à-vis the other options).

For the baseline option, if it is assumed that having to make the oil purchases quickly imposes a 1% premium on the oil cost for the 70% of oil stocks that are held by CSEs, this would have cost more than €4 million per year on average over the last 4 years. The baseline option also has a high administrative burden because some Member States risk not complying on time. On the positive side the baseline option implies the quickest adjustment of stock, so the security of supply increases most quickly during increase years, and there are no costs of holding 'excess' stocks in years when the obligation decreases. The July option would impose large additional stockholding costs in decrease years. These costs are lower for the May option. There are theoretical benefits of increased security of supply through holding these excess stocks for longer, but if it is assumed that the legal obligation is sufficient this should be discounted. The May option has the additional benefit of improving alignment with the IEA. Based on this analysis and an assumption that the administrative burden and risk of non-compliance (in addition to the risk of paying a premium for rushed purchase) of the baseline option outweighs the increased holding costs for the May option, the May option appears the most attractive.

Measure 4: Clarifying the Directive's rules on holding cross-border stocks

What is the problem?

According to the Directive, holding stocks in other Member States (cross-border stocks) is allowed, provided that prior authorisation is provided by both Member States. This should lead to a level playing field for the obligated parties across Member States and increased cost-effectiveness for meeting the obligation to hold emergency stocks. At the same time, however, according to Article [5] of the Directive, Member States may impose limits and conditions on the extent to which their obligated parties are allowed to use cross-border stocks. The problem is that there are large differences across Member States in the limits imposed on the share of cross-border stocks allowed, the stringency of the authorisation procedures and other restrictions imposed. Therefore, the ease with which obligated parties can access the cross-border stock market (tickets and storage) differs substantially per Member State. As a result, in some countries where restrictions are high, obligated parties are less able to minimise the cost of their stockholding obligation than in countries where restrictions are low. This results in an overall (cost) inefficiency for meeting the goals of the Directive.

The objective of the possible intervention in this area is therefore to further remove impediments to cross-border stockholding without eroding the overall level of the accessibility and availability of emergency stocks (i.e. the security of supply).

Which options have been assessed?

The options assessed for their impacts, if potentially adopted, include:

- **Option 1 includes Option 2 as well as:**
  - Harmonising the share of stocks allowed cross-border;
  - Common rules on responsibility for auditing and inspection of cross-border stocks;
  - Common rules on tickets;
  - Common rules on the physical availability and accessibility of emergency stocks.
- **Option 2**
  - Harmonise the deadlines in the authorisation process
  - Provide automatic acceptance of the cross-border deal after passing of the deadline;
  - Harmonisation of the type of information to be provided (see Chapter 4).
- **Option 3**
  - Setting up a continuously updated EU register of transactions related to cross-border stocks, including information on ongoing authorisation requests and decisions.

What are the impacts?

Table 0-4 summarises the expected impacts per option.

Table 0-4 Impacts of policy options regarding cross-border stocks

Option	Impact of policy options compared to baseline				
	Share of cross-border stocks	Reduction in total costs to meet the obligation	Transparency of stocks	Security of supply	Administrative burden
Option 1	**+**	**+**	**+**	**- - to -**	**++**
Option 2	**0/ +**	**0 / +**	**0**	**-**	**+**
Option 3	**0**	**0**	**+**	**0 / +**	**-**

++ Significantly positive / **+** Positive / **0** No significant impact/ - Negative /**--** Significantly negative

For option 1, the volume of cross-border stocks could increase in the range of 8 million tonnes if all obligated parties in the EU could hold a minimum of 30% stocks cross-border and up to 10 million tonnes if the minimum would be 50%. Using an average price differential between domestic and the cheapest international alternatives (tickets, storage options) of €10 per tonne as a crude estimate, we arrive at an indicative potential cost reduction of option 1 in the range of maximum €80-100 million per year, of which potentially 50% would be realistic to realise (€40-50 million per year at EU level). In the latter case, the percentage of stocks held cross-border would need to increase from ca. 12% to ca. 16%. By harmonising restriction levels, other rules on cross-border stocks and the underlying authorisation procedure, option 1 creates the most significant impacts in terms of the increase in the share of cross-border stocks and potential economic savings.

By only harmonising the underlying authorisation procedure, option 2 is likely to realise a much smaller portion of the impacts, but these impacts would be positive as anyhow some more cross-border stocks would be expected from a more streamlined authorisation process. Moreover, most Member States favour this option as they would maintain their authority over the set limits of allowed cross-border stocks. Still, both options are expected to have a negative impact on the security of supply as the increase in the share of cross-border stocks is expected to be mainly composed of tickets. As tickets are sold on excess stocks held by industry, there is a risk that in times of a crisis

tickets cannot be renewed as the supply of those excess stocks has gone down dramatically (when supply is disrupted, the amount of industry stocks available for tickets will be much lower). Since option 1 leads to a larger share of cross-border stocks in the EU (compared to option 2), the negative impact on the security of supply is also larger for this option. At the same time, however, the negative effect on the security of supply can be largely offset in option 1 by harmonising and aligning the rules on physical accessibility and availability of cross-border stocks, common auditing and inspection rules and common product definitions. Option 2 would not directly create this positive impact on the security of supply.

Option 3 would not directly contribute to meeting the objective of reducing impediments to cross-border stockholdings, but would have a positive impact on the transparency of cross-border stocks as information about ongoing transactions concerning cross-border stocks, including authorisation requests and other procedural aspects, would be shared more frequently and become better accessible for authorities and obligated parties. Statistical discrepancies could be resolved more quickly and information on the location and type of stocks would improve, creating a positive impact on the ability to secure supply during a crisis. Due to the increased demand for data, though, the administrative burden for the national authorities would increase.

The combination of options 1 and 3 potentially achieves the best effects by simultaneously removing barriers to cross-border stockholding as well as increasing transparency and quality of cross-border stocks. However, the overall potential to realise a net positive impact from this combination of options requires a careful definition of rules regarding the length and definition of tickets, allowed product categories and auditing and inspection.

RÉSUMÉ

Ceci est le rapport final de l'étude Évaluation d'impact des principales mesures résultant de l'évaluation à mi-parcours de la directive sur les stocks de pétrole 2009/119 / CE. Les impacts des diverses options de changement des quatre mesures suivantes ont été analysés :

1. Modification de la méthode de calcul de l'équivalent pétrole brut (crude oil equivalent-COE) des importations de produits pétroliers (règle de rendement en naphta) (annexe I) ;
2. Modification de la déduction de 10% applicable lors du calcul du niveau des stocks de sécurité détenus (annexe III) ;
3. Déplacement de la date de début de l'obligation annuelle de stockage du 1er avril au 1er juillet (résultant de l'article 3, paragraphe 3) ;
4. Clarification des règles de la directive concernant la détention de stocks transfrontaliers.

Quels impacts ont été évalués ?

Les impacts les plus significatifs concernent les impacts économiques. Aucun impact environnemental ou social majeur de l'ajustement éventuel de la Directive sur les quatre mesures ci-dessus n'a été identifié. Les principaux impacts considérés sont :

- L'impact sur l'obligation de stockage par pays et pour l'UE dans son ensemble ;
- L'impact sur les coûts totaux de détention des stocks d'urgence ;
- L'impact sur la sécurité de l'approvisionnement ;
- L'impact sur le respect des obligations de l'AIE (et les avantages de l'alignement de l'AIE en général) ;
- L'impact sur le fardeau administratif.

Définition du problème, options envisagées et leurs impacts

Mesure 1 : Modification de la règle de rendement du naphta

Quel est le problème ?

L'annexe I de la directive définit la méthode de calcul des importations nettes de produits pétroliers, en déterminant le volume des stocks de sécurité à détenir par les États membres. La méthodologie sous-jacente stipule que si le rendement du naphta est inférieur à 7%, les pays déduisent 4% du rendement en naphta de leurs importations nettes de pétrole pour calculer leur obligation annuelle. Si le rendement est supérieur à 7%, le rendement moyen en naphta ou la consommation nette réelle de naphta peut être déduit de l'obligation. En conséquence, le résultat (l'obligation qui en résulte) peut changer considérablement si le rendement du naphta passe au-delà du seuil de 7%. Par conséquent, les obligations de stockage peuvent changer d'année en année pour certains pays uniquement en raison de la nécessité d'appliquer une méthodologie différente et non en raison d'un changement significatif de la dynamique derrière la demande et l'offre nationales de pétrole. Cela conduit à son tour à des inefficacités de coût liées à l'ajustement du niveau des stocks pétroliers d'urgence dans ces pays. Au cours des six dernières années, cinq États membres ont franchi le seuil de 7% (Belgique, Hongrie, France, République tchèque et Slovaquie), tandis que les rendements en naphte de l'Allemagne et du Portugal se situent juste au-dessus du seuil de 7%. Les personnes interrogées dans le cadre de l'enquête dans ces sept pays ont indiqué qu'il est probable que le rendement en naphta se situera entre 6% et 8% dans une ou plusieurs des 5 à 10 prochaines années.

Quelles options ont été évaluées ?

Les options évaluées pour leurs impacts, si elles sont potentiellement adoptées, comprennent :

- Option 1 - Les pays dont le rendement en naphta est inférieur à 4% appliquent une déduction de 4% ; les pays dont le rendement en naphta est supérieur à 4% déduisent la consommation réelle de naphta ou le rendement réel en naphta (le moindre des deux) des importations nettes ;
- Option 1b - Cela impliquerait de supprimer le déclencheur du calcul et de baser le calcul de l'obligation de stockage obligatoire (CSO) sur la valeur la plus basse à partir de deux calculs :
    - Obligation = rendement réel en naphta déduit des importations nettes, mais si le rendement réel en naphta est <4%, le rendement moyen en naphta de 4% est déduit ;
    - Obligation = importations nettes - consommation réelle de naphta ;
- Option 2 - Rendement réel en naphta déduit du COE des importations nettes ;
- Option 3 - Consommation réelle de naphta déduite du coût de production des importations nettes ;
- Option 4 - Le rendement ou la consommation réelle de naphta serait déduit (le moindre des deux) ;
- Option 5 - Aucune correction du rendement en naphta ;
- Option 6 - La part de naphta utilisée à des fins énergétiques sera incluse dans le calcul de l'OSC (annexe I) et les stocks de naphta utilisés à des fins énergétiques seront inclus comme éligibles pour satisfaire l'OSC (annexe III).

Quels sont les impacts ?

Le tableau 0-1 résume les impacts attendus par option.

Tableau 0-1 Impacts de la modification de la règle de rendement en naphta au niveau de l'UE

Option	Ligne des bases	1/1b	2	3	4	5	6
Niveau CSO	100%	99.2%	104%	100.2%	99.7%	110.1%	NA
Coût supplémentaire (M EUR)	Ligne de référence	-17 to -24 (épargnes)	84 to 120	4 to 5	-7 to -9 (épargnes)	214 to 305	NA
Volatilité des OSC	100%	84%	74%	87%	85%	95%	NA
Sécurité d'approvisionnement	Ligne de référence	Aucun impact	+	Aucun impact	Aucun impact	+	NA
Conformité / Alignement avec IEA	Oui	Les stocks commerciaux pour couvrir la diminution des OSC	Mal aligné	Mal aligné	Les stocks commerciaux pour couvrir la diminution des OSC	Mal aligné	Mal aligné
Fardeau administratif	Ligne de référence	Coûts ponctuels mineurs	Coûts ponctuels mineurs	Coûts ponctuels mineurs	Coûts ponctuels mineurs	+ (Rapport simplifié)	- Rapports supplémentaires complexes

Remarque : Les cellules ombrées vertes indiquent l'option ayant le « meilleur » impact par indicateur, les cellules ombrées en rouge indiquent l'option ayant le « pire » impact par indicateur (par rapport aux autres options).

En comparant les différents niveaux d'obligation par pays, les options 1 et 1B conduisent à des obligations identiques ou inférieures à la référence, tandis que l'option 5 conduit à une augmentation significative de l'obligation pour tous les États membres. L'impact sur les coûts de détention des stocks de sécurité est proportionnel à ces changements d'obligations (augmentation des coûts pour l'option 5 et diminution pour toutes les

autres options)[3]. Lors de la quantification de l'impact sur la volatilité de l'obligation de stockage, aucune des options ne surpasse systématiquement toutes les autres options au niveau de chaque État membre. Au niveau de l'UE, cependant, l'option 2 conduit à la volatilité la moins moyenne. Les impacts sur la sécurité d'approvisionnement, la charge administrative, le respect des obligations de l'AIE et l'alignement sur la méthodologie de l'AIE ont été évalués de manière qualitative.

Nous concluons que les options privilégiées sont les options 1 et 1B, qui mènent à la baisse des OSC et à la réduction de la volatilité, tout en n'ayant aucun impact sur la sécurité de l'approvisionnement par rapport à la situation de référence. Si l'évaluation quantitative des options 1 et 1B est la même, il est important de souligner que l'option 1B supprime le seuil et accorde un traitement égal à tous les États membres ; tandis que l'option 1 a deux approches différentes et déplace le seuil de 7% à 4%. Nous ne recommandons pas les options 2, 5 et 6. L'option 1B est donc plus solide que l'option 1. L'option 1 (B) conduit à l'obligation de stockage la plus faible et au dernier niveau de volatilité attendu au niveau de l'UE. Les options 3 et 4 produisent des résultats comparables, mais légèrement plus mauvais, que l'option 1 (B): au lieu d'une réduction annuelle des coûts de l'ordre de 17 à 24 millions d'euros, il y a une économie de 7 à 9 millions d'euros (option 4) ou une augmentation des coûts de 4 à 5 millions d'euros (option 3).

Les options 2 et 5 se traduisent par des coûts annuels de stockage considérablement plus élevés (84-120 millions d'euros pour l'option 2 et 214-305 millions d'euros pour l'option 5), ce qui est loin d'être compensé par les avantages d'une sécurité d'approvisionnement accrue (les deux options, car l'obligation dépasse l'obligation actuelle, ce que nous supposons être le niveau "optimal") et la faible volatilité (option 2). L'option 6 est surestimée en raison de l'indisponibilité des données et des rapports supplémentaires complexes.

Mesure 2 : Modification de la règle de déduction de 10%

Quel est le problème ?

Tous les stocks de pétrole (stocks d'urgence et stocks commerciaux) détenus dans un pays ne sont pas entièrement disponibles. Les stocks peuvent être indisponibles car il est techniquement impossible de récupérer tout le pétrole stocké (produits) d'une installation de stockage (fonds de cuve) ou des stocks peuvent être nécessaires aux opérateurs économiques pour un processus de production ou d'approvisionnement ininterrompu (stocks de travail). Dans le système de l'AIE, tous les stocks peuvent être comptabilisés pour respecter l'obligation. Par conséquent, pour calculer le montant des stocks pétroliers éligibles présents dans un pays afin de respecter l'obligation de 90 (ou 61) jours dans le système de l'AIE, tous les stocks disponibles sont ajoutés, après quoi 10% est déduit pour atteindre le volume des stocks « disponibles » dans une situation d'urgence. Selon la directive de l'UE sur les stocks de pétrole, toutefois, les stocks commerciaux ne peuvent pas être comptabilisés pour satisfaire à l'obligation et les stocks d'urgence devraient être spécifiquement identifiés. Tous ces stocks d'urgence devraient être accessibles et disponibles en tout temps. Pourtant, dans le même temps, la directive applique également la déduction de 10% pour les stocks indisponibles (comme dans le système de l'AIE). La justification de la déduction de 10% est donc beaucoup plus faible dans le système de l'UE que dans le système de l'AIE.

[3] La volatilité est quantifiée en tant que variation annuelle absolue accumulée de 2014 à 2017, ajustée au niveau des OSC et indexée. Cela nous permet d'observer la variation sans l'effet de niveau CSO.

Le problème qui se pose est que les stocks d'urgence peuvent être plus élevés que ce qui est strictement nécessaire, ce qui entraîne des coûts totaux plus élevés pour détenir ces stocks d'urgence. Le niveau réel d'indisponibilité dépend également du type de stocks d'urgence et du type de contrat : les stocks détenus par les entités centrales de stockage ou les autorités nationales dans les installations de stockage dédiées n'incluent pas les stocks opérationnels, mais les stocks d'urgence couvrent également leurs «stocks de travail». Ces stocks peuvent être techniquement entièrement disponibles, mais doivent être reconstitués après une libération d'urgence des stocks aussi rapidement que possible pour assurer des opérations ininterrompues des opérateurs économiques atténuant, voire annulant, l'effet de niveau macro de la libération des stocks d'urgence.

Quelles options ont été évaluées ?

Les options évaluées pour leurs impacts, si elles sont potentiellement adoptées, comprennent:

- Option 1 - La règle de déduction de 10% ne serait pas applicable aux stocks d'urgence appartenant aux exploitants de centres de sauvegarde, car il n'y aurait aucun doute quant à la disponibilité de ces stocks de sécurité ;
- Option 2 - La règle de déduction de 10% ne serait pas applicable aux États membres qui s'engagent à garantir que, outre les stocks de sécurité, au moins 10 jours de stocks commerciaux (ou 6,8 pour les États membres sous obligation de 61 jours) aura lieu ;
- Option 3 - Les 10% seraient remplacés par une réduction de 5% (ou tout autre pourcentage pouvant être justifié sur la base de la littérature ou des pratiques existantes);
- Option 4 - Aucun pourcentage de déduction ne serait introduit (les deux derniers paragraphes de l'annexe III seraient supprimés).

Quels sont les impacts ?

Le tableau 0-2 résume les impacts attendus par option.

Tableau 0-2 Impacts de la modification de la règle de déduction de 10%

Option	1	2	3	4
Niveau CSO (mt, année de base 2016)	-6.7	-11.9	-6.9	-12.1
Économies de coûts par an (m €)	160-187	Max [209-298] (3 États Membres sur 10: pas d'économies)	121-174	211-302
Sécurité d'approvisionnement	Légèrement négatif [Économies de coûts plus que l'emportent sur cela]	Légèrement négatif	Négatif [L'impact exact n'est pas clair]	Plus négatif que dans l'option 3
Conformité AIE	Non, mais en pratique oui pour presque tous les États Membres	Oui	Non, mais en pratique oui pour presque tous les États membres	Non, mais en pratique oui pour presque tous les États membres
Charge administrative / égalité de traitement des Etats Members	Seulement des coûts ponctuels mineurs	Seulement des coûts ponctuels mineurs ; pas de traitement égal	Seulement des coûts ponctuels mineurs	Seulement des coûts ponctuels mineurs

Remarque : Les cellules ombrées vertes indiquent l'option ayant le « meilleur » impact par indicateur, les cellules ombrées en rouge indiquent l'option ayant le «pire» impact par indicateur (par rapport aux autres options).

L'option 1 nous semble la meilleure option : les stocks détenus par le CSE sont tenus au-dessus de ce qui est déjà disponible sur le marché et sont donc non seulement les types de stocks d'urgence les plus chers, mais aussi les types de stocks d'urgence les plus robustes. La mise en œuvre de l'option 1 pourrait également servir de stimulant pour

augmenter le niveau des stocks détenus par le CST dans l'UE au fil du temps. L'option entraînerait des économies de coûts annuelles de 160-187 millions d'euros, alors que l'impact sur la sécurité d'approvisionnement ne serait que légèrement négatif (notons que les stocks détenus par le CSE n'incluent pas les stocks fonctionnels) et que les économies de coûts dépasseraient largement cet effet négatif.

L'analyse de l'option 2 a révélé une grande incertitude quant à la manière dont l'option serait mise en œuvre dans les États membres. Si l'obligation de stocks commerciaux de 10 jours s'ajoutait à l'obligation, la situation ne changerait pas par rapport à la situation de référence actuelle et aucune économie de coûts ne serait générée. Ce serait le cas pour 3 États membres sur 10 ayant fourni des informations sur cette option. Pour les 18 autres États membres, l'impact est incertain car les informations fournies ne sont pas concluantes ou aucune réponse à la question de l'enquête n'a été fournie.

Dans l'option 3, 10% est remplacé par une réduction plus faible basée sur la littérature et les pratiques existantes. En utilisant une déduction de 4% comme alternative[4], les économies de coûts seraient légèrement inférieures à celles de l'option 1 (121-174 millions d'euros par an), mais comme les stocks ne sont pas comptabilisés, il y a un impact négatif, mais incertain approvisionnement à partir des stocks d'urgence de l'industrie et des billets émis par l'industrie. En ce qui concerne ces derniers, les réductions de coûts ne l'emportent pas sur cet impact négatif sur la sécurité d'approvisionnement. Par conséquent, nous ne recommandons pas l'option 3.

Dans l'option 4, aucun pourcentage de déduction ne serait introduit. Cette option générerait les économies de coûts les plus élevées (211-302 millions d'euros par an), mais aussi l'impact négatif le plus important sur la sécurité de l'approvisionnement.

Impact de la combinaison d'options pour les mesures 1 et 2 au niveau de l'UE

Nous avons analysé les principaux impacts de la combinaison de toutes les options de la mesure 1 (changement de la règle naphta) avec trois options de la mesure 2, à savoir l'option 1 (déduction de 10% pour les actions détenues par le CSE), option 3 (4% plutôt que 10 % déduction) et option 4 (pas de déduction de 10% du tout). Alors que les impacts absolus diffèrent évidemment des impacts des options considérées isolément, les impacts les uns par rapport aux autres restent en grande partie (et dans bien des cas entièrement) les mêmes. Par conséquent, les résultats de l'analyse d'impact conjointe ne modifient pas notre conclusion et les arguments sous-jacents sur l'option privilégiée par mesure examinée ci-dessus.

Niveau UE CSO (%)	Ligne de référence	M1 /Option 1/1b	M1 /Option 2	M1 /Option 3	M1 /Option 4	M1 /Option 5
M2 / Option 4	100%	89%	94%	90%	90%	99%
M2 / Option 3	100%	93%	97%	94%	93%	103%
M2 / Option 1	100%	94%	98%	95%	94%	105%

Niveau de volatilité de l'UE (%)	Ligne de référence	M1 /Option 1/1b	M1 /Option 2	M1 /Option 3	M1 /Option 4	M1 /Option 5
M2 / Option 4	100%	84%	74%	87%	85%	95%

[4] Aucune étude n'arrive à une estimation précise du pourcentage de stocks techniquement indisponibles. Les informations disponibles (études, réponses à l'enquête, réponses aux interviews, expérience pratique des pays qui ont récemment rafraîchi des produits pétroliers ou pétroliers dans des installations de stockage) indiquent que 3-4% des stocks sont techniquement indisponibles. Dans cette fourchette, nous avons opté pour 4% de stocks techniquement indisponibles pour analyser l'option 3.

M2 / Option 3	100%	84%	74%	87%	85%	95%
M2 / Option 1	100%	87%	78%	90%	88%	100%

Mesure 3 : Déplacement de la date de début de l'obligation annuelle de stockage

Quel est le problème ?

Le problème est lié à la date de début actuelle de l'OSC annuelle (1er avril) et au fait que la période entre le calcul et la communication de la nouvelle obligation (annuelle) et le moment où cette obligation doit être respectée est très courte. Cette période de courte durée ne permet pas de prendre des décisions d'achat efficaces dans les années où l'obligation augmente. Depuis 2013, l'obligation a augmenté dans 55% des cas. Cette incapacité à augmenter rapidement de manière suffisante le stock implique également un risque de non-conformité en avril dans certains États membres. Le problème n'existe pas dans les années où l'obligation diminue par rapport à l'obligation de l'année précédente (45% des cas depuis 2013).

D'après l'enquête, il semble que 80% des ESC considèrent la date de début du 1er avril comme un problème, tandis que 78% des répondants de l'industrie ont répondu qu'il n'y avait pas de problème. Le problème est lié à la directive en ce sens que la directive stipule que l'obligation doit être respectée avant le 1er avril. Cependant, le problème est aussi causé de certaine manière par certaines procédures nationales de calcul, de communication (et dans certains cas d'achat) du pétrole pour satisfaire à l'obligation accrue.

Quelles options ont été évaluées ?

Les options évaluées pour leurs impacts, si elles sont potentiellement adoptées, comprennent:

- **Option 1** - Modifier la date de début au 1er juillet [3 mois supplémentaires]
- **Option 2** - Modifier la date de début au 1er mai [1 mois supplémentaire]

Quels sont les impacts ?

Le tableau 0-3 résume les impacts attendus par option.

Tableau 0-3 Incidences du déplacement de la date de début de l'obligation annuelle

	Option	Ligne des bases	1	2
Augmentation annuelle des CSO	Risque d'achat de pétrole plus coûteux	Une prime de 1% implique un supplément de 4,25 millions d'euros par an	Aucun risque	Aucun risque
	Sécurité d'approvisionnement	Un déficit moyen de 1% pendant 0,5 mois	Un déficit moyen de 1% pendant 3,5 mois	Un déficit moyen de 1% pendant 1,5 mois
Diminution annuelle des CSO	Coût de détention du stock excédentaire [m € / an]	Coût le plus bas	€18,7m à €26,7m	€6.2m à €8.9m
	Sécurité d'approvisionnement	Un excédent moyen de 5% pendant 0,5 mois	Un excédent moyen de 5% pour 3 mois	Un excédent moyen de 5% pendant 1 mois
Conformité AIE		Ligne de base	Non	Oui
Fardeau administratif		Haute	Inférieur	Inférieur

Remarque : Les cellules ombrées vertes indiquent l'option ayant le « meilleur » impact par indicateur, les cellules ombrées en rouge indiquent l'option ayant le «pire» impact par indicateur (par rapport aux autres options).

En ce qui concerne l'option de référence, si l'on suppose que l'achat rapide de pétrole impose une prime de 1% sur le coût du pétrole pour les 70% de stocks pétroliers détenus par les CSE, cela aurait coûté plus de 4 millions d'euros par an en moyenne au cours des 4 dernières années. L'option de base impose également un lourd fardeau administratif car certains États membres risquent de ne pas respecter les délais. Du côté positif, l'option de référence implique l'ajustement le plus rapide du stock, de sorte que la sécurité de l'approvisionnement augmente plus rapidement pendant les années de croissance et qu'il n'y a aucun coût de détention des stocks excédentaires dans les années où l'obligation diminue. L'option de juillet imposerait d'importants coûts de stockage supplémentaires en années de baisse. Ces coûts sont inférieurs pour l'option de mai. Il y a des avantages théoriques à accroître la sécurité de l'approvisionnement en conservant ces stocks excédentaires plus longtemps, mais si l'on suppose que l'obligation légale est suffisante, il faut en tenir compte. L'option de mai a l'avantage supplémentaire d'améliorer l'alignement avec l'IEA. Sur la base de cette analyse et de l'hypothèse que le fardeau administratif et le risque de non-conformité (en plus du risque de payer une prime pour l'achat anticipé) de l'option de référence l'emportent sur les coûts de détention accrus pour l'option de mai, la plus attrayante.

Mesure 4 : Clarification des règles de la directive concernant la détention d'actions transfrontalières

Quel est le problème ?

Selon la directive, la détention de stocks dans d'autres États membres (stocks transfrontaliers) est autorisée, à condition qu'une autorisation préalable soit fournie par les deux États membres. Cela devrait aboutir à des conditions de concurrence équitables pour les parties engagées dans les États membres et à une meilleure rentabilité pour satisfaire à l'obligation de détenir des stocks d'urgence. Dans le même temps, cependant, conformément à l'article [5] de la directive, les États membres peuvent imposer des limites et des conditions quant à la mesure dans laquelle leurs parties obligées sont autorisées à utiliser des stocks transfrontaliers. Le problème est qu'il existe de grandes différences entre les États membres dans les limites imposées à la part des stocks transfrontaliers autorisés, la rigueur des procédures d'autorisation et d'autres restrictions imposées. Par conséquent, la facilité avec laquelle les parties obligées peuvent accéder au marché boursier transfrontalier (billets et stockage) diffère considérablement selon les États membres. Par conséquent, dans certains pays où les restrictions sont strictes, les parties engagées sont moins en mesure de minimiser le coût de leur obligation de stockage que dans les pays où les restrictions sont faibles. Il en résulte une inefficacité globale (coût) pour atteindre les objectifs de la directive.

L'objectif de l'intervention possible dans ce domaine est donc d'éliminer davantage les entraves au stockage transfrontalier sans éroder le niveau global d'accessibilité et de disponibilité des stocks de sécurité (c'est-à-dire la sécurité de l'approvisionnement).

Quelles options ont été évaluées ?

Les options évaluées pour leurs impacts, si elles sont potentiellement adoptées, comprennent:

- **L'option 1 comprend l'option 2 ainsi que :**
  - Harmoniser la part des stocks autorisée transfrontalière ;
  - Des règles communes sur la responsabilité de l'audit et de l'inspection des stocks transfrontaliers ;
  - Règles communes sur les tickets ;
  - Des règles communes sur la disponibilité physique et l'accessibilité des stocks d'urgence.
- **Option 2**

- Harmoniser les délais dans le processus d'autorisation
- Procéder à l'acceptation automatique de la transaction transfrontalière après le dépassement de la date limite ;
- Harmonisation du type d'informations à fournir (voir chapitre 4).

- **Option 3**
  - Mettre en place un registre européen des transactions relatives aux stocks transfrontaliers, mis à jour en permanence, comprenant des informations sur les demandes d'autorisation en cours et les décisions.

Quels sont les impacts ?

Le tableau 0-4 résume les impacts attendus par option.

Table 0-4 Impacts of policy options regarding cross-border stocks

Option	Impact des options stratégiques par rapport à la situation de référence				
	Part des stocks transfrontaliers	Réduction des coûts totaux pour satisfaire à l'obligation	Transparence des stocks	Sécurité d'approvisionnement	Fardeau administratif
Option 1	**+**	**+**	**+**	**- - to -**	**++**
Option 2	**0/ +**	**0 / +**	**0**	**-**	**+**
Option 3	**0**	**0**	**+**	**0 / +**	**-**

++ Significativement positif / + Positif / 0 Pas d'impact significatif / - Négatif / - Significativement négatif

Pour l'option 1, le volume des stocks transfrontaliers pourrait augmenter de l'ordre de 8 millions de tonnes si toutes les parties engagées dans l'UE pouvaient détenir un minimum de 30% de stocks transfrontaliers et jusqu'à 10 millions de tonnes si le minimum était de 50 % En utilisant une différence de prix moyenne entre les alternatives internationales (tickets, options de stockage) de 10 € par tonne en tant qu'estimation brute, nous arrivons à une réduction de coût potentielle indicative de l'option 1 de l'ordre de € 80-100 millions par année, dont potentiellement 50% serait réaliste à réaliser (40-50 millions d'euros par an au niveau de l'UE). Dans ce dernier cas, le pourcentage de stocks transfrontaliers devrait augmenter d'environ 12% à 16%. En harmonisant les niveaux de restriction, d'autres règles sur les stocks transfrontaliers et la procédure d'autorisation sous-jacente, l'option 1 crée les impacts les plus significatifs en termes d'augmentation de la part des stocks transfrontaliers et d'économies économiques potentielles.

En n'harmonisant que la procédure d'autorisation sous-jacente, l'option 2 aura probablement une incidence beaucoup plus faible, mais ces impacts seraient positifs, car on s'attendrait à ce qu'un plus grand nombre de stocks transfrontaliers soient soumis à un processus d'autorisation simplifié. De plus, la plupart des États membres sont favorables à cette option puisqu'ils maintiendraient leur autorité sur les limites fixées pour les stocks transfrontaliers autorisés. Néanmoins, les deux options devraient avoir un impact négatif sur la sécurité d'approvisionnement, car l'augmentation de la part des stocks transfrontaliers devrait être principalement composée de billets. Comme les billets sont vendus sur les stocks excédentaires détenus par l'industrie, il est possible qu'en temps de crise, les billets ne puissent pas être renouvelés, car l'offre de ces stocks excédentaires a considérablement diminué (lorsque l'offre est perturbée et sera beaucoup plus bas). Étant donné que l'option 1 conduit à une plus grande part des stocks transfrontaliers dans l'UE (par rapport à l'option 2), l'impact négatif sur la sécurité de l'approvisionnement est également plus important pour cette option. Dans le même temps, l'effet négatif sur la sécurité d'approvisionnement peut être largement compensé dans l'option 1 en harmonisant et alignant les règles sur l'accessibilité physique et la disponibilité des stocks transfrontaliers, les règles communes d'audit et d'inspection et

les définitions communes des produits. L'option 2 ne créerait pas directement cet impact positif sur la sécurité d'approvisionnement.

L'option 3 ne contribuerait pas directement à l'objectif de réduction des obstacles aux stocks transfrontaliers, mais aurait un impact positif sur la transparence des stocks transfrontaliers en tant qu'informations sur les transactions en cours concernant les stocks transfrontaliers, y compris les demandes d'autorisation et autres procédures, seraient partagés plus fréquemment et deviendraient plus accessibles aux autorités et aux parties. Les divergences statistiques pourraient être résolues plus rapidement et les informations sur l'emplacement et le type de stocks s'amélioreraient, créant ainsi un impact positif sur la capacité à sécuriser l'approvisionnement en cas de crise. En raison de l'augmentation de la demande de données, la charge administrative pour les autorités nationales augmenterait.

La combinaison des options 1 et 3 permet potentiellement d'obtenir les meilleurs effets en supprimant simultanément les obstacles au stockage transfrontalier et en augmentant la transparence et la qualité des stocks transfrontaliers. Cependant, le potentiel global de réaliser un impact positif net à partir de cette combinaison d'options nécessite une définition précise des règles concernant la longueur et la définition des tickets, les catégories de produits autorisés et l'audit et l'inspection.

1. INTRODUCTION

1.1. Objectives of the study

Trinomics was commissioned by DG Energy of the European Commission to undertake, in the period June- December 2017, the study "Impact assessment: measures resulting from the evaluation of the Oil Stocks Directive 2009/119/EC." The mid-term evaluation concluded that the Directive has been broadly successful in achieving or progressing towards its main objectives, but also that the functioning of the Directive could be improved through a series of measures.

The overall objective of this study is to provide an impact assessment in line with the EU Impact Assessment Guidelines[5] on the potential revision of the Oil Stocks Directive 2009/119/EC for at least four potential measures. More specifically, the ToR (p.5) describes the objective of the study as "*to analyse the options and impacts of the potential follow-up measures identified as well as the significance and magnitude of an oil supply risk for the EU-28*." In particular, the impacts of various options need to be identified related to the following potential measures:

- Changing the methodology for calculating the crude oil equivalent of imports of petroleum products (naphtha yield rule) (Annex I);
- Changing the 10% deduction applicable when calculating the level of emergency stocks held (Annex III);
- Moving the date of start of the stockholding obligation from 1st April to 1st July (as resulting from Article 3);
- Clarifying the Directive's rules on holding cross-border stocks.

1.2. Structure of the report

This final report is structured as follows:

- Chapter 2 introduces the methodology. It describes the key steps of an impact assessment and also provides a brief account of the activities undertaken and sources of information.
- Chapter 3 elaborates on the problem definition of the four measures. In particular this chapter analyses the following four questions: (1) What is the problem and who is affected? (2) What is the problem's underlying cause? (3) What is the problem's scale and its consequences? and (4) What is the EU dimension and what is the likelihood that the problem will persist?).
- Chapter 4 presents the aim of each measure and proposes indicators/criteria to measure the effectiveness of the policy options. Also, the policy options for which we propose to conduct the actual impact assessment in the next phase of the study are further elaborated upon. Finally, we present the full logic chain per measure, including the policy options.
- Chapter 5 discusses, for each of the four measures respectively, which economic, environmental and social impacts, if any, should be included in the impact assessment.
- Chapter 6 analyses the impacts of the various options and presents a comparison of these options for each of the four measures, including an analysis of the impact of combining options across measures 1 and 2.
- Additional background information and some more detailed calculations underlying the analysis of impacts are included in the annexes.

[5] https://ec.europa.eu/info/files/better-regulation-guidelines-impact-assessment_en?

2. METHODOLOGY

This report has been structured in line with the main elements of a complete impact assessment according to the European Commission Impact Assessment Guidelines. In this chapter, we briefly describe these guidelines and our understanding of the principles behind impact assessments, which we have applied to this study. We further describe the methods that we have used to deliver the impact assessment.

2.1. Overall approach

In May 2015, the EC published the Communication "*Better regulation for better results - An EU agenda*"[6] setting out how it proposed to improve EU regulation in the next years. Better Regulation is supposed to ensure that policy is prepared, implemented and reviewed in an open, transparent manner, informed by the best available evidence and backed up by involving stakeholders. The agenda includes the new Better Regulation Guidelines[7] and the associated "Toolbox". As set out in the toolbox, Impact Assessments (IAs) should follow a standard structure. The structure is built around answering a set of key questions, the answers to which inform policy makers about the trade-offs surrounding the analysed problem and the analysed options. We have singled out the most important questions from the guidelines and tailored them (including their sub-questions) to this project. As a result, the overall approach to this study is characterised by sequentially analysing five steps derived from the IA guidelines for each of the four measures (introduced in Chapter 1):

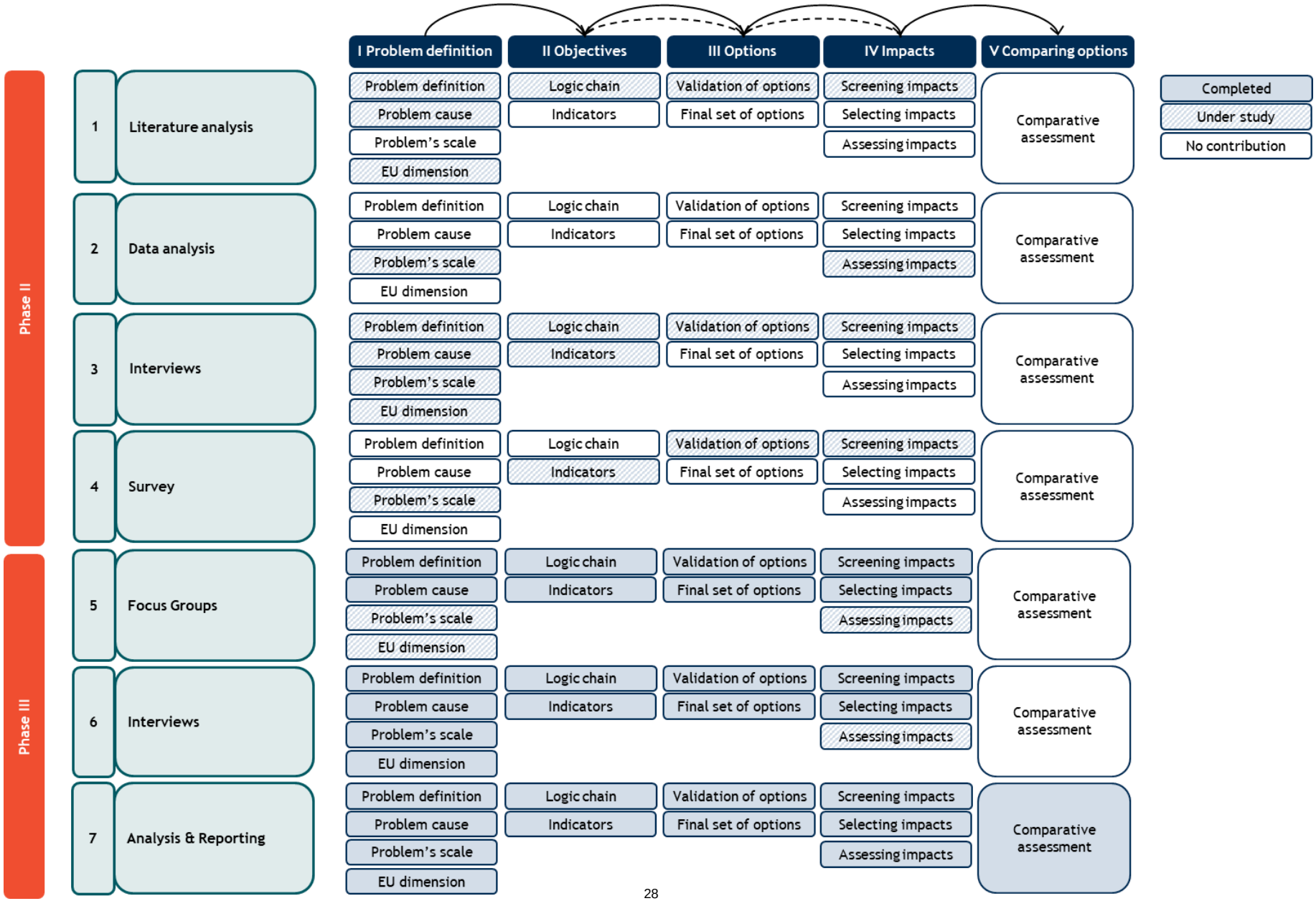
- Defining the problem (What is the problem? What is the cause of the problem? What is the scale of the problem? What is the EU dimension of the problem?)
- Defining the objective (How should the problem be alleviated? What should be achieved?)
- Defining the options (What are the options to achieve this objective?)
- Assessing impacts (What are the impacts of the options?)
- Comparing options

We researched the impacts of each of the four measures simultaneously and starting with the problem assessment, then the definition of the objective and options and lastly the assessment of the impacts of the options per measure. The analysis of impacts was achieved by first identifying potential economic, social and environmental impacts, then selecting the most significant impacts and lastly analysing the significant impacts. The final step in the methodology (not included visually) was formed by an impact assessment from the combination of (any of the) four measures, to derive the incremental impacts of combining certain options. The process is however, not fully sequential but also iterative as while certain impacts of options become clear during the impact assessment, some of the options and maybe even the objective might be tweaked or updated. This process was divided into three phases: an inception phase (I), a data collection phase (II) and an analysis phase (III).

Figure 2-1 presents this overall approach visually, including the seven research activities that we conducted to take the five steps of the impact assessment. Section 2.2 describes the seven research activities in more detail.

6 COM(2015) 215
7 http://ec.europa.eu/smart-regulation/evaluation/index_en.htm

Figure 2-1 Approach to the impact assessment



2.2. Research tools and activities

The Better Regulation Guidelines and Toolbox[8] suggest several methods which could be used to deliver an impact assessment of this kind. We employed a combination of qualitative and quantitative research tools in order to conduct the analysis in the five steps described in the previous section. As illustrated in Figure 2-1, the following five research tools were used for the analysis of the measures:

- Literature analysis
- Data analysis
- Interviews
- Stakeholder survey (analysis)
- Focus Groups (for measure 4 on cross-border stocks)
- Stakeholder validation and additional consultation

In line with the Better Regulation guidelines, we have aimed to quantify the problem assessment and the impacts of each option as much as possible. For some measures this was more feasible than for other measures. The details for each of these tools are described below.

2.2.1. *Literature analysis*

In the first step, all publicly available literature on the Directive to date (including the outcomes of the public consultation) as well as the confidential documents made available by DG Energy were analysed to provide the information basis for the impact assessment. In addition, publicly available data and reports from public administrations or other stakeholders were analysed and retrieved for all four measures. Existing literature particularly helped to define the problem, identifying its root causes, establishing the logic chain and formulating the objective for a potential intervention for each measure. Some of the documents and literature consulted for the study included:

- Study in support of the mid-term evaluation[9]
- EC Impact Assessment for Directive 2009/119/EC[10]
- Answers to the Public Consultation on the mid-term evaluation[11]
- Analysis of Article 9 [5] Member State reports,
- Study Focus on Energy Security – Costs, Benefits and Financing of Holding Emergency Oil Stocks (OECD/IEA 2013)[12]
- The *Oil security and the global market – a key issues paper* (CapeOtway Associates for the Department of the Environment and Energy of the Australian government, November 2016[13])
- Results of the Questionnaire on Minimum Operating Requirements (IEA 2003).

[8] SWD(2015) 111 Better Regulation Guidelines and Toolbox
[9] Trinomics, 2016, Study in support of the mid-term evaluation of the functioning and implementation of the Council Directive 2009/199/EC, available at: https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report%20Trinomics%20-%20August%202016.pdf
[10] Attached to the Commission Staff Working Document Accompanying the proposal for a Directive of the Council imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products, available at: www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/sec/2008/2858/COM_SEC(2008)2858_EN.pdf
[11] Available at: https://ec.europa.eu/energy/en/consultations/consultation-evaluation-directive-2009119ec-imposing-obligation-member-states-maintain
12 https://www.iea.org/publications/insights/insightpublications/FocusOnEnergySecurity_FINAL.pdf
13 https://www.energy.gov.au/sites/g/files/net3411/f/the-global-oil-market-a-review-paper-2016.pdf

2.2.2. *Data analysis*

All publicly available data from Eurostat from the MOS questionnaire (databases *nrg_141m*, *nrg_142_m* and *nrg_143m*) and other data available from other sources relevant to these topics were analysed. Particularly, for the naphtha yield rule (measure I) and the compliance date (measure III), we were able to quantitatively analyse the scope and magnitude of the problem for all EU Member States as well as simulate its impacts. Also the analysis on measure III (compliance date) and IV (cross-border stocks) benefited from a quantification of the problem and the impacts on the basis of data from the MOS questionnaires.

2.2.3. *Interviews*

For each measure a range of interviews were conducted at various stages of the impact assessment. At first, scoping interviews with selected stakeholders were conducted per measure, which were selected based on their position with respect to addressing the measure (in favour/against; refiners/non-refiners; domestic storage/non-domestic storage, etc.), identified using the responses to the public consultation or from experience from conducting the study in support of the mid-term evaluation. The scoping interviews were be used to better understand what the problem and the objective of the intervention should be. The scoping interviews were also particularly used for screening the range of potential impacts of addressing the measure and discussing the list of potential options for addressing the identified problem caused by the measure. During phase III of the study, another range of interviews were held for each measure to obtain more detailed information about the expected development of impacts for the options considered for each measure. Annex B includes the full list of stakeholders interviewed.

2.2.4. *Stakeholder survey*

A comprehensive stakeholder survey was conducted with two aims: to validate the options and type of impacts considered for each measure as well as to collect background and supporting information from all Member States to support the analysis of the problem and the forthcoming impact assessment. The survey was launched on the 11th of August and closed on the 11th of September 2017. The survey questions and the first draft results of the survey are presented in Annex D. Further details:

- The survey was sent out to 265 stakeholders in the EU across all Member States, representing the oil industry, national authorities, industry associations and CSEs;
- In total, **97 responses to the survey** (a response rate of 37%) were received. We consider this a satisfactory response rate as many invitations were sent to multiple people in the same organisations, for which one answer would suffice. Out of the 97 responses, 75 stakeholders fully completed the survey (at least one completed survey per Member State). Of these:
  - 20 were CSEs (27%);
  - 24 were industry players (32%);
  - 5 were industry associations (either national or EU-wide) (7%);
  - 26 were national authorities (35%).

2.2.5. *Focus Group Discussion (for measure 4: cross-border stocks)*

For the impact assessment of the options clarifying the Directive's rules on cross-border stocks, a Focus Group Discussion was organised in the form of an interactive workshop. Since a large part of the problem relating to this measure originates from the coordination and cooperation between Member States, it was particularly useful to bring together representatives from multiple Member States in a group setting to discuss the

problem and the impact of the options for this measure. The workshop was organised on 8 November in Brussels and attended by representatives from national authorities from nine Member States (the UK, Ireland, the Netherlands, Belgium, France, Luxembourg, Spain, Finland and Slovakia). The annotated agenda for the Focus Group Discussion, including the list of questions that were prepared and discussed by Member States is included in Annex B.

2.2.6. *Stakeholder validation and additional consultation*

Additional stakeholder consultation was conducted as part of the finalisation process of the final report. On 30 November 2017, draft final results were presented in a validation workshop open to all interested stakeholders. Some 66 participants attended the workshop and provided feedback in the meeting. Ten days after the workshop, the draft final report was shared with the members of the Oil Coordination Group (OCG) and the stakeholders that attended the validation workshop with the request to provide feedback and answer additional questions on cross-border stocks. Member State authority representatives from Bulgaria, Croatia, Denmark, Germany, Greece, France, Finland, Hungary, Ireland, Lithuania, the Netherlands, Malta, Poland, Slovenia and Sweden used this opportunity to provide feedback on the report. Additionally, also the IEA, UK Petroleum Industry Association, Tank Storage Operators France, Shell, European Storage Operators and FuelsEurope reacted to this request. Their feedback has been taken into account in the development of this final report.

2.3. Note on valuing the costs and benefits of holding emergency stocks

It is important to note for the method of the impact assessment, addressing some of the four measures will lead to changes in the volume of emergency stocks held and/or in the overall level of the stockholding obligation. The concomitant assessment of the impact associated with this requires weighing the impact of the costs of holding these (extra or less) emergency stocks against the impact on the security of supply. Clearly, higher emergency stocks have, all other things being equal, a positive impact on the security of supply, but are more emergency stocks always better in terms of efficiency (the balance between costs and benefits)? The answer to this question is no, provided that all emergency stocks are available and accessible at all times and if we assume that the marginal benefits of having additional emergency stocks decrease if the level of emergency stocks further.

Acknowledging that the impact on security of supply is notoriously difficult to quantify, our practical solution is to assume that 90 (or 61) days of emergency stocks that are available and accessible at all times is the right level, in the sense that the marginal benefit in terms of security of supply is equal to the costs of holding a tonne of emergency stocks at that level.

3. PROBLEM ANALYSIS

3.1. Introduction

In this chapter we elaborate on the problem definition underlying the four measures proposed in the ToR. Per measure we subsequently address the following four questions:

- What is the problem and who is affected?
- What is the problem's underlying cause?
- What is the problem's scale and its consequences?
- What is the EU dimension and what is the likelihood that the problem will persist?

The discussion per measure is concluded by providing the logic chain for that measure, showing the problem, its drivers and the related policy objective (the full logic chain, including the policy options, is presented in chapter 4).

3.2. Changing the naphtha yield rule

3.2.1. *What is the problem and who is affected?*

Annex I of the Oil Stocks Directive specifies the methodology for calculating the crude oil equivalent of imports of petroleum products, which is used to calculate the stockholding obligation of Member States as laid down in Article 3 of the Directive. This calculation stipulates that depending on the naphtha yield for that country in that year, either 4%, the actual naphtha yield or the actual net consumption of naphtha should be deducted from the crude oil equivalent of imports of petroleum products to calculate the stockholding obligation. If the naphtha yield is smaller than 7%, countries deduct 4% naphtha yield from their obligation. If the yield is higher than 7%, either the average naphtha yield or the actual net consumption of naphtha can be deducted from the obligation.

Deducting the naphtha yield is done to reflect the actual use of naphtha in the petroleum sector, which is not always for energy use. The problem, however, is that for some Member States, the naphtha yield oscillates around the 7% trigger level. This means that these Member States might have to switch between methodologies from year to year, which could potentially result in significant annual variations in the stockholding obligation even though there have been no significant changes in net imports or consumption. For example, if the yield goes from 6.9% in one year to 7.1% in the other year, the obligation is calculated by deducting 4% in the first case, and by deducting 7.1% (or the actual net consumption) in the second case. In some cases, the obligation changes significantly without a real change in net imports or consumption, resulting in costs for selling/buying the change in stocks. The cost-benefit ratio of the trigger level of this measure in those cases does not seem positive.

Box 3.1 Stakeholder feedback on the need for naphtha deduction in the survey

When asked whether accounting for naphtha in the stockholding obligation calculation is needed (one way or another), stakeholders had diverging opinions. Key aspects that were mentioned regarding whether to account for naphtha or not in the stockholding obligation calculation included:

- The purpose of emergency stocks: Energy use and energy security versus ensuring supply for the petrochemical industry. Not deducting for naphtha would mean holding stocks for non-energy use (political decision), which would lead to an increase of the CSO for Member States.
- Better understanding of the role of naphtha as an emergency stock is needed
- The need for a distinction between the use of naphtha for gasoline and chemical industry would be needed. Naphtha used in the production of gasoline should be accounted for in the CSO.
- Other products (which are used for non-energy purposes) are not discounted in the same way.
- Need for a stable and predictable stock obligation with as close a correlation as possible between the volume of obligated stocks and the volume on which a contribution is to be paid. The current approach adds administrative burden for countries with varying naphtha yields (or which are very close to the 7% trigger value) due to the considerable uncertainty. Accounting for naphtha has implications on the level of stocks (potential significant oscillation from year to year depending on the approach used).
- The need for simplification / brings increased complexity.
- Changes in the methodology should be aligned with IEA requirements.
- The need for a level playing field.
- Implications for countries with an important naphtha consumption.
- Implications on the cost of the CSO (i.e. to establish and hold additional stock capacity due to the naphtha rule) and costs for consumers (i.e. potentially paying for increased security of supply for the petrochemical industry).

The parties **directly affected** by this issue are all parties with a stockholding obligation, insofar as the stockholding obligation for these parties varies with the (annual) national stockholding obligation due to a change in the method used to account for naphtha, which in turn arises due to a change in the naphtha yield crossing the 7% threshold from one year to the next. The directly affected parties differ depending on the stockholding system in each Member State. In a government-based system or a CSE-system, only the public administration or the CSE is directly affected, while in an industry-based system the directly affected parties are the obligated industry parties (among the industry, different categories –SMEs, refiners, traders- might be affected to different degrees). In a mixed system, both the CSE and the obligated industry parties are directly affected. **Indirectly affected** parties include storage companies (facing increased or decreased demand for storage), parties offering tickets (facing increased or decreased demand) and ultimately consumers of oil (products) or the taxpayer, depending on who ultimately has to pay for changes in the stockholding obligation. Other indirectly affected parties to a potential amendment of this measure are the petrochemical industry and other consumers of naphtha. The potential change in how naphtha will be accounted for in the calculation of the obligation could affect them in a situation where the emergency stocks would be needed as they could face increased or reduced availability of naphtha due to the adjustment of the stockholding obligation.

3.2.2. *What is the problem's underlying cause?*

The direct cause of the problem is the inclusion of the 7% trigger level in the calculation of the crude oil equivalent of imports of petroleum products as explained above. This calculation method was introduced in the 2009 Directive as a result of the ambition to harmonise the calculation methodology with the one that is used by the IEA, so that IEA EU Member States have the same obligation in the IEA and EU system. The IEA system, in turn, chose to include a deduction for the naphtha yield to correct the calculation of the obligation with the amount of crude oil used in a country for the production of naphtha, which mostly has a non-energy use (petroleum naphtha) in the economy.[14]

Box 3.2 Rationale for the IEA's inclusion of a deduction for the naphtha yield when calculating the obligation

The IEA, as an energy security organisation, aimed to secure the availability of oil and oil products for energy purposes in case of supply disruptions. Therefore, they introduced a correction in the methodology for the calculation of the obligation to account for naphtha which was used in the petrochemical industry (i.e. not for energy use). The correction required the deduction of 4% which was based on the weighted average of the actual naphtha yield across IEA countries in the 1970s (and remained the weighted average throughout time).[15] In addition, it was decided to allow countries with a naphtha yield substantially above the 4% average to deduct more, resulting in the 7% trigger. However, the exact motivation for the introduction of the 7% trigger has not been documented.

Source: Interview IEA

3.2.3. *What is the problem's scale and its consequences?*

Only a few countries have a naphtha yield that oscillates around the 7% trigger and may be affected by the methodology proposed in the current Directive. Only five EU Member States have had to switch between methodologies at any point in the past six years, namely, Belgium (three times), Czech Republic (once), France (twice), Hungary (twice) and Slovakia (once). The inefficiencies stem from moving back and forth from one side to the other of the 7% trigger, as is the case of Belgium and Hungary. This was not the case, for example, with Slovakia which went from above to below the trigger and remained there.

Table 3-1 highlights the years in which a Member State had a naphtha yield crossing the 7% threshold.

Table 3-1 Historical naphtha yield per Member State

Member State	2012	2013	2014	2015	2016	2017
Austria	7.9%	11.0%	10.9%	10.6%	9.9%	10.8%
Belgium	4.6%	**4.1%**	**7.1%**	**7.2%**	**6.4%**	**7.3%**
Bulgaria	4.6%	4.6%	4.1%	4.0%	4.4%	5.1%
Croatia	0.0%	1.7%	1.7%	1.3%	1.7%	1.8%
Cyprus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic	10.1%	10.2%	10.3%	10.6%	**8.5%**	**6.9%**
Denmark	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Estonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finland	1.6%	1.5%	1.7%	1.8%	1.4%	0.6%

[14] See IEA Methodology for Calculating Minimum Stockholding Obligation and Compliance. Available from: https://www.iea.org/netimports/explanations/methodology/

[15] It is not explicit whether this weighted average was the yield for all naphtha production or only that for the petrochemical industry (non-energy use).

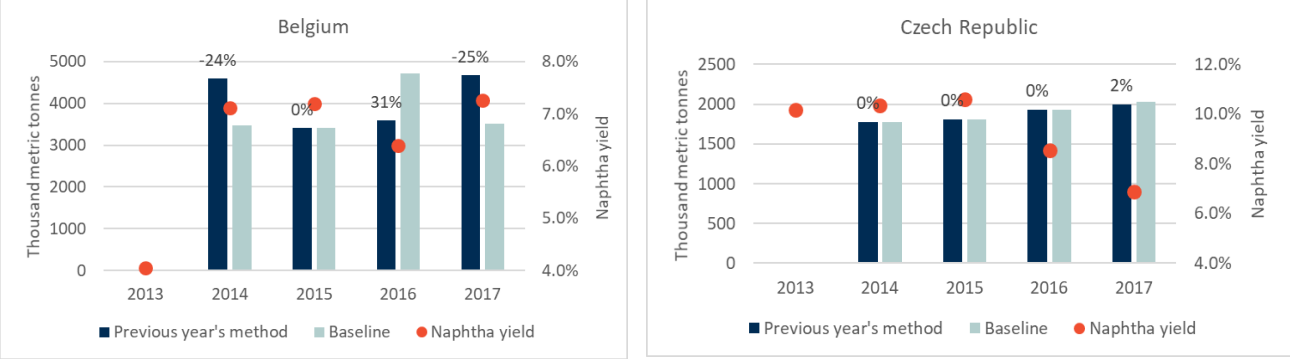
Member State	2012	2013	2014	2015	2016	2017
France	**7.1%**	**6.9%**	**8.2%**	7.9%	7.9%	8.1%
Germany	7.0%	7.3%	7.2%	7.3%	7.2%	7.2%
Greece	3.7%	2.8%	5.0%	4.8%	5.0%	5.5%
Hungary	8.4%	8.4%	**7.9%**	**6.9%**	**7.1%**	10.0%
Ireland	0.6%	0.4%	0.9%	0.9%	1.0%	1.0%
Italy	4.2%	4.1%	4.3%	4.8%	4.1%	5.2%
Latvia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lithuania	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Malta	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%
Poland	3.4%	3.8%	3.9%	4.9%	5.5%	5.2%
Portugal	9.2%	7.3%	8.0%	9.1%	8.1%	7.6%
Romania	0.6%	0.6%	0.6%	0.6%	0.9%	0.8%
Slovakia	8.1%	7.2%	**7.2%**	**6.9%**	5.8%	6.0%
Slovenia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	0.8%	0.4%	0.4%	0.4%	1.8%	1.7%
Sweden	1.2%	0.0%	0.0%	0.0%	0.0%	0.4%
United Kingdom	2.0%	1.3%	2.4%	3.8%	3.9%	3.9%

Legend: *Highlighted numbers show the years in which a Member State's naphtha yield crossed the 7% threshold.*

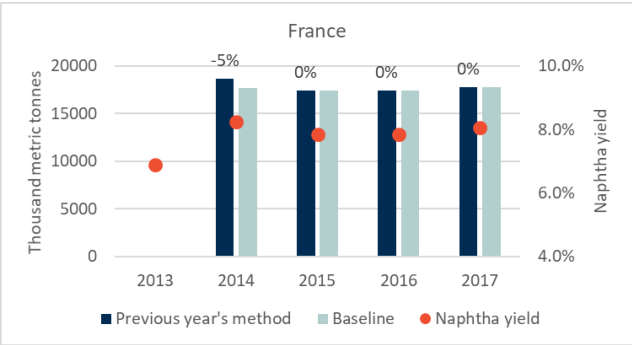
Source: Eurostat, nrg_141m

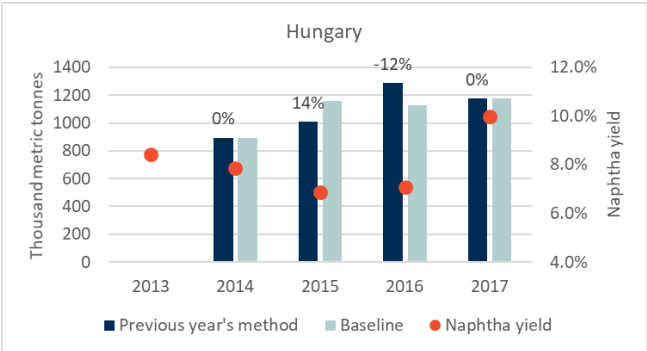
The diagrams below show the extent of the impact for the countries listed above. They show the naphtha yield for each year, the CSO according to the current Directive, and the CSO using the same method as in the previous year.[16] The percentage shown represents the increase or decrease of the obligation (using the naphtha deduction according to the Directive) compared to what the CSO would have been if the deduction method from the previous year was applied.

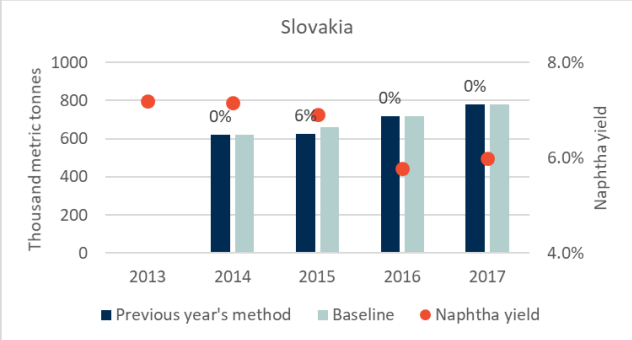
Figure 3-1 Impact of the 7% trigger in the affected Member States from 2014 to 2017



[16] Note that complete data is only available to perform calculations for 2014 onwards, but we show the 2013 naphtha yield as it determines the 'previous year' method for 2014. Naphtha yield can be calculated for previous years (from 2011 onward), but CSO can only be calculated from 2014 onwards.







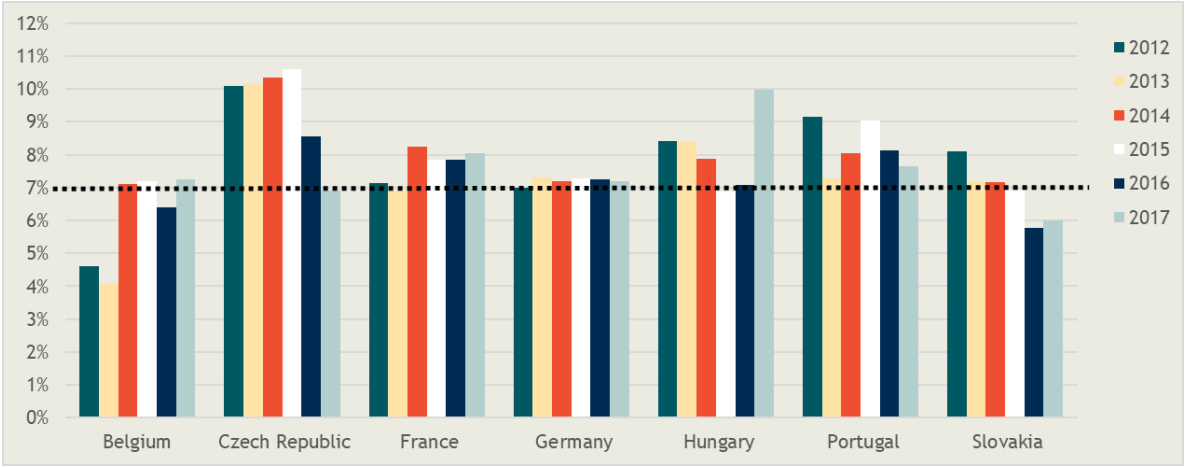
At EU-level, the problem related to the naphtha yield rule does not seem particularly large, given that it only applies to a small minority of the Member States (namely Belgium, Czech Republic, France, Hungary and Slovakia). However, the effect of the naphtha rule on individual Member States could be considerable. Thus we see a clear justification for the EU to act on this matter, given that these effects could (de facto) contradict the principle of equal treatment of all Member States.

3.2.4. *What is the EU dimension and what is the likelihood that the problem will persist?*

The EU dimension of the problem is due to the fact that it originates from the methodology specified in the Directive, which has immediate effect in all EU Member States.

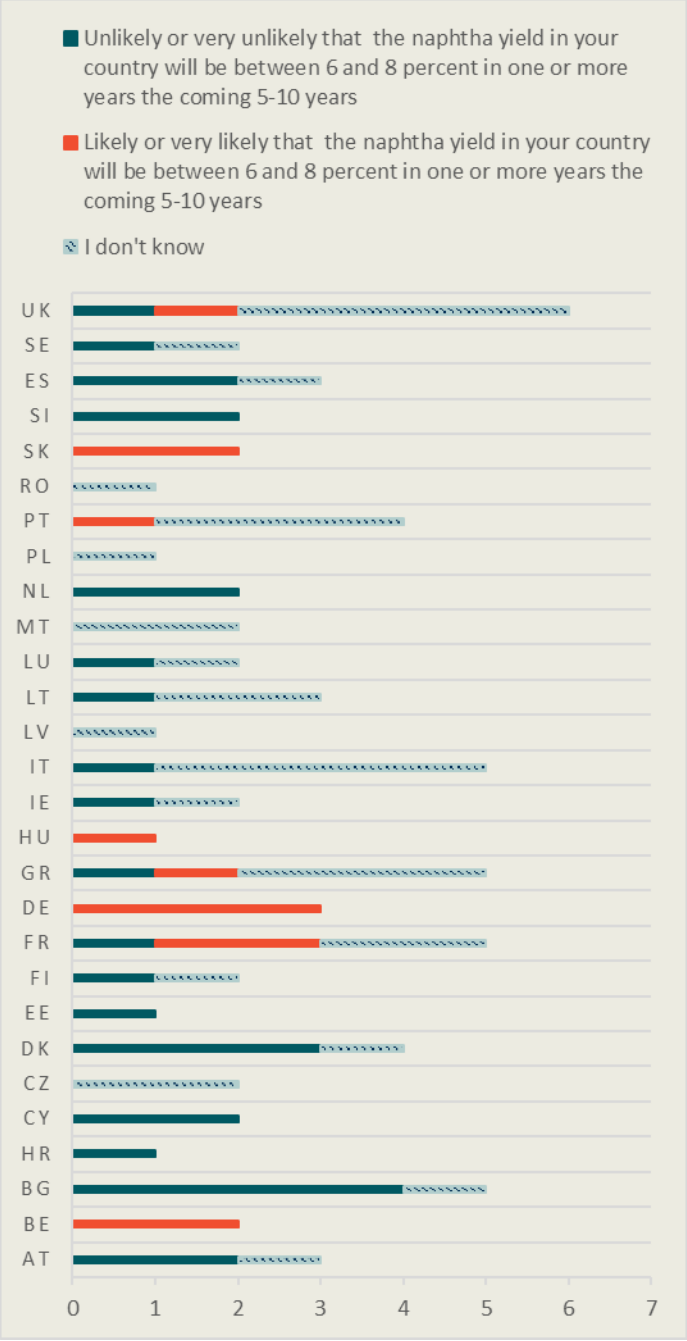
Figure 3-2 below shows the five countries listed above, as well as Portugal and Germany, which have naphtha yields that are very close to the trigger. While no clear trends can be seen, it is likely the issue will persist for several of these countries in the future.

Figure 3-2 Naphtha yield for affected Member States from 2012 to 2017



In the stakeholder survey, there were few responses per country when asking regarding the expectations on future naphtha yield. Furthermore, 44% of respondents answered they did not know. Respondents who expected the naphtha yield to be between 6% and 8% were from Belgium, France, Germany, Hungary, Portugal, Slovakia and the UK (See Figure 3-3). This is mostly in line with the countries in the graph above. However, other respondents from the UK and Greece answered that it was unlikely or very unlikely that the yield would be between 6% and 8%.

Figure 3-3 Expectations regarding naphtha yield.

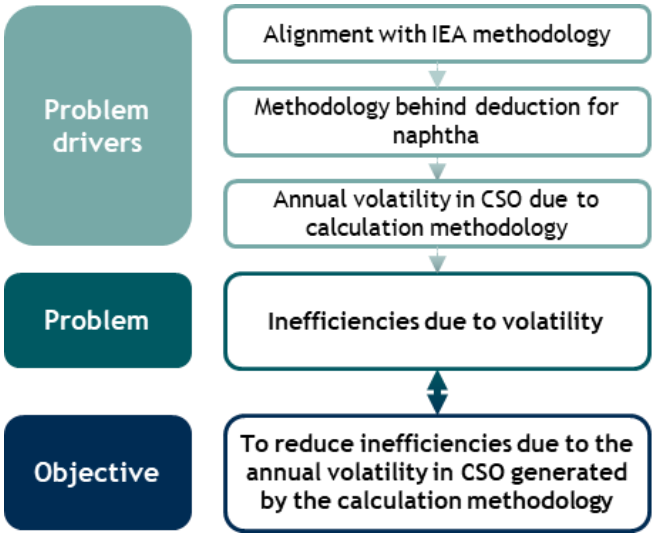


Source: Targeted survey – only completed responses.

3.2.5. *Logic chain of the problem*

Figure 3-4 provides the logic chain for the naphtha yield rule, showing the problem, its drivers and the related policy objective.

Figure 3-4 Logic chain for the naphtha yield rule



3.3. Changing the 10% deduction rule

3.3.1. *What is the problem and who is affected*

In both the IEA system and the EU system, when calculating their emergency stocks, Member States must apply a 10% deduction to take account of 'unavailable stocks'. Under the IEA system, this deduction was originally justified by the consideration that stocks may in fact be unavailable because:

- It would be technically impossible to recover all stored oil or oil products from the storage facility (i.e. tank bottoms);
- Stocks may be needed by economic operators for an uninterrupted production or supply process (working stocks): although these stocks could, technically, be put on the market, operators would seek to rebuild these stocks as quickly as possible to ensure uninterrupted operations.[17]

In the IEA system, there is a clear justification for a deduction for unavailable stocks as in the IEA stockholding system all stocks (i.e. stocks that are designated as emergency stocks and also all other [commercial] stocks) are counted for establishing whether or not the obligation is met. Among the consulted experts, there are diverging views why this deduction would be needed. Some argue that the deduction is only needed to account for the technically unavailable stocks, while others argue that the deduction is needed to account for the technically unavailable stocks and also the working stocks.[18] [19]

[17] In the survey and the interviews, most respondents consider that the technically unavailable stocks are the reason for the 10% deduction, while a minority refers to the notion that also working stocks are not (fully) available. In contrast, some argue that stocks may in fact be not available for other reasons, such as double counting of cross-border stocks, bankruptcy of obligated parties or any other kind of force majeure. We note, however, that this has not been used as a justification for the 10% deduction in the IEA system and is neither used as a justification of the 10% deduction in the Directive (in fact, the Directive does not include an explicit justification of the 10% deduction, other than referring to harmonisation with the IEA).
[18] Interview IEA. Note that the level of working stocks may be scaled down in times of a supply disruption; there are however no estimates available how much lower the working stocks in times of a supply disruption could be as compared to the normal level of working stocks.
[19] The rationale for the 10% deduction in the IEA system was confirmed in an IEA study in 2003 (confidential). Also the magnitude of the deduction (the 10%) was confirmed, which in fact represented a compromise between the two points of view: for accounting only for technically unavailable stocks 3-4% deduction would suffice, whereas accounting fully for working stocks in addition to the technically unavailable stocks would require a deduction of more than 10% (interview IEA).

The justification for the 10% deduction in the EU system is however much weaker, because: (1) the Directive stipulates that all emergency stocks should be available and physically accessible at all times, and (2) commercial stocks are not part of the emergency stocks in the EU system (only stocks that are designated as emergency stocks can be counted for establishing whether or not the obligation is met) and if sufficient commercial stocks are held on top of the emergency stocks it seems likely that all emergency stocks would in fact be available in case of an emergency (any unavailable stocks of economic operators would be part of their commercial stocks and not of their emergency stocks). If this would be the case, the commercial stocks should be at least 11% of the stockholding obligation (10/90 * 100% or 6.78/61 * 100%), which holds true for a large majority of Member States in the period 2014-2017 (see Table 3-2).

Table 3-2 Commercial stocks as percentage of the stockholding obligation in EU Member States, 2014-2017

				Commercial stocks as % of CSO				
Country	CSO 2017	Emergency stocks 2017	Commercial stocks 2017	2017	2016	2015	2014	2014-2017 average
AT	2,685	3,176	318	12%	11%	11%	13%	**11%**
BE	3,501	4,314	2,484	89%	75%	98%	70%	**83%**
BG	1,041	787	633	61%	60%	64%	61%	**62%**
CY	623	593	24	8%	8%	6%	8%	**8%**
CZ	2,029	2,012	664	35%	41%	40%	37%	**38%**
DE	20,056	24,535	8,964	43%	44%	43%	42%	**43%**
DK	1,244	1,421	1,955	141%	178%	173%	127%	**155%**
EE	199	220	122	114%	68%	66%	68%	**79%**
EL	2,830	3,722	470	12%	16%	23%	12%	**16%**
ES	12,095	14,519	924	13%	13%	9%	7%	**10%**
FI	1,994	4,065	2,229	122%	122%	109%	102%	**114%**
FR	17,548	19,193	3,849	19%	21%	22%	21%	**21%**
HR	584	671	719	145%	134%	124%	102%	**126%**
HU	1,179	1,210	649	97%	98%	76%	79%	**87%**
IE	1,725	1,665	474	32%	36%	36%	23%	**32%**
IT	10,839	12,927	3,898	58%	50%	39%	39%	**46%**
LT	472	468	392	96%	109%	106%	101%	**103%**
LU	702	685	42	5%	5%	6%	7%	**6%**
LV	355	339	68	23%	23%	23%	26%	**24%**
MT	169	210	107	67%	101%	54%	66%	**72%**
NL *	3,672	n.a	n.a	n.a	327%	306%	202%	**278%**
PL	5,957	5,838	1,790	43%	45%	48%	34%	**42%**
PT	2,317	2,513	728	39%	38%	43%	39%	**40%**
RO	1,329	1,268	530	38%	48%	45%	36%	**42%**
SE *	2,473	n.a	n.a	n.a	123%	97%	65%	**95%**
SI	604	604	99	18%	20%	17%	15%	**18%**
SK	781	716	518	63%	65%	68%	75%	**68%**
UK	10,986	11,664	1,384	22%	26%	26%	15%	**23%**

*Note: The cases where the commercial stocks are less than 11% are marked in red brick colour; the cases where the commercial stocks are in the range of 11-19% are marked in soft orange. *The averages for the Netherlands and Sweden are for 2014-2016.*

On the other hand, Annex III to the Directive stipulates that the calculation of eligible emergency stocks may include quantities held in storage tank bottoms and as working stocks, as a result of which it cannot be excluded that part of the emergency stocks may in fact include stocks that are not available.

Article 9(5) of the Directive requires Member States who hold less than 30 days of specific stocks (note that these are the overwhelming majority of the Member States) to submit an annual report '*analysing the measures taken by its national authorities to ensure and verify the availability and physical accessibility of its emergency stocks as referred to in Article 5 and shall document in the same report arrangements made to*

allow the Member State to control the use of these stocks in case of oil supply disruptions.' While these annual reports all report on these issues in greater or lesser detail, only some explicitly address the issue of unavailability in the meaning of points 1. and 2. above. For example, the UK report of January 2017 states on page 4: *'An obligated company will be only able to count stocks towards its obligations where those stocks are available at all times and physically accessible to the company […]. Stocks will not be considered available for these purposes unless the obligated company can freely dispose of the stocks when directed to by the Secretary of State.'* This seems to suggest that technically unavailable stocks indeed cannot be counted as emergency stocks in the UK.

This is also the case in countries like Germany, Italy, Lithuania, the Netherlands and Sweden, whose legislation explicitly stipulates that all stocks should be accessible and available at all times and provides the legal basis for severe penalties if this would not be the case. At the stakeholder survey, one stakeholder described its experience as follows:

"[Country X] places strong demands on the full obligated volume being accessible at all times, so the tank bottoms, line fill and other inaccessible volumes is something the economic operator will have to sort out on its own and calibrate its commercial stock accordingly. There are very hefty penalties for obligated actors not holding enough emergency stocks and as [the country's] emergency stocks are held commingled there are no physical tank bottoms associated with particular emergency stock tanks, for instance. In theory, an obligated economic operator could make poor business decisions and completely run down all its commercial stock, without being allowed to draw on the emergency stock part of its total stocks. It would then have to seize operations. In such a case perhaps it would turn out that a small percentage in the end was unavailable when the emergency stocks was pumped out, but the company, whether in receivership or not, would still be fined for not living up to its obligation. This is an extreme example, which shows to what length one has to go in a scenario to get to a point where a company places the emergency stocks in a situation where unavailable stocks could become an issue. It is not allowed to count line fill as emergency stocks and tank bottoms have to be part of the obligated party's commercial stocks, in a commingled stockholding system."

The problem emerging from the above considerations is that the stockholding obligation in the EU system might be in practice higher than needed, resulting in unnecessary additional costs for holding emergency stocks.[20]

The parties directly affected are all companies and organisations that have a stockholding obligation and would face a lower stockholding obligation if the 10% deduction rule would be abolished or modified. In addition, the taxpayers / consumers are indirectly affected as they ultimately bear the costs connected to the stockholding obligation. Finally, parties that offer stocks, storage capacity and/or tickets are (negatively) indirectly affected because the demand for stocks, storage capacity and/or tickets will go down if the 10% deduction rule would be abolished or modified (considering the options put forward in the ToR).

3.3.2. *What is the problem's underlying cause?*

The cause of the problem seems to be the desire at the time of preparing Directive 2009/119 to harmonise the Directive's methodology as much as possible with IEA rules,

[20] This conclusion presupposes that there is no benefit for holding emergency stocks in excess of the obligation, or at least that this benefit is lower than the additional costs to hold these excess stocks.

without paying due attention to the remaining fundamental differences between the EU system and the IEA system.

3.3.3. *What is the problem's scale and its consequences?*

In the period 2014-2017, the combined annual stockholding obligation for Member States expressed in crude oil equivalent ranged from 107 to 110 million tonnes. Application of the 10% deduction rule implies that, at EU level, ca. 12 million tonnes need to be held on top of this amount (10/90 times 107-110 million tonnes).

The survey results suggest a total cost for CSEs to hold emergency stocks of around €24 per tonne (unweighted average of the responses from 11 CSEs, answers mainly referring to 2016). The cost to hold emergency stocks by industry will in general be lower, but the survey does not provide a reasonably reliable estimate.[21]

Using 2014-2017 as reference period, the consequence of the 10% deduction rule is, in monetary terms, that the total annual cost of holding emergency stocks could (maximally) be in the range of €120-300 million higher than strictly necessary.[22]

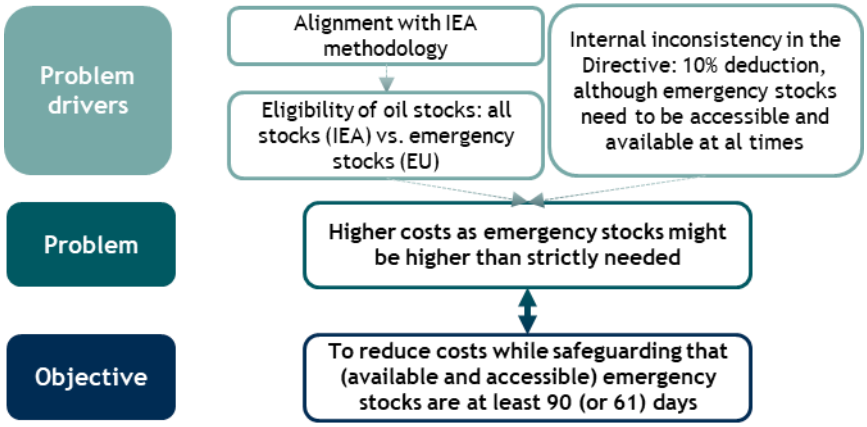
3.3.4. *What is the EU dimension and what is the likelihood that the problem will persist?*

The problem originates from the methodology proposed in the Directive, exists in all Member States and will persist as long as the Directive will not be amended on this point.

3.3.5. *Logic chain of the problem*

Figure 3-5 provides the top part of the logic chain for the 10% deduction rule, showing the problem, its drivers and the related policy objective.

Figure 3-5 Logic chain for the 10% deduction rule



[21] The (unrepresentative) feedback of eight industry representatives (mainly refiners) suggests a total stockholding cost of around €12 per tonne.

[22] Based on a range for holding emergency stocks of €10-25 per tonne. Note that this is an estimate of the maximum impact of the 10% deduction rule, under the assumption that there would be no justification for any deduction at all.

3.4. Moving the start date of the stockholding obligation

3.4.1. *What is the problem and who is affected?*

In accordance with Article 3 of the Directive, the CSO is calculated every year based on the actual data on net imports or inland consumption during the previous calendar year. Member States shall comply with the new yearly obligation as from the 1st of April (was 31st of July until 2012) , whereas under the IEA system the new yearly obligation effectively applies as from 30th of April (was 31st of January until 2012).[23] The stockholding obligation is based on data for the calendar year before and as the information on December is usually available at the end of February the following year (the exact date depends on the relationship between the obligated parties and the government body that collates and submits the MOS data), the time for making the necessary adjustments in actual emergency stockholdings is very short.

The ToR states that the obligation is based on the sum of the net imports or consumption in the 12 months in the preceding year and that the accuracy of the 12-month average improves with each available month, implying that it is possible to start making any necessary arrangements before submission of December's Monthly Oil Stock (MOS) questionnaire. The implications of this possibility (particularly on the scale of the problem) have been tested, and they appear to be influenced by the type of stockholding system. It appears to be more complicated to start making necessary arrangements in advance for some CSE systems and mixed systems than for industry-led systems, because of the seemingly longer time it takes CSEs to make and enact decisions on increasing stocks, for example because of the requirement to issue public tenders for buying stocks.

The potential problem is that the earlier compliance date (in comparison with the previous Directive) results in suboptimal oil stock purchase decisions with consequently higher costs for making the necessary adjustments in actual emergency stockholdings as the time span in which these necessary adjustments need to be made is very short. An additional problem also appears to be that, for some Member States because of the short time for making the actual adjustments, the obligation is not met by the 1st of April.

Moving the start date of the stockholding obligation from 1st of April to 1st of July (the only option proposed under this measure in the TOR) would give three extra months for making the necessary adjustments. It also implies that the stockholding obligation for the months of April, May and June would in fact be based on the figures for two years before rather than the figures for the previous year.

The parties directly affected are all companies and organisations that have a stockholding obligation which varies annually in connection to the national stockholding obligation. Indirectly affected parties include storage companies and parties offering tickets and ultimately consumers of oil (products) or the taxpayer, depending on who ultimately has to pay for changes in the stockholding obligation.

3.4.2. *What is the problem's underlying cause?*

As with the previous problem, part of the cause appears to be the desire to harmonise the Directive's methodology as much as possible with IEA rules. As a result of this harmonisation, both the EU and the IEA changed the start date of the stockholding obligation: the EU from 31st of July (until 2012) to the 1st of April and the IEA from 31st of January (until 2012) to the 30th of April. IEA members have to comply by the end of the month rather than at the beginning of the month in the EU system (because the

[23] In the IEA system, member countries have to comply by the end of the month, whereas in the EU system Member States have to comply at all times, resulting in this practical difference of the compliance date in the two systems.

Directive states that the stocks must be available at all times), which explains the difference between 1st of April and 30th of April as the effective date of compliance. This lack of alignment has also been commented on to the IEA by its members.

Another part of the problem is the seeming inability for some CSEs to make (relatively) rapid decisions (and take actions) to increase their stocks based on partial data on annual oil imports.

3.4.3. *What is the problem's scale and its consequences?*

The main potential consequences of the problem that can be identified from an external view are that the stockholding bodies only have a short time to adjust their stockholding to a new level. If this stock level is higher they may be obliged to pay more for the oil (to increase their stock level) than they would have done if they had been given a longer period to adjust their stockholding, on the assumption that the Member State / CSE in question is unable to start adjusting their stockholding earlier in the year based on partial data (e.g. 9 months of the 12, or by using the October to December data of two years ago). Another potentially negative impact can be seen in the event of a stock requirement going down, if the compliance date was moved later in the year. For example, if the date moved from April 1st to July 1st, in years when the stockholding requirement goes down, during April and June the stockholding body would need to hold more than required for three months (if the compliance date had remained April 1st). Being able to reduce the stockholding more quickly would give the ability to more quickly reduce costs. This is based on the assumption that the 12 months on which the CSO are calculated stay the same, i.e. January to December.

The table below looks at the annual changes in stock requirement for each Member State since 2013, so shows four years of changes.

Table 3-3: Annual changes in stockholding obligations by Member State (since 2013)

	Decrease years	Increase years	Average Decrease (%)	Average Increase (%)	Average Decrease (ktonnes)	Average Increase (ktonnes)
Belgium	3	1	-0.6	38.0	-738	1,298
Bulgaria	0	4	0.0	5.9		53
Czech Republic	1	3	-7.1	4.7	-136	87
Denmark	2	2	-3.4	1.9	-43	23
Germany	2	2	-8.4	1.6	-1,880	307
Estonia	0	4	0.0	3.2		6
Ireland	0	3	0.0	9.7		124
Greece	2	2	-8.1	3.2	-253	87
Spain	2	2	-7.9	3.8	-1,048	438
France	3	1	-2.5	1.0	-462	167
Croatia	3	0	-3.6	0.0	-23	
Italy	4	0	-5.5	0.0	-709	
Cyprus	1	3	-19.7	8.6	-129	48
Latvia	1	2	-1.7	4.3	-6	14
Lithuania	0	4	0.0	7.4		29
Luxembourg	3	1	-1.8	0.7	-13	5
Hungary	2	2	-6.6	16.7	-69	155
Malta	2	2	-27.8	20.4	-63	26
Netherlands	1	1	-0.3	11.7	-10	347
Austria	2	2	-6.1	3.1	-170	79
Poland	2	2	-8.1	9.3	-474	485

	Decrease years	Increase years	Average Decrease (%)	Average Increase (%)	Average Decrease (ktonnes)	Average Increase (ktonnes)
Portugal	1	3	-2.4	7.4	-54	147
Romania	1	3	-7.9	3.2	-104	40
Slovenia	3	1	-4.6	5.6	-30	32
Slovakia	0	4	0.0	6.8		45
Finland	2	2	-16.1	11.7	-365	204
Sweden	3	0	-9.5	0.0	-255	-
United Kingdom	2	2	-2.2	1.0	-251	109
EU28	2	2	-5.1	1.5	5,959	1,586
MS Total*	**48**	**58**	-5.8 (average)	6.8 (average)	-260 (average)	155 (average)

**The MS total does not add up to (28 x 4) 112, because there have been four occasions of no change and the total for 2017 is not yet available for two Member States.*

Source: Eurostat data

As can be seen, the number of occasions on which the Member State total increases, when it is postulated that there could be an additional cost (and admin burden) because of having to purchase additional stocks or tickets quickly, is 58. The number of occasions on which the Member State stock decreases, when it is postulated that (if the compliance date was moved later in the year) there may be additional costs incurred because of having to hold higher stocks than required, is 48. The annual split between Member States with an increasing demand and Member States with a decreasing demand is: 2013-2014 = 8:12 , 2014-2015 = 12:14 , 2015-2016 = 16:11, 2016-2017 = 22:3. The ratio between Member States with an increasing demand and those with a decreasing demand is of interest because, if EU28 as a whole security of supply is considered, if an oil supply issue occurred in April there would have always been some Member States holding slightly more than their required amount to help compensate for any Member States who had seen an increase in demand (and obligation) and may be holding slightly less than their obligation in April.

It is interesting to note that for the EU 28 total there are two years when the stock decreases and two years when the stock increases, but the average decrease (5,959kt) is much larger than the average increase (1,586kt). This observation is in line with the expected trend of an overall decrease with time in oil demand, due to factors such as improving energy efficiency and increased use of renewable energy sources.

The volatility of oil demand, which drives the size of the change in stockholding requirement (in addition to the naphtha yield – which explains the high volatility for some Member States such as Belgium as explained earlier in this report), and hence the potential size of the cost implication, is relatively consistent across Member States, with a small number or outliers. The Member States with higher than average volatility, and hence higher than average potential exposure are Belgium, Ireland, Cyprus, Hungary, Malta, Poland and Finland.

Another potential impact of this issue is that if Member States are unable to adjust their stocks quickly enough there may be a period when, if their stockholding requirement has increased, their stocks will be lower than required. This is not in line with the primary objective of the Directive – to protect and enhance security of supply.

In our stakeholder survey exactly 50% of 78 respondents answered yes to the question "Does the fact that April is the first month in which the stockholding obligation is based on last year's data constitute a problem?" If the response is analysed by type of respondent, there is a clear pattern with 80% of CSEs saying there is a problem, but 78% of industry respondents saying there is not a problem.

When asked to explain why they thought there was a problem the split by respondent type is reflected in the comments. The most frequent comments confirm the assumption that the main problem relates to the lack of time to adjust the stocks because of the short time between receiving official confirmation of the obligation (typically between February and late March) and the date by when the adjusted stocks have to be in place (April). The problems of this time constraint are well summarised by one respondent who says *"It makes obligated companies price takers and puts them at a serious disadvantage vis-à-vis other market actors".* Another aspect mentioned by several respondents is the delay in getting government approval and organising tenders for purchasing additional stocks. This indicates that a significant part of the problem appears to relate to the inability in some Member States to begin to adjust stock holdings in advance of the official confirmation, for example from January based on 9 months of the 12, or by using the most recent 12 months that is available.

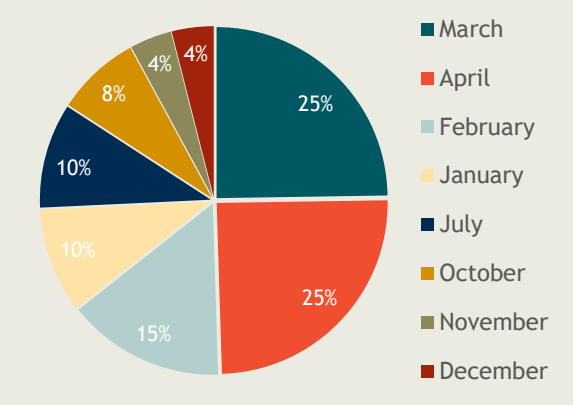
Some respondents (particularly those with more volatile stock level requirements) report that they adopt a conservative position and build up stocks in advance to avoid the risk of having to quickly purchase additional stocks.

It may be the case that in practice the impact is minimal, because stockholders could begin to adjust their stockholding well in advance of the date, if they had access to the national statistics in advance of the official notification. The exact date when the stock level that will be required from April 1st on is known is therefore important. To this end the survey included the following question '*Are you aware of your annual oil imports / consumption (and subsequent obligation) in advance of the official notification of your company's new stockholding obligation? If so when?*' There were 17 responses to this question, all of which came from oil industry respondents, with 9 of these indicating that the data is known between mid-January and mid-February, which suggests an average of 2 months (February and March) to adjust stock levels.

The nature of the obligated party also appears to influence the nature and severity of the impact of the annual compliance date. This was picked up in question 36 of the survey. Most respondents indicated that the stockholding obligation of industry parties depends on company data and not on the total CSO. Hence, as soon as obligated industry parties know their own figures for the previous year, they also know their obligation for the current year. This makes adjustment easier. For CSEs the obligation is related to the total obligation of the Member State and it appears from the survey response that in a number of cases they cover the balance between the total CSO and the industry obligation (based on industry figures).

Another question on this issue was included in the survey, relating to when stock holders start to adjust their holdings, as reported below:

Figure 3-6: In what month do you start to make adjustments to your actual stockholding (in relation to the new obligation) for the coming year? (n=52)



Source: Trinomics stakeholder survey for this study (August-September 2017)

This response suggests that many respondents do start to adjust their stocks 'early' (i.e. before the 'official' notification data, with 41% starting between October and February, but that 35% start 'late' (i.e. in April or later). We assume that those who replied that they start in July mean they start very early, this could be those who intentionally wish to hold an excess (e.g. Denmark). This sheds some light on the following point raised in the SWD evaluating the Oil Stocks Directive:

"*The stakeholders' perception may result from a misunderstanding of the relevant rules. For the calculation for the obligation, the sum of monthly figures is relevant, and not just the end-of-year data. The accuracy of this 12-month-average improves with each available month and the necessary arrangements can certainly start before submission of December's MOS questionnaire."*

The answer indicates that over 50% of the respondents start adjusting their stockholding before March or April, so they are certainly aware of this possibility. Comments around this question suggest that some are less willing (or able) than others to start in advance of the 'official' figure (based on end of year data) being made available.

The reasons why the compliance date appears to be more of a problem for Member States with CSOs than for Member States with an industry based system are well described by one respondent, who says

"Due to a number of reasons (such as easy access to the ticket market, easy access to group internal storage capacity and the fact that industry does not need to comply with public procurement rules), industry is much more flexible than a Member State, or a CSE, in handling variations in CSO. In countries where the obligation is on industry there is no concern with this problem, but it's understood that some Member State/CSE might be (affected by this)."

The Stakeholder survey included the question "*What would be a reasonable time for adjusting your stockholding in an efficient, cost-effective manner? (The process of gaining approval from the national authorities, issuing tenders, notifying stock holders, etc.)"* The responses to this question can be summarised as follows: it depends on the size of the increase, the larger the increase the more time is required – a small increase can be done within a month, but a large increase can need much longer. The nature of the oil market at the time of purchase is also important, if global imports are increasing the demand will be higher and the time required could increase.

Tickets are a quicker route than physical stock purchase. Stock increase via purchase can take many months because of the need for storage space, and the purchasing requirements for public bodies. Industry led systems can be adjusted relatively quickly – for example two weeks might be sufficient. However, the answer for CSEs varies between one month and 6 months, with an average of around 3 months, although one respondent says 'the longer the better'.

3.4.4. *What is the EU dimension and what is the likelihood that the problem will persist?*

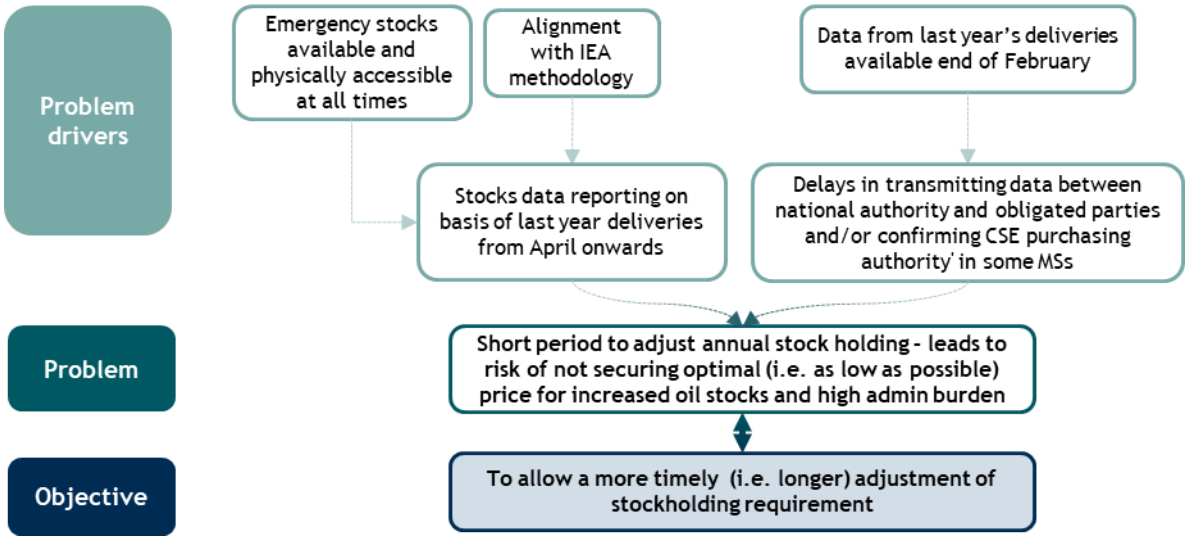
The potential EU dimension relates to the fact that there could be costs imposed on a Member State (and/or obligated parties) because of the way in which an EU policy design (as reflected in the Directive) is put into place in some Member States and these costs may be avoidable, and may be different as a result of Member State decisions on the nature of their stockholding system, e.g. CSE-based or industry led.

If the impacts are genuine (see previous section) they will persist until the system is altered.

3.4.5. *Logic chain of the problem*

The diagram below is intended to illustrate the problems, origins and consequences.

Figure 3-7 Logic chain for the date of stockholding obligation



3.5. Clarifying the Directive's rules on holding cross-border stocks

3.5.1. *What is the problem and who is affected?*

The Directive allows cross-border stockholding for all obligated parties in the EU, given prior authorisation of both Member States is provided[24]. This should lead to a level playing field for obligated parties across all Member States as they should all be able to optimise their costs of meeting the obligation using the storage facilities in the EU. Member States also have the right to limit economic operators' opportunities to buy tickets abroad or use foreign storage facilities, but they should ensure that operators are guaranteed the right to delegate at least a certain share of their obligation to a CSE in the country in case they are allowed to store less than 10% (30% by 2018) of their obligation abroad. Therefore, cross-border stocks are allowed by the Directive but Member States have rights to limit them. Some Member States use these rights to impose stricter limits than others that are less concerned. The differences stem from:

- **The need for a bilateral agreement** - Some Member States still require the presence of a bilateral agreement with the partner Member States, despite the removal of the need for a bilateral agreement in this Directive. Most of these agreements include rules and agreements on the manner in which stocks are audited abroad and how (and what) information is exchanged between both Member States on the cross-border stocks. Other Member States do not use bilateral agreements, but include requirements on cross-border stocks in their national legislation and yet others do not pose additional rules and requirements at all and trust that the implementation of the EU Directive suffices to ascertain availability and accessibility. Figure 1 in Annex A presents a visual illustration of bilateral agreements currently in force.
- **The total height of restrictions on the share of cross-border stocks that obligated economic operators and/or CSEs are allowed to have**
- **Conditions on the type, location or other characteristics of cross-border stocks**

[24] Articles [7] and [8] in the Directive define the right of obligated economic operators and CSEs to delegate their stockholding obligation to economic operators or CSEs in other Member States.

As a result, the number, height and type of restrictions that are placed by Member States on cross-border stocks differ. Table 3-3 overleaf provides an overview of the extent of these differences. The table shows that in **practice three Member States practically prohibit cross-border stocks** altogether (Austria, Romania and Poland[25]) and that for 14 of the 25 remaining countries for which information could be gathered, the presence of a bilateral agreement is required to authorise a cross-border stocks trade. In total, only four Member States do not impose particular restrictions to obligated parties in their country with regard to holding cross-border stocks (Cyprus, Malta, Slovenia and the UK). All other countries apply either a volume restriction or other type of restrictions for industry or CSEs.

Also the way in which Member States authorise cross-border stocks deals differs, affecting the ease for using cross-border stocks for obligated parties. The authorisation procedures generally differ in terms of the **deadlines** Member States impose during the procedure and the **type of information** that parties are required to submit. Some Member States require obligated parties to provide the request for a cross-border deal 30 days before the start date of the cross-border contract, whereas others also allow last minute requests on the day before the deadline. Most Member States require information on the length of a (ticket or storage) contract, location of stocks and sometimes the price.

[25] Poland legally does not prohibit cross-border stocks, but limits them to 5% of the total obligation. However, Poland does require the conclusion of a bilateral agreement with a partner country. Since they did not conclude any bilateral agreements (yet), cross-border stockholding is practically not possible at this stage.

Table 3-4 Rules and restrictions regarding cross-border stocks in Member States

	Stockholding system 2016		IEA?	1) Bilateral agreement/MoUs needed?		2) Limits on the use of cross-border stocks (max in % of total obligation)				3) Specific requirements on cross-border stocks?
	By % of stockownership					CSE		Industry		
	CSE	Industry			Agreement with	Owned stocks	Tickets	Owned stocks	Tickets	
Austria	73	27	Yes	N.A.		Yes, 0%	Yes, 0%	Yes, 0%	Yes, 0%	• N.A (cross-border not allowed)
Belgium	100	0	Yes	No	FR, EL, IE, LU, NL, UK	Yes, 30%[D]	Yes, 30%[D]	N.A.		• **Location –** Stocks to be held within 3-days sailing
Bulgaria	33	67	No	No	EL, HU, IT, SL	Yes, 30%	No	Yes, 30%	Yes, 30%	
Croatia	100	0	No	Yes	DE, HU	No	No	N.A.		
Cyprus	100	0	No	No	EL, NL	No	No	N.A.		
Czech Rep.	100	0	Yes	Yes	DE, EL	No	Yes, 0%	N.A.		
Denmark	70	30	Yes	Yes	EE, FI, DE, IE, IT, LV, NL, SE, UK	Yes, 5%	Yes, 5%[E]	Yes, 30%	Yes, 30%	
Estonia	100	0	Yes	Yes	DE, DK, FI, LV, SE	No	Yes, 20%	N.A.		
Finland	60	40	Yes	No	DK, LV	Yes, 30%	Yes, 30%	Yes, 30%	Yes, 30%	
France	85	15	Yes	No	BE, DE, ES, IE, IT, LU, MT	Yes, 10%	Yes, 10%	N.A.		• **Domestic opportunities** - Authorisation conditional upon explanation why the stocks must be held abroad [A]
Germany	100	0	Yes	No	BE, CZ, DK, EE, FR, HR, IT, LU, NL, PT, SI, UK	No	Yes, 10%	N.A.		• **Location** – Distance of stocks to Germany important for authorisation procedure.
Greece	0	100	Yes	Yes	BG, BE, CY, UK	N.A.		Yes, 30%	Yes, 30%	
Hungary	100	0	Yes	No	HR, IT, SI	Yes, 0%[F]	Yes, 0%[F]	N.A.		
Ireland	100	0	Yes	Yes	BE, DK, DE, ES, FR, NL, SE, UK	No	No	N.A.		
Italy	33	67	Yes	Yes	BU, DE, DK, ES, HU, MT, NL, SI, UK	Yes, 0%	Yes, 0%	No[C]	No[C]	
Latvia	100	0	No	Yes	DK, EE, FI, LT, NL	Yes, 75%	No	N.A.		
Lithuania	32	68	No	No	LV	No	Yes, 75%	Yes, 30%	Yes, 30%	
Luxembourg	0	100	Yes	No	BE, DE, FR, NL	N.A.		Yes, 92%	Yes, 92%	• **Location** - Every importer has to maintain a minimum of 8 days domestically and of 35

									days on regional territory (230 km around Lux)
Malta	0	100	No	No	ES, FR, IT, NL	N.A.		No	No	
Netherlands	80	20	Yes	Yes	BE, CY, DE, DK, IE, IT, LV, LU, MT, PT, SE, SI, UK	No	No	No	No	
Poland	60	40	Yes	Yes	None	Yes, 5%	Yes, 5%	Yes, 5%	Yes, 5%	
Portugal	55	45	Yes	Yes	DE, ES, NL	Yes	Yes	Yes	Yes	
Romania	0	100	No	N.A.	None	N.A.		Yes, 0%[B]	Yes, 0%[B]	• **Location –** Distance of stocks to Romania important for authorisation procedure.
Slovak Rep.	100	0	Yes	Yes	CZ	No	No	N.A.		• **Domestic storage –** authorisation requires proof that no domestic storage facilities are available
Slovenia	100	0	No	No	DE, HU, IT, NL	No	No	N.A.		
Spain	42	58	Yes	Yes	FR, IE, IT, MT, PT	Yes, 40%	Yes, 40%	Yes, 40%	Yes, 40%	• **Security of supply assessment:** If the percentage of cross-border stocks of a certain product exceeds 15%, a study measuring the impact on the security of supply by the National Commission of Energy is required
Sweden	0	100	Yes	Yes	DK, EE, IE, NL, UK	N.A.		Yes, 30%	Yes, 30%	
UK	0	100	Yes	No	DK, EL, IE, IT, NL, SE	N.A.		No	No	

Source: Trinomics stakeholder survey for this contract (August-September 2017), additional consultations with OCG members (via mail)
Legend: "N.A." means Not Applicable for that country due to their stockholding system

A. In practice, this implies explaining why tickets for or storage of a certain product are unavailable in France at a reasonable price
B. In Romania, practically no cross-border stocks are allowed. A new law has been drafted that allows 50% of the obligation to be met with cross-border stocks. However, law is not yet adopted or approved.
C. In Italy, there are currently no restrictions on the use of cross-border stocks but there are discussions to increase restrictions on cross-border stocks for industry players, just like for the CSE
D. Belgium limits only its share of finished products to be held abroad to maximum 30%. There are no limits to cross-border crude oil stocks.
E. For Jetfuel, Denmark allows a 100% cross-border stockholding for its CSE through tickets
F. Hungary does not apply any restrictions on cross-border stocks, but the policy of the CSE (who holds 100% of the obligation) is to not store/hold stocks cross-border. Thus in practice a 100% barrier.

In summary, Table 3-4 presents the most important dimensions in which Member States differ with respect to their governing frameworks for cross-border stocks. We distinguish between (i) the hard **limits and rules** that Member States impose on the allowed share of cross-border stocks and other rules on cross-border stocks and (ii) the required procedures for authorising cross-border stocks (including the need for a bilateral agreement in selected countries, see Table 3-3. Not presented in Table 3-4). With regard to the first, the limits on allowed share of cross-border stocks are presented in Table 3-3. Many countries also set specific rules as regards the availability and accessibility of the cross-border stocks, in order to comply with the obligation in Article 5.1 of the Directive[26]. For example, some set a desired speed of release of the emergency stocks on the domestic or European market.

As regards the authorisation procedure, the largest differences stem from **differing deadlines in the authorisation procedure**, the need for a bilateral agreement (presented in Table 3-3), the type of information requested for the approval (not in the tables, but explained below) and the type of approval system used by Member States (not in the tables, e.g. paper-based or digital). Table 3-3 already showed that there are large differences between the limits imposed by Member States on own stocks and tickets abroad. Additional rules on cross-border stocks and tickets also differ strongly. Some apply sailing clauses on how far away emergency stocks can be held: from no restrictions (in e.g. Cyprus) to 3-days sailing (in Belgium) or 230km (in Luxembourg). Regarding tickets, there are large differences in the permitted length (in months) of tickets, ranging from short term tickets (in Ireland for example) to a minimum of 6-month tickets in Greece. Also the type of products allowed to be covered by cross-border tickets differs per Member State: from "any oil" in the UK to only jet fuel tickets for the CSE in Denmark.

Table 3-5 Important differences between Member States in rules, restrictions and authorisation procedures

Rules and restrictions for cross-border stocks							
Elements			**Lowest**	**Example**	**High**	**Example**	**Most common**
Limits	Own stocks	Max %	0%	UK	100%	Austria	30% and 0%
	Tickets	Max %	0%	UK	100%	Austria	30% and 0%
Rules	Own stocks & tickets	Distance to country	No limit	Cyprus	230km	Luxembourg	No limit
		Speed of release	No definition	Croatia	Within 3 days	Belgium	No definition
	Tickets	Min/max length	None	Ireland	Min 6 months	Greece	Min/Max: 3/12 months
		Type of products	"Any oil"	UK	Jet fuel only	Denmark	Products stated in Annex III
Authorisation procedures for cross-border stocks							
Elements			**Lowest**	**Example**	**High**	**Example**	**Most common**
Deadlines	Application received	Days before	10 days	Lithuania	90 days	Ireland[A]	30 days
	Approval decision	Days before	7 days	Netherlands	30 days	Luxembourg	Not specified
	Automatic approval/rejection	N.A.	Automatic approval	Luxembourg	Automatic rejection	France	Most use 'automatic refusal'

Source: Trinomics stakeholder survey for this contract (Aug-Sep 2017), focus group discussion (November 2017) and additional consultation with OCG members via mail
A) If not mentioned otherwise in bilateral agreement

[26] Article 5.1 does not define specific requirements to 'physical availability and accessibility of stocks', which therefore forms a key driver of differences in rules and procedures regarding cross-border stocks. See more in Section 3.5.2

As regards the type of information requested for the authorisation of the cross-border deal, most countries require information on:

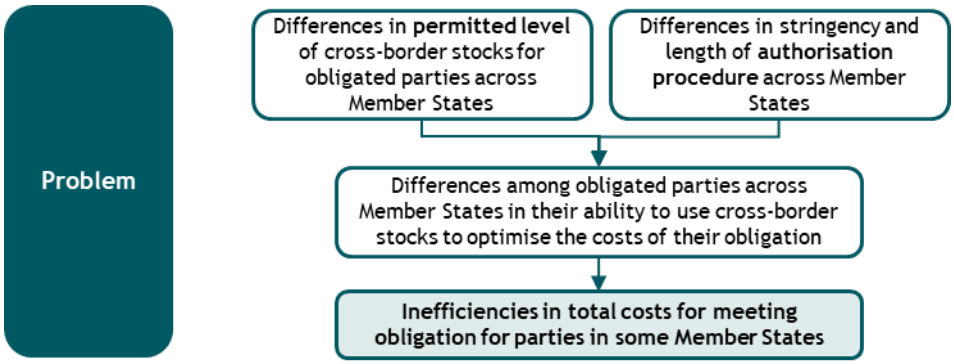
- **Name of the obligated party** (including address);
- **Name of the storage company or ticket seller** (including address);
- **Location** of the stocks (including address);
- **Duration** of the (ticket)contract;
- **Type of product**, though the (statistical) classifications which are used to describe products differ across Member States, leading to statistical discrepancies (see Section 3.5.3);
- Information on how stocks can be repatriated in case of a supply crisis (including transport mode).

However, also some Member States require information on why there is no domestic storage available (France), a copy of the ticket or storage contract, the price for storage or the ticket price. Ticket price information or the contract are probably merely information requirements, but a requirement like describing the reason to use cross-border facilities could be seen as an extra burden to using cross-border stocks. At the same time, there are also differences between the level of information that authorities have regarding the physical accessibility and availability of stocks held cross-border. Whereas for some Member States the company name and address suffice for authorisation, others demand the exact location of their product at tank level.

The resulting problem is that the ability to make use of storage opportunities abroad or to buy tickets abroad for obligated parties differs strongly from Member State to Member State. This is caused either directly by the height of the restrictions in Member States or otherwise indirectly by the characteristics of the authorisation procedure. In effect, this creates an unlevel playing field for the obligated parties across Member States with high restrictions on cross-border stocks versus those in countries with little requirements. The level playing field within countries is unaffected by the differences in cross-border frameworks of Member States, though. But at European level, in Member States where cross-border stockholdings are prohibited (as an extreme case), obligated parties are forced to use domestic storage or ticketing possibilities, although there may be cheaper options available in neighbouring Member States. As a result, the total costs of meeting the obligation for the parties in countries with high restrictions could be higher than needed. The efficiency of the Directive could therefore possibly be improved if the obligated parties would be able to use cross-border opportunities more often.

The problem therefore is that the opportunities to use storage facilities abroad and/ or to buy tickets abroad are more limited for obligated parties in some Member States compared to other Member States. Being able to use the opportunities of storage or ticket opportunities within the EU Internal Market could allow them to meet their stockholding obligation at lower costs and would therefore result in a more efficient way of achieving the objectives of the Directive (see Figure 3-8).

Figure 3-8 The problem with cross-border stocks in the Directive



Who is affected?

The parties that are directly affected by this problem are the parties in each Member State that receive an obligation to hold emergency stocks from their national authorities, particularly those that are in some way restricted in their ability to use foreign storage or ticketing options. Depending on the distribution of the obligation in Member States, these could be either the CSEs or the obligated industry parties. The latter are typically oil industry players, such as refineries, traders and/or retailers depending on how the national authority in a Member State distributes the obligation. Table 3-3 showed in which countries the (oil) industry has an obligation. Refineries are typically very large companies due to the high need for capital expenditures, whereas traders and retailers could also be SMEs operating at restricted regional levels in Member States. However, generally the emergency stock obligation is not born by very small companies (typically larger SMEs or large companies). Indirectly affected parties are also certain competitive storage companies across the EU, because they could face/benefit from? increased demand for storage facilities when impediments to cross-border holdings would be further brought down. At the same time, domestic (uncompetitive) storage companies (currently 'protected' by the height of the restrictions in place) could face a reduction in demand.

3.5.2. *What is the problem's underlying cause?*

As established in the previous section, there are two direct reasons for the differences in the ability to use foreign storage or ticket opportunities: 1) the differences in the permitted level of cross-border stocks for obligated parties and 2) the strictness of the authorisation procedure. Both these reasons are in turn driven by Member States' level of comfort of the actual availability of cross-border emergency stocks. This level of comfort is, in turn, largely formed by:

1. Member State interpretation of Article (5) of the Directive specifying that emergency stocks (including cross-border stocks) need to be physically accessible and available
2. Perceived lack of transparency surrounding cross-border stocks (in particular tickets);

<u>1) Interpretation by Member States of Article (5) in relation to cross-border stocks</u>

According to Article [5] of the Directive, Member States:

- shall ensure that emergency stocks and specific stocks are available and physically accessible for the purposes of this Directive [at all times];
- shall establish arrangements for the identification, accounting and control of those stocks so as to allow them to be verified at any time. […];

- may set limits or additional conditions on the possibility of its emergency stocks and specific stocks being held outside its territory.

This article requires Member States to make sure that emergency stocks are available and accessible, regardless of whether they are held cross border or not. In this context, they may set limits to cross-border stocks on the possibility of stocks to be held cross-border. The restrictions put in place can therefore be seen as a Member States interpretation of the need for 'physical accessibility and availability'. Article [2] of the Directive defines 'physical accessibility' as "*arrangements for locating and transporting stocks to ensure their release or effective delivery to end users and markets within time frames and conditions conducive to alleviating supply problems which may have arisen".* This leaves the question of (for example) what an adequate 'time frame' of effective release is and what an effective delivery is. This interpretation is believed to cause differences in restrictions on cross-border stocks. For example, Belgium applies 3-days sailing time as a restriction and Luxembourg applies a distance of 230km from them. On the basis of a focus group discussion with representatives from 10 Member States, it also became clear that Member States' differing views on accessibility and availability were especially large in the area of tickets. The majority regarded the quality of tickets to be generally inferior to proprietary stocks. Tickets are namely sold on excess industry stocks, which are widely available in a contango market, but in times prior to a potential crisis industry stocks are very likely to strongly decrease as supply of oil is contracting. The availability of tickets could therefore significantly reduce in times of an oil supply disruption and thus the risk of not being able to prolong expiring ticket contracts during a crisis is high.

Member States' interpretation of the need for identification, accounting and control of cross-border stocks also differs. One respondent to our survey stated that the responsibilities and obligations of Member States with respect to verification of stocks should be clarified and harmonised. At the moment, the frequency and methods of inspection and verification differ between Member States and between bilateral agreements. Those Member States that still use bilateral agreements mainly use them in order to govern the need for identification, auditing and accounting of the stocks, as required by Article 5 of the Directive. It is their interpretation of "the arrangements" needed that Article 5 demands on the accountability and identification of stocks as there is no similar article in the Directive that establishes the responsibilities for auditing and accounting in relation to cross-border stocks.

2) Perceived lack of transparency with respect to cross-border stocks (in particular tickets)

There appears to be uncertainty surrounding the availability and accessibility of cross-border stocks, in particular cross-border tickets, due to a lack of transparency surrounding cross-border stocks in the EU. The impact assessment conducted by the Commission prior to the development of Directive 2009/119/EC already identified a particular concern on the use of cross-border tickets. As a result, a number of actions were taken in the development of the 2009 Directive. Most importantly, the Directive forbad "sub-delegation" and reporting systems from the EU and the IEA were aligned. The study in support of the mid-term evaluation of Directive 2009/119/EC found that the transparency surrounding the physical accessibility and availability of cross-border tickets increased due to the prohibition of "sub-delegation" of tickets and the additional requirement to establish a permanent register about the location and quantity of emergency stocks held by Member States[27], but that on the other hand indeed

27 Trinomics, 2016, Study in support of the mid-term evaluation of the functioning and implementation of the Council Directive 2009/199/EC, available at: https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report%20Trinomics%20-%20August%202016.pdf

uncertainties about the availability of stocks (and particularly tickets) held cross-border remain. Discrepancies in reporting and potential double-counting of cross-border stocks have reduced since the adoption of the 2009 Directive, but still amount to some 1%-6% of the volume stocks held abroad[28]. The study in support of the mid-term evaluation found that public authorities still have significant doubts about the precise composition of tickets held cross-border due to the different ways in which countries could classify complex products in their reporting. For example, Member States do not consistently apply a commonly agreed 'dictionary' of oil products in reporting and also the use of the product category 'any oil' is still sometimes prevalent. This leads to potential misunderstandings and uncertainty at the level of national governments and the EU as to which stocks are precisely available where when formulating potential actions to specific situations. An updated analysis using the most recent MOS-data reveals that the overall discrepancy in the reporting of cross-border stocks is decreasing, the volatility in discrepancies remains high (Figure 2 in Annex A).

An analysis of survey responses for the reasons behind the answers to the survey question on what the Directive could do to increase transparency regarding cross-border stocks reveals that Member States and CSEs generally:

- **Do not trust each other's reporting** surrounding cross-border stocks due to the absence of harmonised product definitions and their related statistical codes;
- **Do not feel there are sufficient checks and balances** to ensure the actual availability of cross-border stocks, particularly tickets, due to missing information about who holds precisely what stocks where and for who;
- **Feel uncertain about the** frequency and quality of verification checks and inspections on emergency oil stocks in other Member States due to diverging requirements across Member States (Member States with bilateral agreements likely to have more institutionalised procedures compared to Member States that do not) – in line with the findings of the mid-term review.

All problem drivers

The varying interpretation of Member States with respect to the 'availability and accessibility' of cross-border stocks (in particular tickets) and their uncertainty about the transparency of stocks cross-border (again especially tickets) drive a general concern of Member States about cross-border tickets and stocks and give rise to the restrictions and procedures in place. In response, some Member States also prefer to continue to use their bilateral agreements or Memoranda of Understanding (MoUs) and include rules about information provision, auditing and release of stocks to demonstrate their compliance with Article 5 of the Directive. The IEA also still requires "an agreement […] that it shall impose no impediment to the transfer of those stocks in an emergency to the Participating Country"[29]. That could be another driver as to why many EU IEA Member States continue to use bilateral agreements.

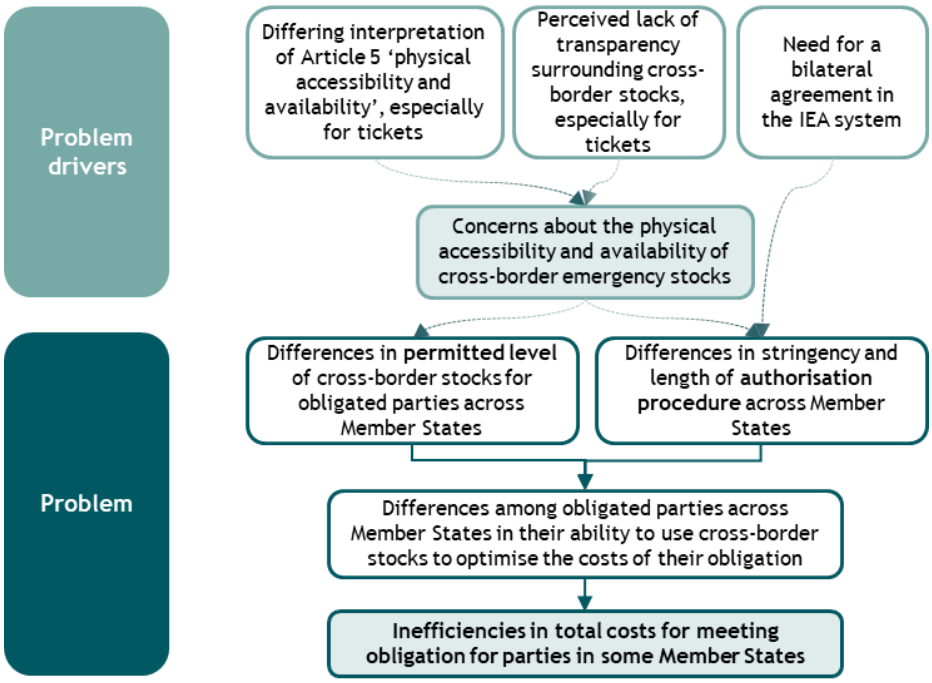
3.5.3. *Building the logic chain of the problem*

In summary, the definition of the problem with cross-border stocks in the EU as well as its separate problem drivers (causes) is visually presented in Figure 3-9. This forms the first part of the logic chain for the problem in relation to cross-border stocks. Chapter 4 expands it further with the potential options of addressing the problem.

28 Trinomics, 2016, Study in support of the mid-term evaluation of the functioning and implementation of the Council Directive 2009/199/EC, available at: https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report%20Trinomics%20-%20August%202016.pdf

29 International Energy Programme 2004, Annex Emergency Reserves, Article 3.

Figure 3-9 Logic chain for cross-border stocks

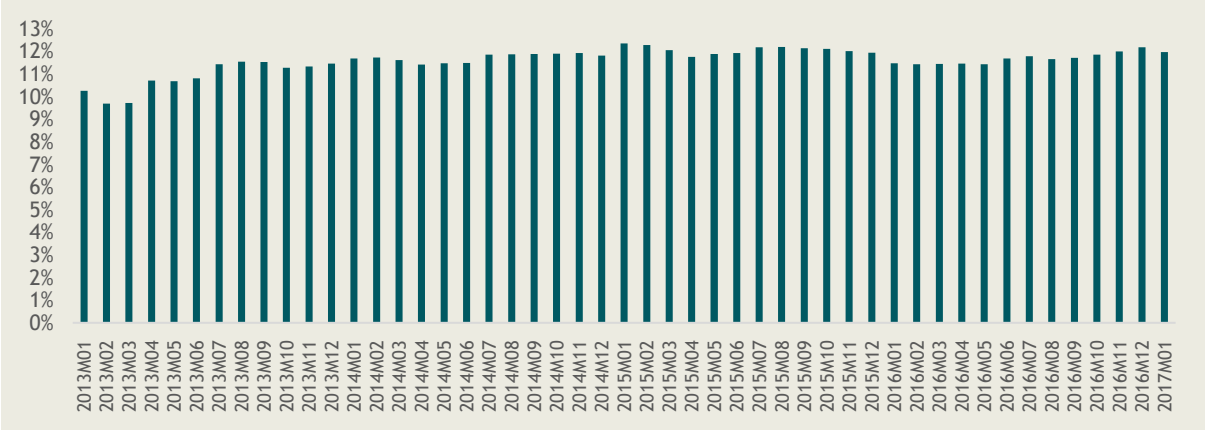


3.5.4. *What is the problem's scale and its consequences?*

Table 3-3 and 3-4 showed there are numerous rules and regulations on cross-border stocks. There are three countries that practically prohibit using cross-border stocks (Poland, Romania and Austria). Some seven Member States (Cyprus, Ireland, Malta, Luxembourg, the Netherlands, Slovenia and the UK) are very liberal in their attitude towards cross-border stocks and the remainder of the countries apply limits on the use of cross-border stocks. Therefore, the scope for more cross-border stocks is large.

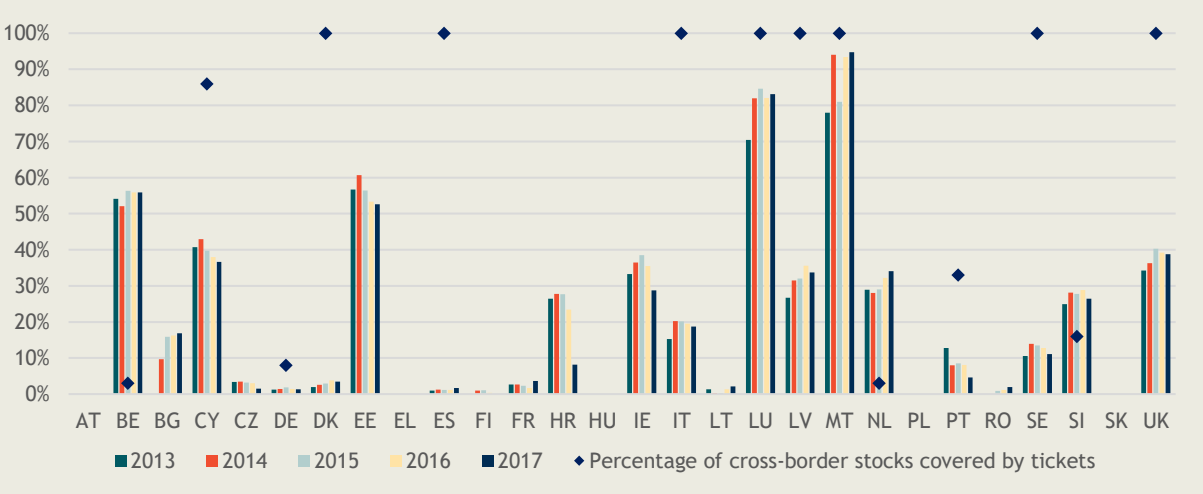
An analysis of Member States' MOS-data supplied to Eurostat shows that the average share of emergency stocks held cross-border in the EU is more or less stable around 12% (Figure 3-10). The share of stocks held cross-border varies widely between Member States though, as shown in Figure 3-11. Luxembourg, Malta, Estonia, Cyprus and Belgium store a large share of their stocks cross-border. Unsurprisingly, these are also countries that do not generally impose a lot of restrictions on the authorisation of cross-border stocks.

Figure 3-10 Stocks held abroad under official agreement, as % of total emergency stocks, '13-'17



Source: Author's calculation based on Eurostat, nrg_141m

Figure 3-11 Stocks held abroad under official agreement as a % of emergency total stocks (average 2013-2017)



Source: Author's calculation based on Eurostat, nrg_141m

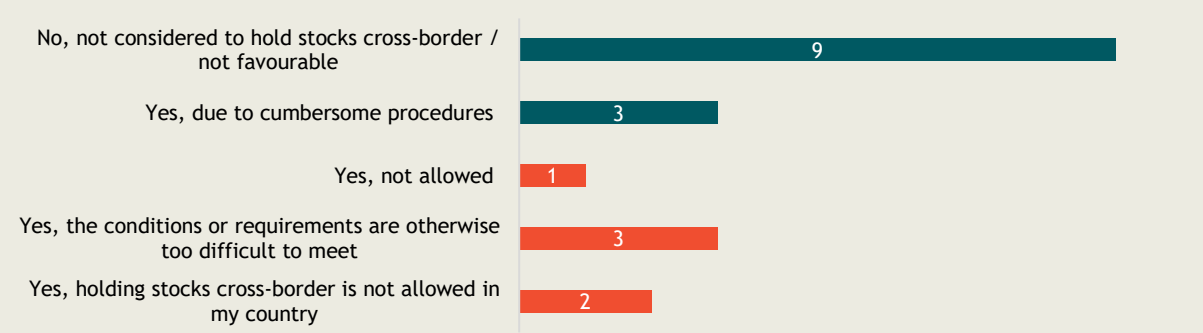
Note: In addition to 'stocks held abroad under official agreement', Austria, Belgium and Luxembourg also hold some 10%/13%/10% (in 2017) of their emergency stocks respectively in another Member States designated definitely for import into their countries.

Note 2: In case the percentage of stocks held abroad covered by tickets equals zero, it is excluded.

Since tickets constitute a significant driver of the problems surrounding cross-border stocks, the share of cross-border stocks held as tickets also matters for the scale of the problem. The markers in Figure 3-11 show that particularly Cyprus, Italy, Luxembourg, Latvia, Malta and the UK have a high share of tickets as well as a high share of their obligation met through cross-border stocks.

As a result of the differences in the rules and regulations regarding cross-border stocks, we observe differences in the extent to which obligated parties in countries use cross-border stocks. The scale of the problem is further illustrated by the share of obligated parties that would like to make increased use of storage or ticket opportunities abroad. Results from our survey indicate that most respondents do not think that the rules and procedures have dissuaded them from holding stocks abroad, though (Figure 3-12). Two-thirds of industry respondents and about half of the CSE respondents indicated that the requirements and procedures in their country did not hamper them from holding cross-border stocks in the past. Responses to this question covered only about half of the Member States, though, and the survey did not record answers from some of the countries with restrictive policies, so these results may underestimate the scale of the problem.

Figure 3-12 Have the requirements, conditions and procedures with respect to the possibility of holding stocks cross-border hampered you to hold stocks cross-border in the past?



Source: Trinomics stakeholder survey as part of this contract (August-September 2017)
Note: 42/43 industry and CSE stakeholders that completed the survey responded to this question

As became visible in Table 3-3, the scale of the problem is large due to the large amount of differences between rules and regulations between countries. The scale of the problem is especially large for those countries with high restrictions on cross-border stocks. The fact that a large share of respondents also do not indicate to have had difficulties with using cross-border stocks in their countries indicates that the scale of the problem might be defined particularly to a specific set of countries in the EU where rules and regulation on cross-border stocks are particularly restrictive.

3.5.5. *What is the EU dimension and what is the likelihood that the problem will persist?*

The EU dimension of the problem is significant as the obligation to hold emergency stocks results directly from the EU Directive. The nature of the problem has an EU dimension by definition as countries are allowed to use each other's storage facilities to meet the obligation of the Directive. Secondly, the differing rules and regulations regarding emergency stocks have partly arisen due to the previous EU Directive (requiring bilateral agreements) as well as the differing interpretation of the current Directive's Article [5]. The problem is likely to persist if no action is taken because the Directive is partially the cause of the problem (as explained above). If there would be no changes to the Directive, then the Member States will not be required or incentivised to adopt any changes to their rules, procedures and requirements currently applied for cross-border stockholdings.

4. ELABORATING THE PROPOSED OPTIONS

4.1. Introduction

For each of the four measures, this chapter presents the aim of the measure (what should be achieved?) and proposes indicators/criteria to measure the effectiveness of the policy options. The options for which the actual impact assessment will also be conducted in the next phase of the study are further elaborated upon. To this end, we briefly present our own assessment of the options in the ToR, discuss the stakeholder feedback in the survey and the interviews and, based on this, arrive at our conclusion and proposal for options for inclusion in the impact assessment. At the end of each section, we present the full logic chain per measure, including the policy options.

4.2. Changing the naphtha yield rule

4.2.1. *What should be achieved?*

The aim of changing the calculation method of the stockholding obligation, in particular the naphtha yield rule, is to reduce unnecessary volatility generated by the methodology. The expected outcome would be smaller and/or more predictable changes in the stockholding obligation due to changes in naphtha production, which would in turn reduce costs to comply with the obligation. The selected indicators and criteria to measure the effectiveness of the policy option are:

- The level of change in the CSO generated due to the use of a different methodology from one year to the next (due to a change in the naphtha yield);
- The (avoided) additional cost of sourcing and storing oil to reflect the adjustments due to the naphtha yield trigger;
- The variation/distribution (between Member States) of the avoided additional cost of sourcing and storing oil to reflect the adjustments due to naphtha yield.

4.2.2. *What are the various options to achieve the objectives?*

The options, as introduced in the ToR, are as follows:

- **Baseline** - Countries with a naphtha yield lower than 7% apply a 4% deduction; countries with a naphtha yield higher than 7% deduct actual naphtha consumption or actual naphtha yield (whichever is smaller)
- **Option 1** - Countries with a naphtha yield lower than 4% apply a 4% deduction; countries with a naphtha yield higher than 4% deduct actual naphtha consumption or actual naphtha yield (whichever is smaller)
- **Option 2** - Actual naphtha yield deducted from crude oil equivalent
- **Option 3** - Actual naphtha consumption deducted from crude oil equivalent
- **Option 4** - Actual naphtha yield or consumption would be deducted (whichever is smaller)
- **Option 5** - No naphtha yield correction

The baseline option is the current approach in the Directive and follows the IEA methodology. Option 1 is similar to the one proposed by Belgium in the OCG meeting in

June 2015, which was supported by some countries.[30] While this option addresses the potential volatility of the CSO for those countries with a naphtha yield around the 7% trigger, it does not fully coincide with the option proposed by a group of CSE stakeholders[31]. Options 2, 3 and 4 also address the volatility issue, but may have an impact for countries with higher naphtha yields. All these options (baseline and options 1-4) consider a consistent treatment of naphtha both in the CSO calculation (where the methodology accounts for a deduction of naphtha both for use in the petrochemical industry and gasoline production, as per the definition in Section 4 of Annex B to Regulation (EC) No 1099/2008 referred to in Annex II of the Directive) and the level of stocks held (where all naphtha is excluded, as per Annex III of the Directive). However, the portion of naphtha for gasoline production should in any case be accounted for.[32] Option 5 would imply an inconsistent treatment of naphtha within the Directive, as naphtha would be included fully in the CSO calculation while it is not included in the level of stocks held.

These options were validated in the stakeholder survey, where 78% of the 65 respondents agreed that these were the relevant options to further improve the functioning of the Directive.

Box 4.1 Feedback from stakeholders

22% of respondents did not agree these are the relevant options and provided further details on this regard. The main points that were brought up are listed below:

- Option 1 only creates a different threshold, moving the problem without resolving it.
- Option 5 leads to an increase in obligations (and related costs) for many countries even though consumption would not change.
- A distinction is needed between naphtha stocks for petrochemical use and for gasoline production. The deduction should only refer to naphtha for petrochemical use while the naphtha stocks for gasoline should be included in the CSO calculation.
- National law may prevent the deduction of naphtha consumption in at least one country, in which case a percentage is preferred.

Other stakeholders highlighted their preferences among the options though no consensus was apparent.

When asked for additional options, only seven responses were provided. These were diverse, with few actual proposals for additional options. Stakeholders highlighted their preferences as well, with one mentioning option 1 and another one mentioning option 4. Three stakeholders mentioned that it should be possible to count naphtha which is used for purposes other than petrochemical as emergency stocks.[33] Currently, the Directive in Annex III states that naphtha products are not included in the calculation of stock levels held.

Other proposals mentioned include:

- Dividing total obligations between countries using a system based on base period final consumption (BPFC[34]) shares.
- Calculate a rolling average on three years in order to increase the stability of the stockholding obligation.

[30] http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=20764&no=2
[31] Representatives from CSEs of Belgium, Ireland, Netherlands, Spain, Czech Republic, Denmark, Slovak Republic, Estonia, Austria and Germany
[32] Currently annex III states that "Stocks of naphtha … are not included" when calculating the level of stocks held. Motor gasoline, however, is included and reported, and indirectly includes naphtha which has already being utilised for gasoline production.
[33] A stakeholder, in a similar line, mentioned that the deduction should be expanded to LPG used for non-energy purposes.
[34] The Base Period Final Consumption (BPFC) equals the monthly average end consumption of the last four three-months' periods before the onset of the crisis.

- Return to the previous system with the three specific stock obligations, where there is more convergence between stocks held and internal consumption.

The BPFC based proposal and the return to the previous system however would imply losing the alignment with the IEA.

Conclusion and proposal

Based on the reviewed information we suggest assessing the options presented in the ToR, plus two additional options. The first one would be an adjustment to option 1 (hereafter option 1B) which was proposed previously by a group of CSE stakeholders[35]. This would imply removing the trigger from the calculation and basing the calculation of the CSO on the lowest value from two calculations:

1. Obligation = net imports * (1-actual % of naphtha yield) - but if actual naphtha yield is <4%, the average naphtha yield of 4% is deducted;
2. Obligation = net imports – actual naphtha consumption.

This option is very similar to option 1. The main difference is for those countries with naphtha yield under 7%, which would not automatically take a 4% deduction but would rather use the lower CSO calculation using either the 4% or the actual naphtha consumption.

The second option (option 6) would be the scenario where naphtha used for energy purposes will be included as eligible to meet the CSO (as opposed to the current situation where no naphtha is included) and where naphtha for non-energy purposes is deducted from the CSO calculation (as opposed to the current situation where the overall naphtha yield is deducted). This option could also be applied to LPG. However, we are aware that data availability to perform the required calculations may be limited, and this will be taken into account in the IA.

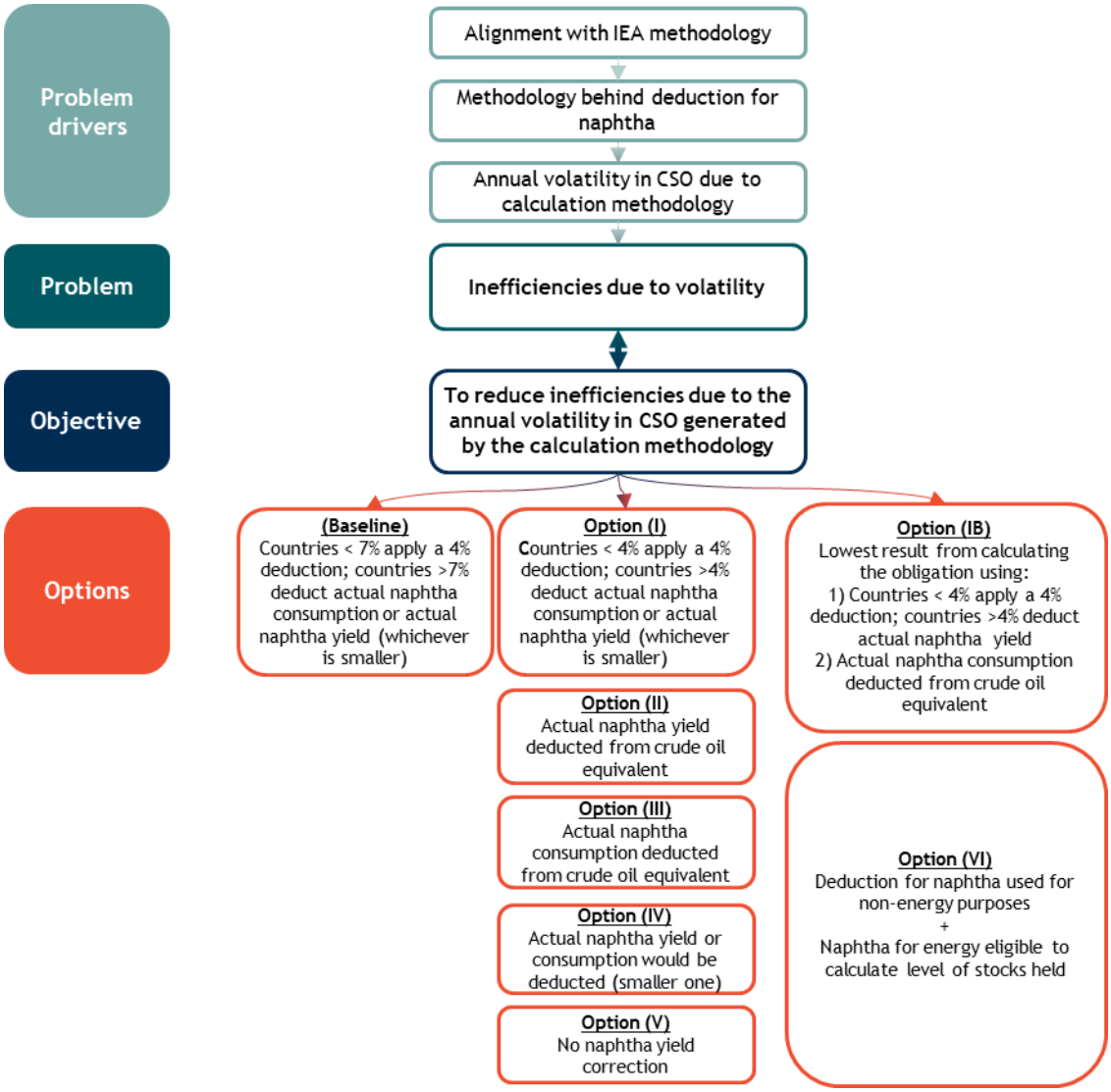
While performing the impact assessment we will take into account the fact that stakeholders expect option 5 to lead to an increased CSO for most countries (without a change in the actual consumption). Furthermore, this option does not allow for a deduction of naphtha for non-energy purposes. We expect to confirm these findings via the impact assessment.

4.2.3. *Logic chain including options*

In summary, Figure 4-1 presents the analysis of the problem with the naphtha yield deduction. These logic chains make the link between the definition of the problem, its root causes, the objectives of the intervention (alleviating the problem) and the considered options for the measure.

[35] Representatives from CSEs of Belgium, Ireland, Netherlands, Spain, Czech Republic, Denmark, Slovak Republic, Estonia, Austria and Germany

Figure 4-1 Logic chain for the naphtha yield rule



4.3. Changing the 10% deduction rule

4.3.1. *What should be achieved?*

The aim of changing the 10% deduction rule is to reduce costs while safeguarding that available and accessible emergency stocks correspond to at least 90 (or 61) days of average daily net imports (or consumption). This addresses the potential problem that the stockholding obligation in the EU system might be in practice higher than needed, resulting in unnecessary additional costs for holding emergency stocks.

There are two interpretations of 'safeguarding that available and accessible emergency stocks correspond to at least 90 (or 61) days.' The first interpretation is that, in view of the harmonisation with IEA rules, the total stockholding obligation in the EU system can be as easily (or as difficultly) complied with as the stockholding obligation in the IEA system. The second interpretation is that for stocks that are 100% available and accessible there is no justification for any reduction, whereas for stocks where this cannot be guaranteed, a deduction would be justified. A cross cutting issue in this respect is the definition of unavailability: is this (1) limited to technical unavailability

(e.g. tank bottoms) or does this (2) also include the unavailability of working stocks?[36] The selected indicators and criteria to measure the effectiveness of each policy option are:

- The level of the stockholding obligation and the cost reduction that can be realised (per country and for the EU as a whole);
- The actual accessibility and availability of the emergency stocks concerned (to what extent can this be guaranteed? Both in terms of technical availability and in terms of potential inclusion of working stocks, linking to the security of supply);
- The level of the stockholding obligation in comparison with the compliance with the stockholding obligation in the IEA system (or in other words: if you would comply with the EU obligation, would you then also comply with the IEA obligation?).

4.3.2. *What are the various options to achieve the objectives?*

The following options are proposed in the ToR:

- Baseline - When calculating the level of emergency oil stocks actually held, the Member State would apply to the quantities of stocks a correction factor of 10%, to take account of the amount of stocks that might not be accessible (e.g. tank bottoms);
- Option 1 - The 10% deduction rule would not be applicable for emergency stocks owned by Central Stockholding Entities[37], because there would be no doubt about the availability of these emergency stocks;
- Option 2 - The 10% deduction rule would not be applicable for those Member States that commit to make sure that, in addition to the emergency stocks, at least 10 days of commercial stocks (or 6.8 for Member States under 61-day-obligation) will be held;
- Option 3 - The 10% would be replaced by a 5% reduction (or any other percentage figure that can be justified based on existing literature or practices);
- Option 4 - No deduction percentage would be introduced (the last two paragraphs of Annex III would be deleted).

All the options to the baseline have their own potential merits. Option 1 is a valid option as long as the emergency stocks owned by CSEs would be fully available and the feedback of CSEs on this issue suggests that this is usually the case (and often contractually safeguarded). In option 2, Member States would still comply with the stockholding obligation in the IEA system, as 90 days would have to be covered through emergency stocks and the remaining 10 days could be covered through existing commercial stocks. Option 3 takes a different perspective, and limits the deduction to technically unavailable stocks (reason 1 why stocks may not be available, see section 4.3.1), rather than taking a broader perspective on the unavailability of stocks, including working stocks (reason 2 why stocks may not be available, see section 4.3.1) and the stipulation in the Directive that all emergency stocks should be accessible and available at all times. This option acknowledges the often expressed opinion that 10% is overstating the amount of stocks that currently would be technically unavailable.[38] Option

[36] Note that these stocks could, technically, be put on the market, but as economic operators would want to restore their working stock levels as quickly as possible, the effect that this has on the supply of oil and oil products to the market would be nullified in a short period of time.

[37] In fact, this option also includes not applying the 10% deduction rule for government stocks, but the option is defined to cover only CSE-owned stocks as practically in the EU there are not government stocks as most governments have set up some type of CSE to manage with the CSO. The results of this impact assessment could therefore equally well apply to government-owned stocks and without a loss of conclusions and findings the option could be rewritten to include government-owned stocks. For practical reasons, though, we proceed by referring to CSE-owned stocks, as this is what it in practice boils down.

[38] Most respondents and interviewees suggest that the level of technical unavailable stocks would currently be around 3% on average. Some indicate that it is somewhat lower (1-2%) and some indicate that it could be up to 5%. Industry experience further suggests that the exact level of unavailable stocks is dependent on the type of storage facility. For example, the level of technical unavailable stocks would be lower in tanks with fixed rooftops than in tanks with floating rooftops. One respondent

4 has its own merits as well, and (implicitly) relies on the requirement in the Directive that all emergency stocks should be accessible and available at all times.

In the stakeholder survey, 81% of the 81 respondents answered 'yes' to the question "Do you agree that these are relevant options to further improve the functioning of the Directive?" The 19% that answered 'no' to this question mainly did so because they were not in favour of one or more of the options. Two respondents point at the danger that, without further safeguards in terms of quality of stock conditions, reducing the 10% would result in less accessible and available stocks, given the fact that some obligated parties, including some CSEs, are covering obligations with working stocks.

The survey also asked for any additional options for changing the 10% deduction rule. There were a small number of additional suggestions as follows:

- 10% reduction for emergency stocks managed by CSE/Ministry, i.e. also tickets provided that the CSE/Ministry inspects the stocks and contractually stipulates that all stocks under ticket need to be made available in case of a crisis;
- Using/moving closer to the IEA methodology: both commercial and emergency stocks should be eligible to meet the CSO and the 10% deduction should be applied on this total (commercial and emergency stocks). In agreement with the IEA this reduction could be reduced to something like 5%, or any other percentage that can be justified based on existing literature or practice;
- The kind of storage facility could be considered: in certain facilities there could be no deduction while in other facilities a certain percentage could be applied;
- In any case it is important to keep alignment between Annex III and the IEA methodology (this was one of the objectives of Directive 2009/119/EC);
- The 10% deduction should not be applied for stocks held in separate storage facilities that are 100% accessible and available. For example, in Spain, private contracts with CLH (main logistic company with more than half of the market) guarantee to oil companies that 100% of the product is available without any deduction. If this is technically possible in the private field, this rule could be applied as well in the CSO field. It should then be confirmed by the Commission that this contractual practice is widespread all over the EU and if so, proceed to eliminate the 10% deduction applicable to the level of emergency stocks.

Conclusion and proposal

The options included in the ToR are all relevant options to consider and are not disputed with credible arguments by stakeholders. We are not in favour of adding suggestion 1 above (also no 10% deduction on tickets bought by CSEs/Ministries) as there would be no material difference between a CSE or an economic operator buying the same ticket with the same contractual stipulations. Suggestion 2 might be out of scope and after discussion with the Commission we have decided not to include this as a separate option. Suggestion 3 we do not recommend including as an option as it does not deal with parts of the rationale underlying the rethinking of the 10% deduction (fundamental difference between the EU and IEA system, impact of working stocks on availability) and, moreover, seems to be a rather complex option. Point number 4 has been taken on board as (more or less) one of the indicators and criteria to measure the effectiveness of the policy option. As presented, suggestion 5 seems to underline option 4 of the ToR and does not suggest anything in addition. An alternative way of looking at it, however, is that all stocks that are located at external (to the refiner and trader) storage facilities owned by economic operators should be exempt from the 10% deduction, as long as the full

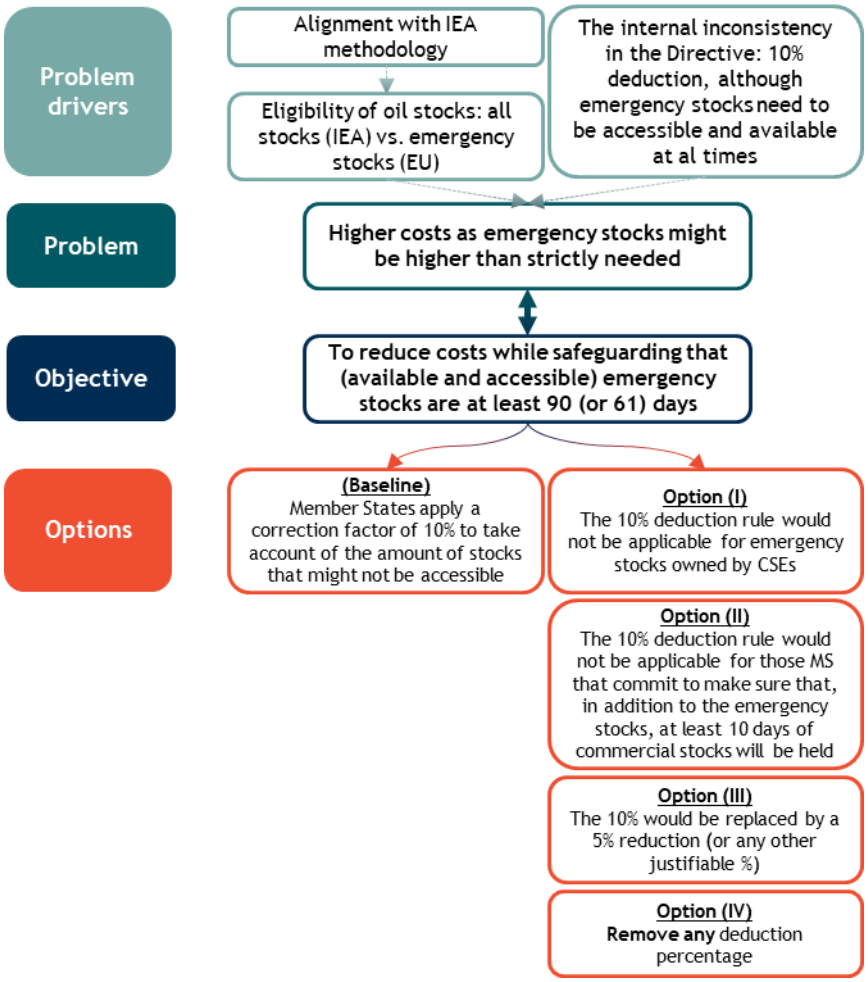
indicated that, depending on the various tank technologies, the (technical) availability is in the range of 90-100%. Note that we have not come across a study that provides a reliable estimate for the average level of technical unavailable stocks within the EU.

availability (that is, net of any tank bottoms) of the product is contractually guaranteed. This could be combined with option 1 to form an additional option.

4.3.3. *Logic chain including options*

In summary, Figure 4-2 presents the analysis of the problem with the 10% deduction in Annex III. This logic chain summarises the link between the definition of the problem, its root causes, the objectives of the intervention (alleviating the problem) and the considered options for the intervention.

Figure 4-2 Logic chain for the 10% deduction



4.4. Moving the start date of the stockholding obligation

4.4.1. *What should be achieved?*

The primary purpose of considering options for changing the start date of the stockholding obligation is to give the stockholding bodies more time to adjust their stockholding. This increase in time should enable them to increase their stockholding (in years where this is the case) before the deadline and for a lower cost, on the assumption that if there is a longer period to purchase oil or tickets then a better price can be found.

The selected indicators and criteria to measure the effectiveness of the policy option are:

- The risk of extra costs in oil purchase (physical or tickets) or purchasing oil in a short period of time that would be avoided by moving the annual compliance date from April 1st to July 1st;
- The administrative costs (and complexity) of purchasing oil in a short period of time that would be avoided by moving the annual compliance date from April 1st to July 1st;
- The extra costs of holding a relatively high level of emergency stocks in the period April-June if the stockholding obligation would go down for the previous to the current year.

4.4.2. *What are the various options to achieve the objectives?*

The only options proposed in the ToR for this measure are:

- Baseline (do nothing) – Member States would remain obliged to comply with the stockholding obligation as from 1st of April (March MoS submission) each year;
- Option 1 – Member States would be obliged to comply with the stockholding obligation as from 1st of July each year, in order to improve cost efficiency when carrying out the necessary adjustments of the emergence oil stocks.

The survey contained a question on the options for change, with 61 of the 78 respondents (78%) agreeing that option 1 was a relevant way to potentially improve the Directive.

The survey also asked for any suggestions on alternative options to improve the Directive, with regard to the annual compliance date. There were a small number of additional suggestions as follows:

- Use a quarterly rolling basis for calculating the obligation (as is done in the UK system) for economic operators, as this should reduce the annual (potential) shock;
- The Danish CSE (who operate with a self-imposed 10% excess, so are not affected by this issue) already use July 1st as their annual update;
- One respondent also pointed out that if the date was changed to July 1st the IEA deadline should also be adjusted to this.

It appears that there may be a potential unintended consequence of extending the compliance date to July 1st. This is, as explained earlier, that in years when the stockholding requirement goes down (which is almost as frequent a situation as the stockholding requirement going up, and given the policy goal to reduce energy consumption and to reduce the use of fossil fuels should increase into the future), during April, May and June the stockholding body would need to hold more than required (if the compliance date had remained April 1st). Being able to reduce the stockholding more quickly would give the ability to more quickly reduce costs. This issue suggests that it may be worth considering another option: the stock level between March 1st and July 1st is to be based on the lower value of the 90 day average from the annual data in year -1, or year -2. This option would allow countries to quickly reduce their stocks if the obligation went down, but give them longer to increase if their obligation went up. An alternative option would be that Member States must comply with the new (annual) stockholding obligation from July 1st, but are allowed to comply with the new stockholding obligation anywhere between April 1st and July 1st if the stockholding obligation goes down (and this would mean that they would not comply with the CSO of year -2 in this period). However, this option adds a substantial extra level of complexity in terms of compliance, monitoring and reporting. Therefore this option is not considered to be worth further analysis.

Another option that could be considered is to move the compliance date to align (practically) with the IEA date. This would mean that the start date of the obligation would be May 1st and that the figure reported at the end of April would be used (the April closing stock / the May opening stock- MoS submission) – as this would mean that the closing stocks held at the end of April / beginning of May would have to be in line with the 12 month average for the previous year. This option addresses the important practical difference between the IEA and the EU obligation that relates to the stocks being available 'at all times'. In the EU obligation this is interpreted as meaning that the opening stocks in a month need to be at the correct level – hence the current March 31st/ April 1st deadline. This option would give an extra month for stockholders to increase their stocks in years when their obligation increases. This option also has a lesser impact than the July 1st option with regard to having to hold 'excess' stocks in years when the obligation decreases: this would only be the case for one month longer than current, as opposed to three months longer under the July 1st option.

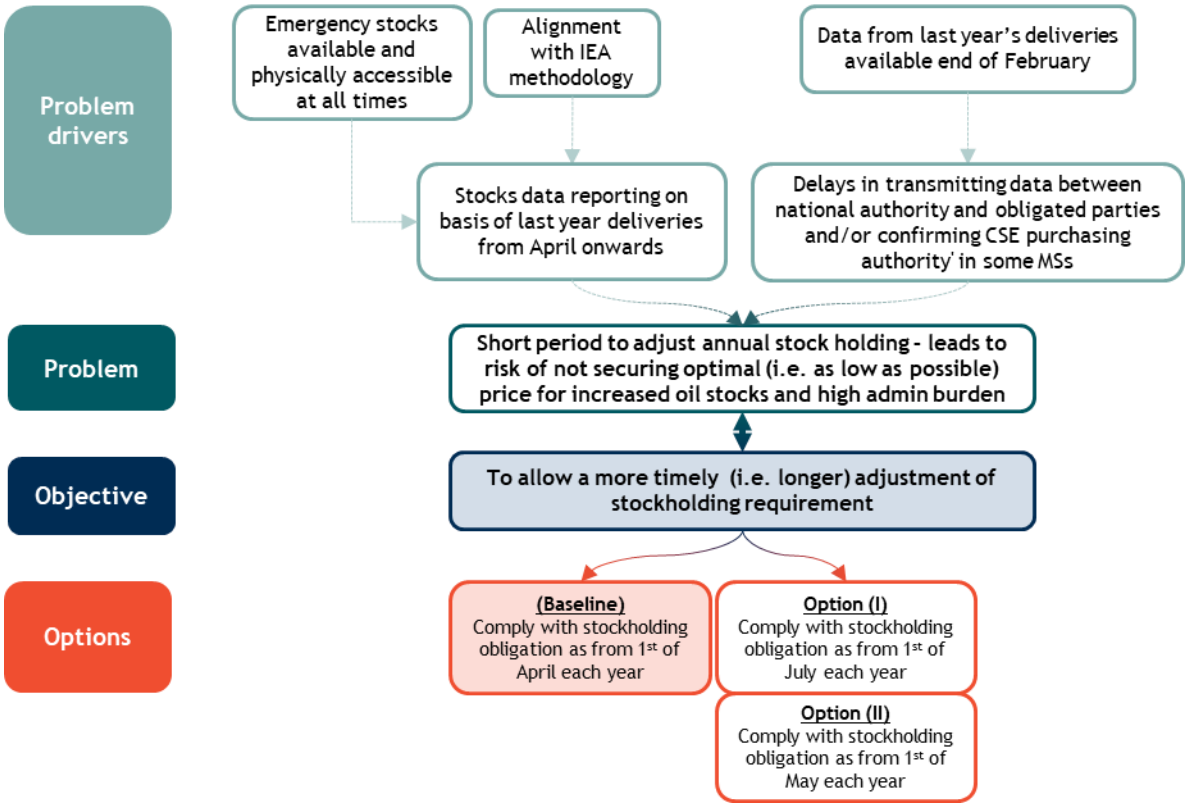
Conclusion and proposal

It appears that the primary option, that of extending the annual compliance date to July 1st, is generally supported, but there is some value in considering the option of May 1st. Another option of a quarterly adjustment is rejected from further analysis due to added complexity. Another sub option being that the quarter from April could be based on the lower figure of the previous year or the current year (to allow more time to adjust for an increase but would also allow for a reduction to be more quickly put in place) is also rejected for the same complexity reason.

4.4.3. *Logic chain including options*

In summary, Figure 4-3 presents the analysis of the problem with the compliance date of the Directive. This logic chain summarises the link between the definition of the problem, its root causes, the objectives of the intervention (alleviating the problem) and the considered options for the intervention.

Figure 4-3 Logic chain for the compliance date



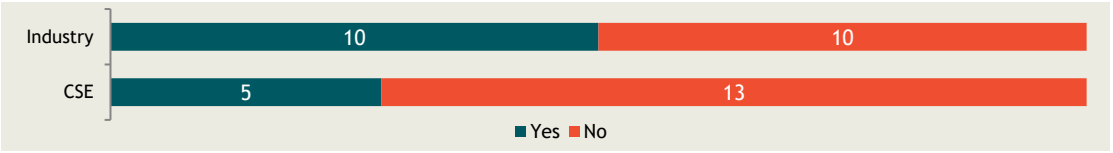
4.5. Clarifying the Directive's rules on holding cross-border stocks

4.5.1. *What should be achieved?*

As presented in Chapter 3, the problem in relation to cross-border stocks is the cost inefficiencies that exist for certain countries from only being limitedly able to use cross-border stocks, because of national restrictions to use cross-border stocks and/or a cumbersome authorisation procedure.

First and foremost, the goal of the Directive is to ensure the presence of a robust emergency stockholding system. Ensuring the ability to secure the supply of emergency stocks is key in this respect. Cross-border stocks are allowed and equally eligible as emergency stocks as long as they meet the physical availability and accessibility definition (Article 5). As long as that assumption is satisfied, though, the costs for having meeting the main objective of the Directive should be minimised as much as possible. Therefore, the objective of the intervention should be to remove the unnecessary impediments to cross-border stocks across the EU so that all obligated parties are equally able to optimise the cost of their stockholding obligation. Our stakeholder survey aimed to verify whether obligated parties share the aim of being able to meet a large share of the obligation using cross-border stocks (see Figure 4-4). The answers are not unanimous though. Most CSEs do not wish to hold more stocks cross-border. Though industry players are more in favour (50% of industry players indicate a wish to hold more stocks cross-border), it would be expected that they would be unanimously in favour of more cross-border stocks. Of those stakeholders that said "no", most indicate that the existing limits on cross-border stocks suffice for them (6 stakeholders). Two CSE stakeholders indicate that they prefer having stocks close to the place of consumption and not cross-border. Those in favour commented that it would increase flexibility in optimising the costs of meeting their obligation.

Figure 4-4 Would you like to be able to meet a larger share of your obligation using cross-border stocks?



Source: Trinomics stakeholder survey as part of this contract (August-September 2017)

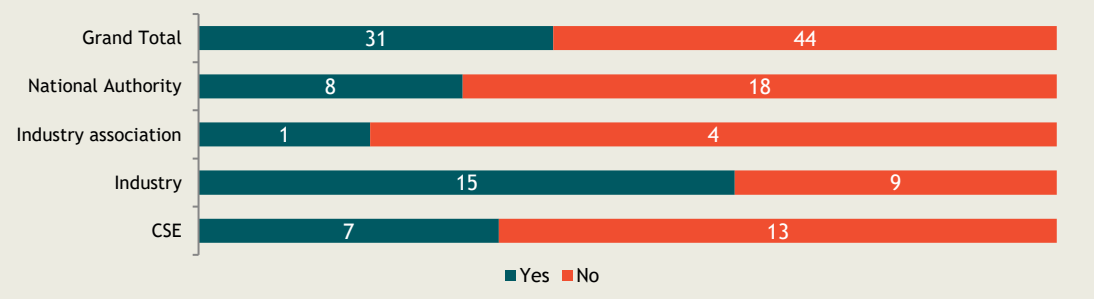
Note: 38/43 industry and CSE stakeholders that completed the survey responded to this question

Also relevant for the definition of the objective, is stakeholders' opinion on the role that the Directive should play in facilitating more cross-border stocks. A small majority of respondents does not see a role for the Directive to facilitate more cross-border stocks either (Figure 4-5). This overall outcome is driven largely by the opinion of national authorities and CSEs that are largely against this objective, while the majority of industry is in favour. Most national authorities and CSEs mentioned that purely promoting cross-border stocks should not be the objective of the Directive as the Directive should foremost promote its main goal of achieving security of supply.

Due to the perceived higher uncertainty of the availability and accessibility cross-border stocks, stakeholders do not support a promotion of cross-border stocks in the Directive. The four "no's" from industry associations included two answers from each two countries. They mentioned that the current rules were sufficient and that authorising cross-border stocks is a national issue that should not be governed at EU level. Also, the nine industry players that answered "no" to this question mentioned that emergency stocks should be held preferably locally from the perspective of security of supply. One also particularly

mentioned that as long as the range of products allowed to be held cross-border is not harmonised, it is better to have stocks domestically.

Figure 4-5 Should the Directive further encourage the possibility for obligated parties to hold stocks cross-border?

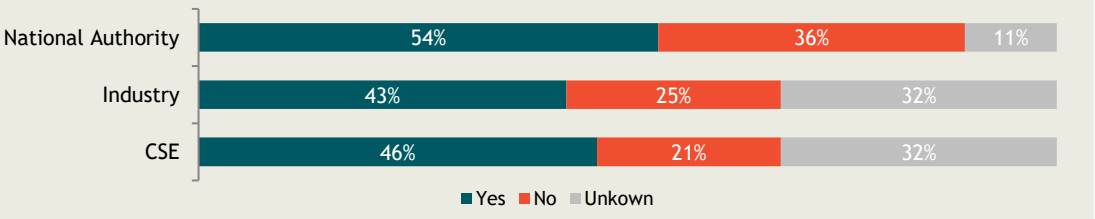


Source: Trinomics stakeholder survey as part of this contract (August-September 2017)

Note: 75/75 stakeholders that completed the survey responded to this question

Stakeholders did more uniformly agree to an objective that would increase the transparency of cross-border stocks (see Figure 4-6). Representatives from all three groups across the EU that answered this question (national authorities, industry players and CSEs) shared this opinion[39]. Specifically four out of 24 respondents mentioned harmonisation of rules and regulations surrounding cross-border stocks as a way to increase transparency about cross-border stocks.

Figure 4-6 Do you think the Directive should do more to increase the transparency of cross-border stocks?



Source: Trinomics stakeholder survey as part of this contract (August-September 2017)

Note: 72/86 national authorities, CSE and industry stakeholders responded to this question.

When we combine these outcomes of the survey with the aim from the ToR to increase the functioning of the Directive in the area of cross-border stocks, we conclude that removing impediments to cross-border stocks is still a legitimate objective as it could achieve efficiency gains in the total costs for the emergency stockholding system in the EU, but that an increase in efficiency should not come at the cost of the quality of the emergency stockholding system. As such, the objective of the intervention should explicitly include that the overall level of accessibility and availability of emergency stocks in the EU should not be affected.

Therefore we formulate the objective for the options to improve the functioning of the Directive in this area to be: to further remove unnecessary impediments to cross-border stockholdings in the EU without eroding the overall level of physical accessibility and availability of EU's emergency stocks.

[39] National Authority representatives from three Member States did not answer the survey

Indicators

The proposed indicators and criteria to measure the effectiveness of any selected policy option to achieve this objective will be further developed after the most effective and efficiency policy option to achieve this objective has been determined in the impact assessment phase. Possible indicators and criteria that could be considered include:

- Share of stocks held cross-border by Member States;
- Average height of restrictions on cross-border stocks applied by Member States (in %);
- Number of countries with similar authorisation procedures (e.g. deadlines and definitions aligned);
- Administrative burden involved in authorising cross-border stocks.

4.5.2. *What are the various options to achieve the objectives?*

In order to achieve this goal, the ToR suggested two options next to the baseline (status quo) option:

- **Option 1 -** Fully harmonising the rules on authorisation of cross-border stocks in all Member States, and in particular the following:
    i. Harmonised procedural steps and deadlines;
    ii. Harmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement);
    iii. Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket).
- **Option 2 -** Partially harmonising the rules on authorisation of cross-border stocks in all Member States, limited to the procedural steps and deadlines for authorising cross-border stocks in all Member States, but leaving freedom to the Member States to define other requirements.

Both options aim to remove differences in the way Member States treat cross-border stocks, but they differ from each other in the stringency and scope of the approach. Option 1 is designed to take away the differences between the 'hard' barriers to cross-border stockholding between countries and option 2 to align the 'soft' barriers from unequal authorisation procedures (in line with table 3-4 in chapter 3.5). Option 1 is the most comprehensive as it aims to harmonise across all Member States the authorisation procedure, limits and rules to cross-border stockholding, so that all apply an equal interpretation of cross-border stocks (and thus includes option 2). Option 2 is less comprehensive as it only aims to achieve efficiency gains from harmonising the underlying authorisation processes of Member States. Still, both options leave a lot of room for further specification, which can make either of them very ambitious or much less ambitious. From the stakeholder consultations conducted during the study, many stakeholders mentioned that they cannot assess the costs and benefits of each option without defining into further detail what both options would entail.

Specification of the options

The impact of both options 1 and 2 will indeed depend strongly on what procedures and restrictions would precisely be aligned. Based on the input from the stakeholder survey, interviews and focus group discussion we aimed to further specify the options. This allows us to measure the effects of the options more accurately in the impact assessment. As a starting point for the further specification of the options, we have taken the "most common" alternative for each of the most important elements that define option 1 and 2 (as presented in table 3-4 in chapter 3.5). In this way, rules and

restrictions would be harmonised to level that most Member States already apply, thereby creating the largest common denominator for the options. This implies:

Option 1

- Option 2 and:
- Harmonising the share of stocks allowed cross-border
  - A minimum of 30% for all countries (in line with the requirement from the Directive to allow a minimum share of 30% delegation for economic operators);
- Common rules on the responsibility for auditing and inspection of cross-border stocks;
- Common rules on tickets
  - Minimum duration of 3 months;
  - Maximum duration of 12 months;
  - Specific list with common allowed products and their definitions in line with the products listed in Annex III of the Directive and their definition in Regulation (EC) No 1099/2008 (not 'any oil');
- Common rules on the physical availability and accessibility of emergency stocks
  - Emergency stocks should be able to be put on the domestic (or European) market within five working days by ship, rail or road.

Option 2

- Harmonising the deadlines in the authorisation process
  - Application received within 30 days before contract start;
  - Approval decision at latest 7 days before contract start;
- Provide automatic acceptance of the cross-border deal after passing of the deadline;
- Harmonising the type of information to be provided
  - Name of obligated party (including address);
  - Name of storage company or ticket seller (including address);
  - Location of the stocks (including address);
  - Duration of the (ticket)contract;
  - Type of product (common definition to be used like in Option 1);
  - Information on how stocks can be repatriated in case of a supply crisis (including transport mode).

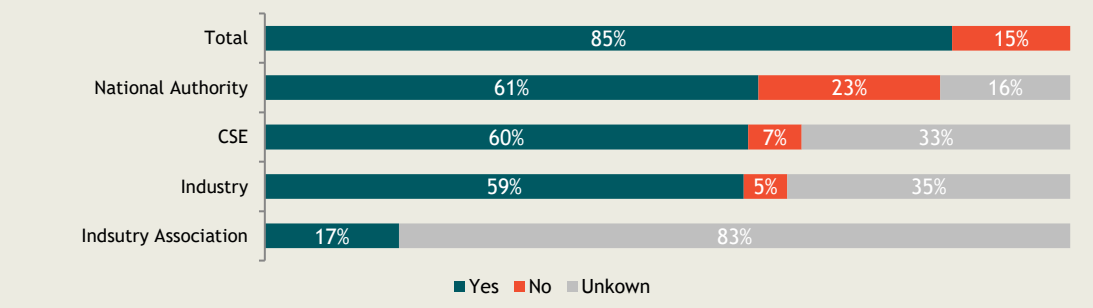
Validation of the options

Both options were validated by means of the stakeholder survey conducted for this study, without the above specification of the options. Based on the responses, 85% of the stakeholders agree that these are relevant options to consider (see Figure 4.7). Only 15% of the respondents indicated these were not relevant options to consider. From these, mainly national authorities did not agree with the relevance of these options. They mentioned that they either prefer using their own national procedures or that only option 1 would be a useful and significantly different alternative to the baseline. One stakeholder mentioned that the options are not relevant because the existing procedures are not the cause of the problem, but rather the different views of Member States on how available and accessible their emergency stocks should be. This last point was already discussed in section 4.5.1.

On the basis of follow-up interviews, the Focus Group Discussion with selected Member State authorities representatives and consultation with OCG-members, it appeared

however that many Member States could not provide their final position on the options before they would be fully specified.

Figure 4-7 Validation of options: Do you agree that these are relevant options to further improve the functioning of the Directive?



Source: Trinomics stakeholder survey for this contract (August-September 2017)
Note: 75 national authorities, CSEs, industry players and industry associations respondents (out of 75 total complete respondents) answered this question

Next to these options, there were other options mentioned as relevant for alleviating the problem during the course of the study:

- Harmonising oil product definitions including common statistical codes for products across the EU in the accounting and reporting of oil products held cross-border;
- Establishing a (digital) permanent database of the location, volume and contracts of stocks held as tickets per facility across the EU so that double-counting of stocks can be avoided;
- Clarifying and harmonising the responsibilities and obligations of Member States with respect to verification and inspections of emergency stocks for stocks owned by domestic obligated parties as well as foreign obligated parties.

We interpret the first and the last point as a refinement and further specification of how Options (1) and (2) might be implemented and therefore not as a standalone, separate option to consider next to the existing options, but we do propose to formulate a third option from the second point (see conclusion).

The validation of options (1) and (2) on the basis of their full specification as outlined earlier in this section was not performed. However, on the basis of the OCG-members that reacted to the draft final version of this report, 50% (5) were in favour of aiming to reach harmonised rules in Option 1, whereas the other 50% (5) were against harmonised rules in Option 1. Most of them mentioned that harmonising rules will ignore the unique characteristics of each Member State in terms of their geographic locations and their domestic oil infrastructure. As a result, harmonising rules for them could imply a reduced ability to secure supply in times of a crisis (if a large minimum share of stocks are held cross-border). Nearly all OCG-members had a positive attitude to aiming to increase transparency of cross-border stocks (option 3) as well as harmonising procedures (option 2).

Conclusion and proposal

In conclusion, we propose to maintain the two options presented in the ToR as they both offer relevant (most stakeholders agree) and sufficiently different alternatives to alleviating the problem. Option 2 might be the more feasible, but less ambitious version of option 1. Both are therefore relevant to consider. Next to these options, we propose to add a third option on the basis of the suggestions made:

Option 3

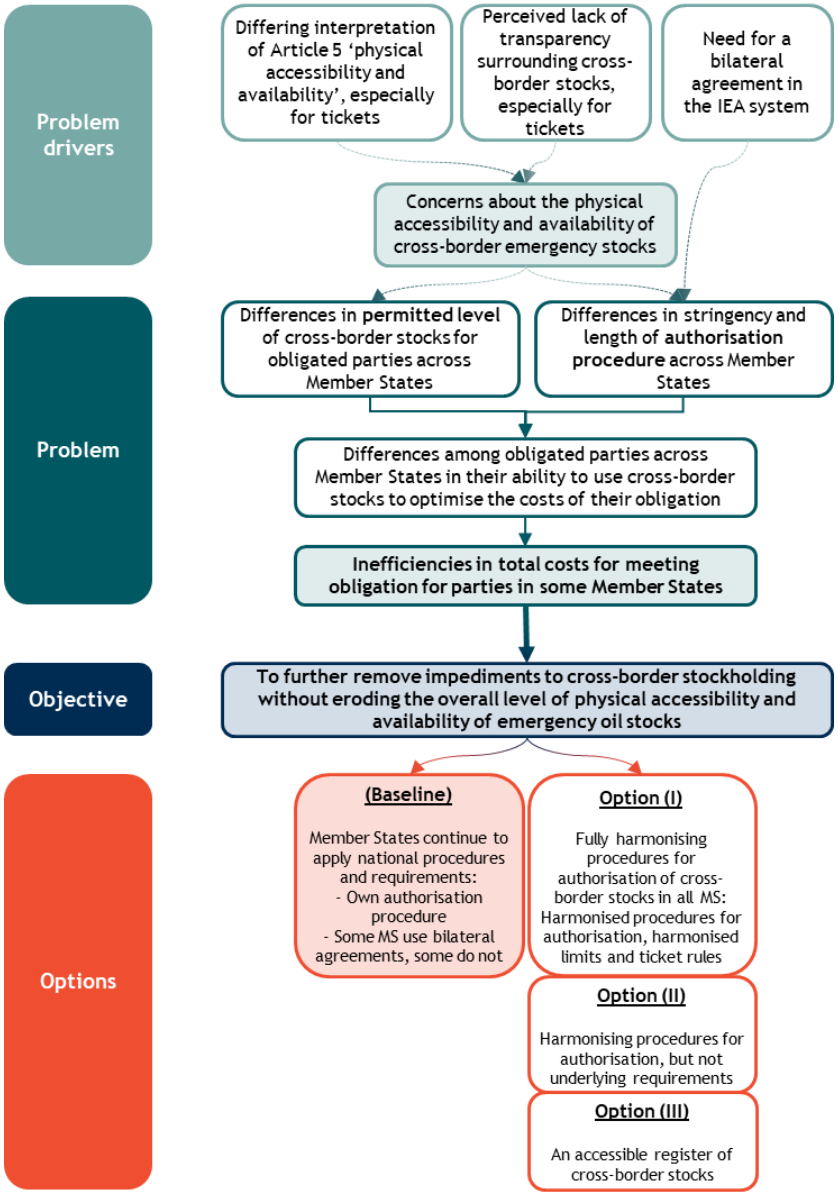
- Developing a common database including the information from the register on the location, volume and type of cross-border stocks held across the EU on a frequent and live basis that is accessible by all obligated parties in the EU;

This option is relevant to consider in isolation as well as in conjunction with both options 1 and options 2 (as refinements of both options) as it could increase the transparency of cross-border stocks further, reducing the uncertainty surrounding cross-border stocks and thereby driving an automatic lowering of the level and number of restrictions across the EU for cross-border stocks.

4.5.3. *Logic chain including options*

In summary, Figure 4-8 presents the preliminary analysis of the problem with cross-border stocks in the EU. This completed logic chain summarises the link between the definition of the problem, its root causes, the objectives of the intervention (alleviating the problem) and the considered options.

Figure 4-8 Logic chain for harmonisation of cross-border stocks



5. WHICH IMPACTS SHOULD BE ASSESSED?

This chapter discusses, for each of the four measures respectively, which economic, environmental and social impacts, if any, should be included in the impact assessment of the policy options. We first provide the feedback in the survey on this matter and then present our proposal based on this feedback and our own considerations.

5.1. Impacts relevant to all measures

A general conclusion of the inventory of potential impacts is that the most significant impacts concern economic issues, we have not identified any major environmental nor social impacts. These most significant impacts are:

- the impact on the stockholding obligation per country and for the EU as a whole;
- the impact on the total costs of holding emergency stocks; and
- the impact on the security of supply.

The impact on the stockholding obligation and the total costs of holding emergency stocks will be assessed quantitatively, while the impact on the security of supply will be assessed in qualitative terms. Other impacts that will be considered for all measures/options and eventually for various combinations of measures/options are:

- the impact on compliance with IEA obligations (and benefits of IEA alignment in general);
- the impact on the administrative burden.

5.2. Changing the naphtha yield rule

5.2.1. *Potential impacts*

The main outcome is the change in the CSO level generated due to the use of a different methodology from one year to the next (due to a change in the naphtha yield). In line with the survey results (described in detail in section 5.3), this change in CSO level would have mostly an economic impact related to avoided or additional costs of holding emergency stock and in the countries' security of supply.

We expect limited social and environmental impacts. Environmental impacts are mostly related to the process of stockholding in the tank parks and transport of the stocks (emissions such as vaporisation, leakages, etc.). There would be a minor impact in the risk of accidents (soil and air pollution) as stocks are handled and stored, as well as a minor impact in the need for storage (and use of land). Potential social impacts would be an impact on jobs in storage facilities and refineries.

5.2.2. *Conclusion*

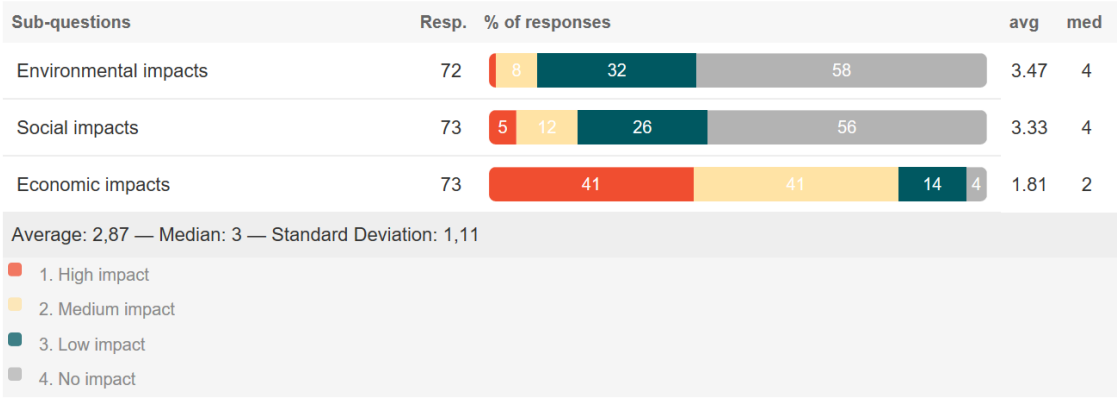
Regarding the impacts of the naphtha yield rule, we will firstly establish the effect of the various options on both the changes in the stockholding obligation per country and the volatility of the changes (measured as the percentage change from one year to the next) and compare them to the baseline. Secondly, we will establish the impact that these changes and the resulting volatility of the changes have on the total costs of holding emergency stocks and the variation per Member State. Finally, we will assess the (other) impacts relevant to all measures as described above.

5.3. Changing the 10% deduction rule

5.3.1. *Potential impacts*

The direct outcome of changing the 10% deduction rule is that the CSO - *all other things equal* - will decrease. This impacts on the total costs of stockholding, which will decrease in the same proportion. In the survey we asked the respondents to assess the magnitude of environmental, social and economic impacts and, if relevant, to provide concrete examples of these potential impacts. Figure 5.1 shows that a small minority of the respondents expect high or medium environmental (10%) or social (17%) impacts, while more than half of the survey respondents did not expect any impact at all. In contrast, 41% expect high economic impacts, while another 41% expect medium economic impacts.

Figure 5-1 Under the assumption that the IEA obligation would also change 10%, what type of impacts does a 10% change in the CSO at EU Member State level create, and what is the relative significance of these impacts?



Source: Stakeholder survey – only completed responses.

Environmental impacts

18 respondents provided additional information regarding the environmental impacts of a 10% change in the CSO. The answers of the stakeholders can be grouped together in the following way:

- The first group of respondents (8) pointed at the lower (in case of a 10% reduction of the CSO) emissions in the process of stockholding (vaporisation, leakages, etc.) in the tank parks and during the transportation and to the (assessed as small - or miniscule by one respondent) positive impact due to lower stocks and commensurately lower risk (soil and air pollution) of accidents as stocks are handled and stored;
- The second group of respondents (8) specifically pointed at the impact on storage facilities and the environmental impact: if the CSO would go up, there would be a need for more storage facilities which affects land use and (also) negatively affects the environment because of increased maintenance activities. If the CSO would go down, there is less need for storage facilities which may result in some idle capacity that needs to be shut down at a certain moment in time;[40]
- Finally, two respondents indicated that the environmental impacts would be indirect and did not provide examples of these impacts. One respondent summarised it as follows: "the environmental impact will change by 10%."

[40] Note that in the short run (until old storage facilities have been fully dismantled) this usually has some negative environmental impact, whereas in the medium-long run the environmental impact of shutting down storage facilities is positive.

Given the anticipated low level of environmental impacts we have not included these in the impact assessment.

Social impacts

24 respondents provided additional information regarding the social impacts of a 10% change in the CSO. Some responded that there was no impact (2x) or indirect impact (1x), without providing additional explanation. Ten respondents saw the higher (or lower, dependent on the direction of change in the CSO) prices for end-consumers as a social impact, but this will be treated by us under economic impacts. The other responses mainly concerned the impact on jobs in storage facilities and refineries (7x) and, more general, on the potential difficulty for storage providers to find alternative clients and the potential closing of existing tank capacity at EU level (in case of a 10% deduction of the CSO). We note however that a lower CSO would in the end have positive indirect employment effects in other parts of the economy, as the total costs of emergency stockholding would go down and these benefits would be passed on to other economic players.

As in a welfare economic analysis employment effects, in this case caused by lower emergency stocks[41] and consequently lower costs for holding emergency stocks, would not be taken on board, we have discarded the social impacts in the impact analysis.

Economic impacts

53 respondents provided additional information regarding the economic impacts. The large majority of the stakeholders pointed at the impact on costs, either at company level or at national level, of a change in the CSO. At company level, lower costs and freeing of working capital would be welcomed, as the fuel business currently is a low margin business. A minority of the respondents further indicated that a lower (higher) CSO would result in more than proportional lower (higher) costs because of increasing (decreasing) availability of storage facilities and tickets with a corresponding effect on average storage costs and ticket prices. Some respondents indicated that the acceptance and legitimacy of the system under economic operators would enhance if the 10% deduction rule would be abolished. Also the need to build additional storage facilities, in the light of an increasing CSO related to still increasing imports, would become less, herewith potentially avoiding the need to build storage facilities that may well become idle once oil consumption in the EU would start to decrease (cf. the transition to renewable energy and the increasing energy efficiency within the EU). On the other hand, a deduction of the CSO with 10% may also lead to a closing down of storage facilities in certain locations.

Based on the above, we have decided to limit the analysis to the direct economic impacts on the total costs of holding emergency stocks and the security of supply and to disregard the indirect impacts on storage costs and the storage industry at large.

5.3.2. *Conclusion*

The impact assessment will focus on the economic impacts and in particular concern a quantitative analysis of the impact on total costs of holding emergency stocks. This will be weighed against the impact on the security of supply. Finally, we have not included any environmental or social impacts in the impact assessment.

[41] In case the CSO would go down.

5.4. Moving the start date of the stockholding obligation

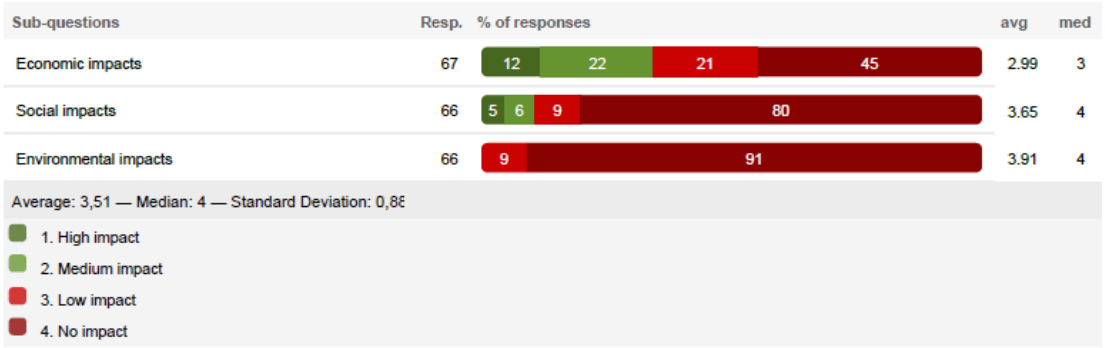
5.4.1. *Potential impacts*

The potential impacts are the costs and administrative burden avoided by (in years when the stock obligation increases) not having to purchase additional oil in a short period, and (in years when the stock obligation falls, if the start date was moved to July 1st) having to hold higher stocks than will be required for April, May and June.

Another potential impact is that in years where the stock obligation increases a Member State may not be able to increase its stocks quickly enough to meet the increased obligation. This would result in a period of time when that Member State is holding less stock than it should be. This would be a breach of the Directive and represent a reduction in security of supply during this period.

The survey included a number of questions on the existence and severity of potential impacts from the April 1st compliance date. The first of these questions was:

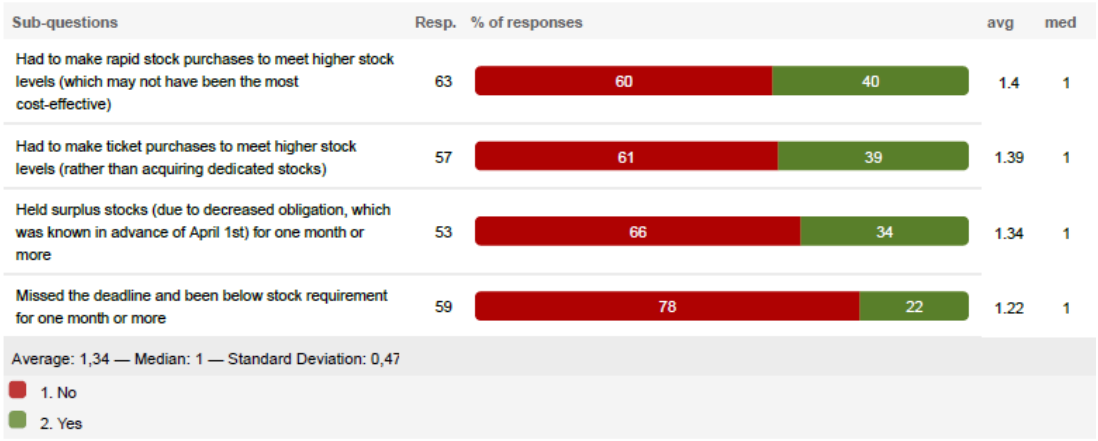
Figure 5-2 What type of impacts does the 1st of April 'compliance date' create and what is their significance?



This response suggests that there are some economic impacts (associated with the need to purchase increased oil stocks quickly) but that these are only encountered by 34% of the respondents. These translate into social impacts, presumably via the passing on of these costs to consumers, for 11% of the respondents. There are no environmental impacts according to 91%, with the other 9% only expecting low environmental impacts. An additional pair of questions on the specific impacts of the annual compliance date were included in the survey.

The answers to this question are a reasonable match with the analysis of the annual changes in stockholding with 40% of respondents having to make rapid purchases to increase their stock levels, and 34% of respondents holding excess stock. This matches the 52% of times that a Member State stockholding has increased from one year to the next (since 2013) and the 43% of times it has decreased. The fact that 22% of respondents admit to being below the stock requirement confirms the assumption that the annual compliance date is having the impact of causing periods of non-compliance.

Figure 5-3 Which of the following impacts/costs have applied to you in the years since the transposition of the Directive in your legislation (2013) due to the current situation regarding the 1st of April compliance date?



However, in terms of the severity of the impact, the responses to the following question confirm that despite these impacts occurring, they are not overly common.

Figure 5-4 Stakeholder Survey - Question 41B

	Yes (number)	Yes (%)	No (number)	No (%)
1 Had to make rapid stock purchases to meet higher stock levels (which may not have been the most cost-effective)	25	40%	38	60%
2 Had to make ticket purchases to meet higher stock levels (rather than acquiring dedicated stocks)	22	39%	35	61%
3 Missed the deadline and been below stock requirement for one month or more	13	22%	46	78%
4 Held surplus stocks (due to decreased obligation, which was known in advance of April 1st) for one month or more	18	34%	35	66%

Only two industry respondents said they adopted the approach under .1 (having to make rapid stock purchases), but many of those who said no were CSEs / national authorities. Therefore, it is not reasonable to conclude that all CSEs have a problem, but it appears that the clear majority of these who do have a problem are in countries with CSEs.

Only two industry respondents said they adopted the approach under.2 (using tickets to meet higher CSO levels), but many of those who said no were CSEs / national authorities

Only one of the respondents who said they adopted the approach under .2 (missing the deadline) was not a CSE, but some of those who said no were CSEs. This suggests non-compliance in some Member States, but the shortfall could have been met via several other routes (e.g. ticket purchases, stocks held by others)

Of those who said they adopted the approach under .4 (holding surplus stocks) four were industry respondents while the rest were CSEs or national authorities. Those who responded No are a mixture of stakeholder types. This split seems strange as it would be expected that the yes would be higher / closer to the no as the number of occasions when the obligation has fallen is close to the number when it has risen. This suggests that the question may not have been understood.

5.4.2. *Conclusion*

- There are real impacts from the annual compliance date being April 1st;
- These impacts are greater for Member States with above average volatility in demand and with a CSE, the CSEs report more difficulty in receiving the information and increasing oil stocks in a short time (because of slow procedures (e.g. for authorising oil purchases, public tendering procedural obligations) at Member State level);
- The impacts only occur (to a noticeable extent) in certain sets of circumstances (increasing demand) and for certain Member States (typically those with CSEs – for the reasons explained above);
- The main impacts are economic, with little or no apparent environmental impact, and the social impacts being linked to the economic impacts;
- Moving the date to July 1st would reduce, though not remove, most of the potential impacts. However, it would increase the cost burden associated with holding larger stocks than required, because this situation would last for longer;
- The main economic impacts that will be looked at are:
  - The extent to which stock holders suffer additional costs by having to purchase stock on a rapid basis (in years when the stock holding requirement increases) and the extent this would be reduced by moving the date to July 1st (or May 1st – based on the April / May MOS submission – so that the opening stocks in May become the de-facto target in line with the IEA procedures)
  - The additional costs that would be incurred by having to hold 'excess' stock for April, May and June (in years when the stockholding requirement decreases) if the annual compliance date was moved to July 1st or the additional costs in this case for April if the compliance date was moved to May 1st .
  - Security of supply impacts during the months of April (and May and June if the date was changed to July 1st), with a smaller stock of oil in those months if the obligation increases, and a larger stock of oil if the obligation decreases.

5.5. Clarifying the Directive's rules on holding cross-border stocks

5.5.1. *Potential impacts*

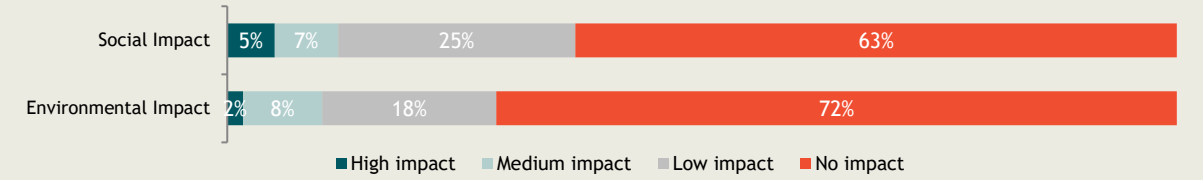
The proposed options to lower impediments in holding cross-border stocks could potentially have economic, social and environmental impacts. The main impact expected at this stage is the lower total costs of meeting the stockholding obligation in the EU due to enhanced possibility for obligated parties to utilise cheaper storage facilities abroad. There might additionally be other economic effects related to administration costs. In order to validate what type of impacts we could expect from harmonising rules and procedures in the EU, we posed the question in the survey.

We found that stakeholders do not expect high social or environmental impacts from either option: 88% of the respondents expect no or low social impact and 90% expect no or low environmental impacts (see Figure 5-5). Some expect a (marginal) potential positive environmental effect through the channel of increased facility utilisation (this could prevent the need to build new tanks). The minor potential social impact mainly considers losses in employment. The options could lead to closures of inefficient storages which can have negative effects on employment in certain Member States (and positive effects in other countries). At EU level however, these employment effects would be negligible.

Stakeholders do expect – in line with our assessment – economic impacts from adopting options [1] or [2]. As Figure56-6 shows, the options are expected to particularly impact on the EU's readiness to respond to emergencies, as stakeholders particularly mention

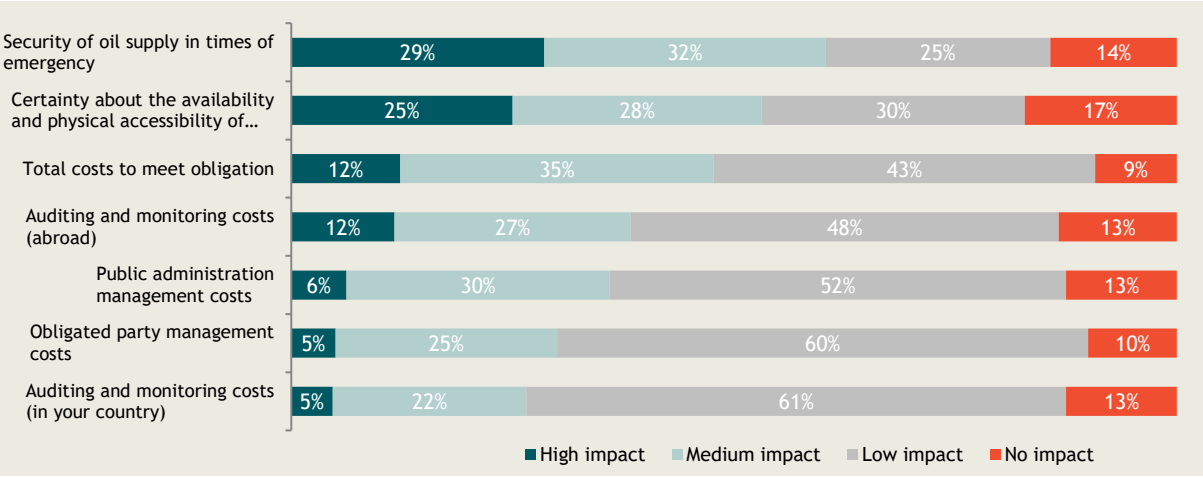
the impact on 'security of supply' and 'certainty about the availability and physical accessibility of emergency stocks' as high or medium impact expected. The impact of the options directly on costs to meet the obligation are expected to be less significant (most stakeholders expect a 'low' or 'medium' impact on total costs to meet the obligation and related management costs such as auditing and monitoring costs). In general, the answers do not differ significantly between stakeholders. Only in the case of the 'certainty about the availability and physical accessibility of emergency stocks', answers are different. Whereas, 68% of the national authorities and 65% of the CSEs expect a high or medium impact of option [1] or [2], only 29% of the industry players believe that either option could have a medium or high impact.

Figure 5-5 Social and environmental impact



Source: Trinomics stakeholder survey for this contract (August-September 2017)
Note: 60 national authorities, CSEs, industry players and industry associations respondents (out of 75 total national authorities, CSEs, industry players and industry associations respondents) answered this question

Figure 5-6 Economic impacts of either option 1 or option 2



Source: Trinomics stakeholder survey for this contract (August-September 2017)
Note: 65 national authorities, CSEs, industry players and industry associations respondents (out of 75 total national authorities, CSEs, industry players and industry associations respondents) answered this question

5.5.2. *Conclusion*

We conclude therefore that the impact assessment should mainly focus on the economic impacts of harmonising cross-border stock rules (including administrative burden). We consider any potential environmental and social effects to be too marginal to warrant a deeper analysis. In terms of economic impacts, the impact assessment should focus both on direct costs related to meeting the stockholding obligation (auditing costs, management cost, storage costs etc.) as well as indirect costs (related to the potential costs for inadequately dealing with a risk in the security of supply in the EU).

6. IMPACTS OF THE MEASURES AND OPTIONS

6.1. Introduction

This chapter analyses the impacts of the measures and options. Apart from impacts that are specific to the measure, such as the impact on the volatility of the stockholding obligation of possible changes to the naphtha rule, we address the impact on the (total) stockholding obligation, the impact on the total costs of holding emergency stocks, the impact on the security of supply, the impact on compliance with IEA obligations and the impact on the administrative burden. As much as possible we assess these impacts quantitatively (in particular the impact on the stockholding obligation and the corresponding impact on costs to hold emergency stocks effect). When this is not feasible, which is largely the case for the three other impact categories, we discuss these impacts in a qualitative manner.

The impact on the total costs of holding emergency stocks are estimated as the change in the level of the stockholding obligation multiplied by the average total costs in euro of holding one tonne crude oil equivalent per year, as further explained in textbox 6-1.

Box 6.1 Costs of holding emergency stocks per tonne per year

With regard to the overall stockholding obligation, for the average annual costs to hold one tonne of emergency stocks we use a range of 17.5-25.0 euro/tonne/year. The upper value is just above the average of the reported total annual costs for holding emergency stocks by CSEs, while the lower value assumes that industry would not bear any costs for holding emergency stocks (which clearly is an extreme assumption).

With regard to the costs of holding CSE-owned stocks, we use a somewhat higher cost range of 24.0-28.0 euro/tonne/ year, acknowledging the fact that these stocks do not concern industry stocks and neither stocks held by CSEs in the form of tickets (which reportedly costed on average around 12 euro/tonne/year in 2016).

Source: Survey, calculations Trinomics

6.2. Impacts of changing the naphtha yield rule

As explained above, the main outcome of changing the naphtha yield rule is the change in the CSO level generated due to the use of a different methodology from one year to the next (due to a change in the naphtha yield). This change in CSO level would have mostly an economic impact related to avoided or additional costs of holding emergency stock and in the countries' security of supply.

Therefore, in this section we focus on establishing the effect of the various options on both the changes in the stockholding obligation per country and the volatility of these changes (measured as the percentage change from one year to the next) and compare them to the baseline. Then, we will establish the impact that these changes and the resulting volatility have on the total costs of holding emergency stocks and the variation per Member State.

In order to facilitate the analysis, we have split the EU countries into:

- Countries with consistently no naphtha yield (0%), for which a change in the naphtha yield rule will have no or limited impact;
- Countries with a naphtha yield crossing the 7% threshold in the last five years, for which the impact is expected to be highest;
- Countries with a naphtha yield consistently above 7%.
- Countries with a naphtha yield consistently below 7%.

The grouping is presented in the following table.

Table 6-1 Country grouping regarding naphtha yield

Type	Countries
Countries with no naphtha yield	Cyprus, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Malta, Slovenia
Countries with naphtha yield crossing the trigger	Belgium, Czech Republic, France, Hungary, Slovakia
Countries with a naphtha yield consistently above 7%	Germany, Netherlands, Portugal, Austria
Countries with a naphtha yield consistently below 7%	Bulgaria, Ireland, Greece, Spain, Croatia, Italy, Poland, Romania, Finland, Sweden, United Kingdom

For the quantitative assessment of these measures, we will focus entirely on the options presented in the ToR thus leaving apart the additional option proposed in chapter 4 (option 6: to include naphtha used for energy purposes eligible to meet the CSO and deduct naphtha for non-energy purposes from the CSO calculation) due to data limitations. Option 6 will be assessed qualitatively to the extent this is possible.

Similarly, the quantitative assessment presents the results for options 1 and 1B together, given that – in practice – both options lead to the same obligations for all 28 Member States in the years assessed.

Box 6.2 Theoretical differences between options 1 and 1B

In theory, option 1 and 1B are not identical. However, when assessing options 1 and 1B in practice for the EU28 for 2014-2017, we found that the final obligations were in all cases the same.[42] Option 1B only results in a difference for the 90 days calculation of net imports for the UK, Estonia and Denmark, but these countries always take the 61 days inland consumption for the CSO calculation so there is no real effect in the tables presented hereafter.

The main theoretical difference is that in option 1B, those countries with a naphtha yield under 7%, would not automatically take a 4% deduction but would rather use the lowest CSO calculation resulting from deducting either the 4% or the actual naphtha consumption. This point is further elaborated, as follows, where we consider two types of countries:

1.Countries with naphtha yield > 4%

- In option 1, the CSO obligation is Net Imports (NI) – actual naphtha yield or NI – actual naphtha consumption (whichever leads to the lowest CSO). In option 1B, the obligation is NI – actual naphtha yield or NI – actual naphtha consumption (which ever leads to the lowest CSO).
- Thus, for these countries option 1 and 1B are identical.

2. Countries with naphtha yield < 4%

- In option 1, the CSO obligation is Net Imports (NI) - 4% in all cases. In option 1B, these countries will have the exact same obligation, unless the obligation resulting from NI – actual naphtha consumption is smaller than the obligation following from option 1.

If the CSO obligation resulting from NI – actual naphtha consumption is smaller than the CSO obligation following from NI – actual naphtha yield, option 1 and 1B are not identical. However, this has only been the case in three Member States over the assessed years and it did not change their CSO obligation as their obligation based on 61 days of inland consumption exceeded the CSO obligation based on 90 days of net imports.

[42] Note that - regardless of the option - the final CSO obligation is the highest of either 61 days of inland consumption or 90 days of net imports.

6.2.1. *Impacts of the options*

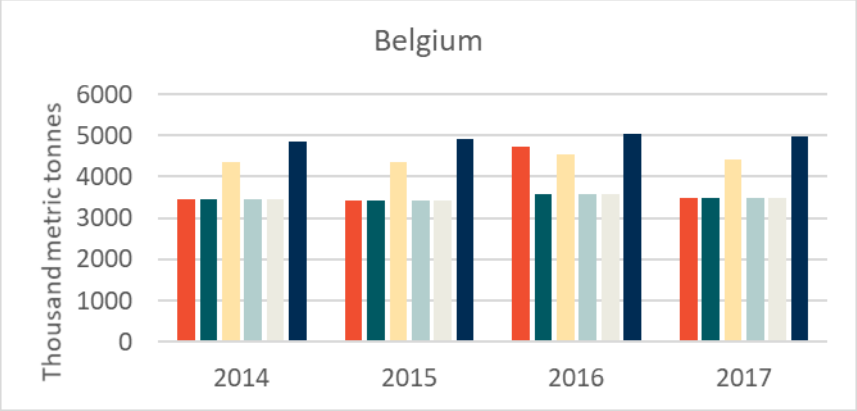
The options assessed are as follows:

- Baseline - Countries with a naphtha yield lower than 7% apply a 4% deduction; countries with a naphtha yield higher than 7% deduct actual naphtha consumption or actual naphtha yield (whichever is smaller);
- Option 1 - Countries with a naphtha yield lower than 4% apply a 4% deduction; countries with a naphtha yield higher than 4% deduct the actual naphtha consumption or actual naphtha yield (whichever is smaller) from the net imports;
- Option 1b - This would imply removing the trigger from the calculation and basing the calculation of the CSO on the lowest value from two calculations:
    - Obligation = actual naphtha yield deducted from net imports, but if the actual naphtha yield is <4%, the average naphtha yield of 4% is deducted;
    - Obligation = net imports – actual naphtha consumption;
- Option 2 - Actual naphtha yield deducted from the COE of net imports;
- Option 3 - Actual naphtha consumption deducted from the COE of net imports;
- Option 4 - Actual naphtha yield or consumption would be deducted (whichever is smaller);
- Option 5 - No naphtha yield correction;
- Option 6 – The share naphtha used for energy purposes will be included in the calculation of the CSO (Annex I) and stocks of stocks of naphtha used for energy purposes will be included as eligible to meet the CSO (annex III).

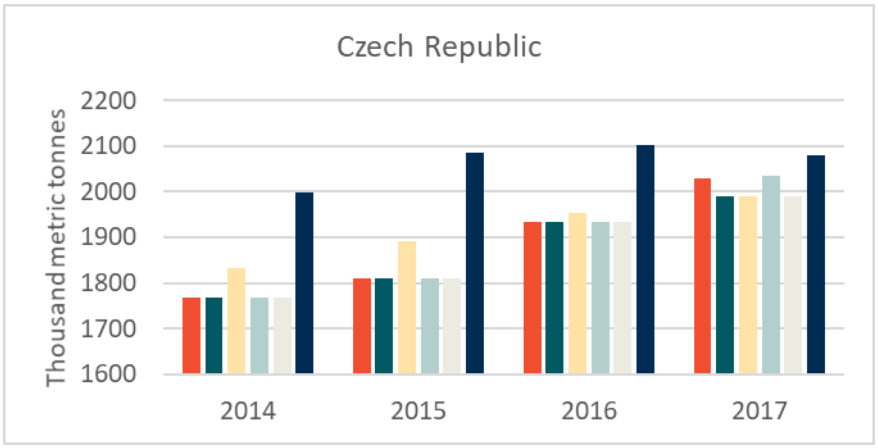
Impact on the stockholding obligation

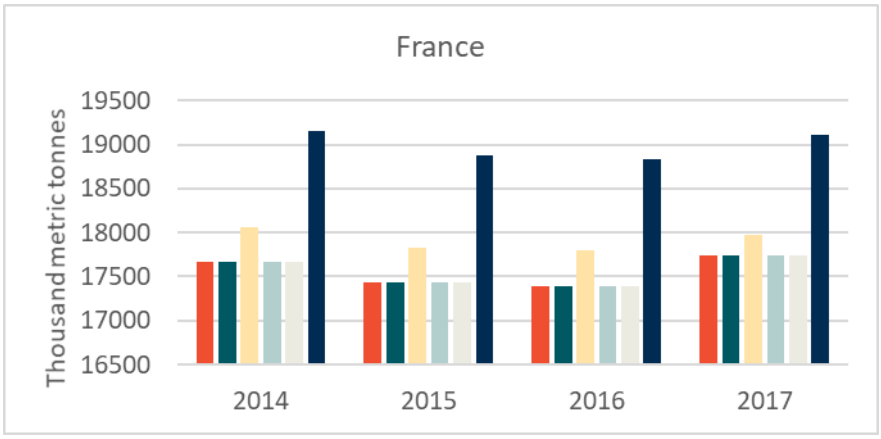
This section provides the impact of the different options on the stockholding obligation. There are no impacts for those countries with no naphtha yield, in all cases except Lithuania[43]. The figures below present the level of the obligation for those countries with naphtha yields crossing the 7% trigger in the last years. Detailed results for all countries are presented in Annex C.

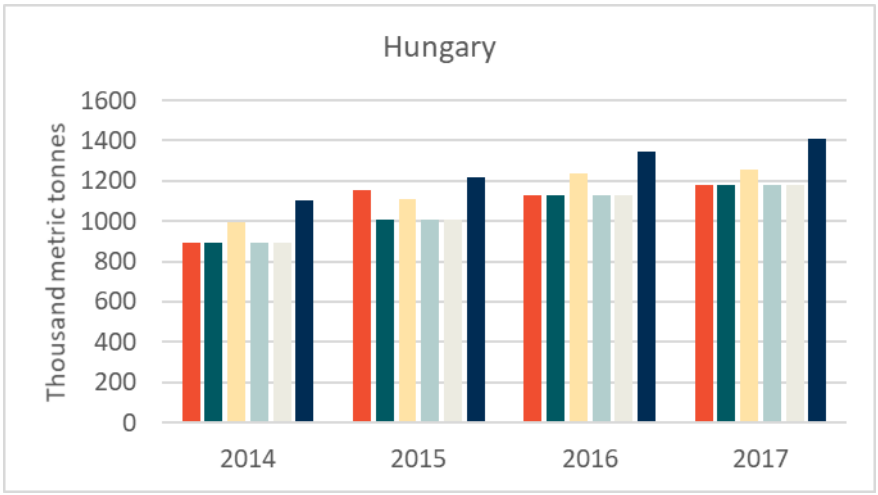
Figure 6-1 Impact in obligation for countries with naphtha yields crossing the 7% trigger[44]

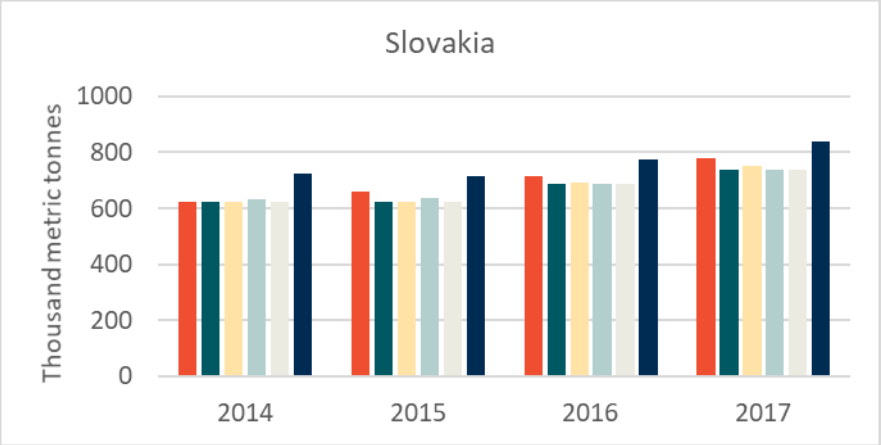


43 Lithuania shows a different behaviour because it has a crude oil component. The same is the case for Denmark and Estonia. However, these countries use the 61-day commitment based on inland consumption instead of the 90-day commitment based on net imports; thus no impact is reflected in the final obligation level.
44 Not accounting for the 10% deduction rule to meet the obligation


Czech Republic
Thousand metric tonnes
2200
2100
2000
1900
1800
1700
1600
2014
2015
2016
2017


France
Thousand metric tonnes
19500
19000
18500
18000
17500
17000
16500
2014
2015
2016
2017


Hungary
Thousand metric tonnes
1600
1400
1200
1000
800
600
400
200
0
2014
2015
2016
2017



When comparing the different obligation levels per country (using the average obligation from 2014 to 2017 and assuming the baseline as 100%), it is clear that option 1/1B leads to the same or lower obligations, while option 5 leads to a significantly increased obligation for all Member States compared to the baseline. Similar results are seen at EU level (see Table 6-2).

Table 6-2 Index per country based on the average stock levels required to meet the obligation[45] (2014-2017), where the baseline obligation is 100%

Country	Baseline	1/1B	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	100%	93%	117%	93%	93%	131%
CZ	100%	99%	102%	100%	99%	110%
FR	100%	100%	102%	100%	100%	108%
HU	100%	97%	106%	97%	97%	117%
SK	100%	96%	97%	97%	96%	110%
Countries with a naphtha yield consistently above 7%						
AT	100%	100%	102%	100%	100%	109%
DE	100%	100%	113%	100%	100%	121%
NL	100%	100%	100%	100%	100%	127%
PT	100%	100%	100%	102%	100%	112%
Countries with a naphtha yield consistently below 7%						
BG	100%	99%	99%	107%	99%	107%
ES	100%	100%	104%	102%	102%	105%
FI	100%	100%	104%	101%	101%	106%
GR	100%	98%	98%	109%	98%	109%
HR	100%	100%	103%	104%	103%	104%
IE	100%	100%	101%	102%	101%	102%
IT	100%	97%	99%	97%	97%	106%
RO	100%	100%	100%	100%	100%	100%
PL	100%	99%	99%	100%	99%	104%
SE	100%	100%	107%	105%	105%	107%
UK	100%	100%	100%	100%	100%	100%
Countries with no naphtha yield						
CY	100%	100%	100%	100%	100%	100%
DK	100%	100%	100%	100%	100%	100%
EE	100%	100%	100%	100%	100%	100%
LT	100%	100%	121%	121%	121%	121%
LU	100%	100%	100%	100%	100%	100%
LV	100%	100%	100%	100%	100%	100%
MT	100%	100%	100%	100%	100%	100%

[45] Accounting for the 10% deduction rule

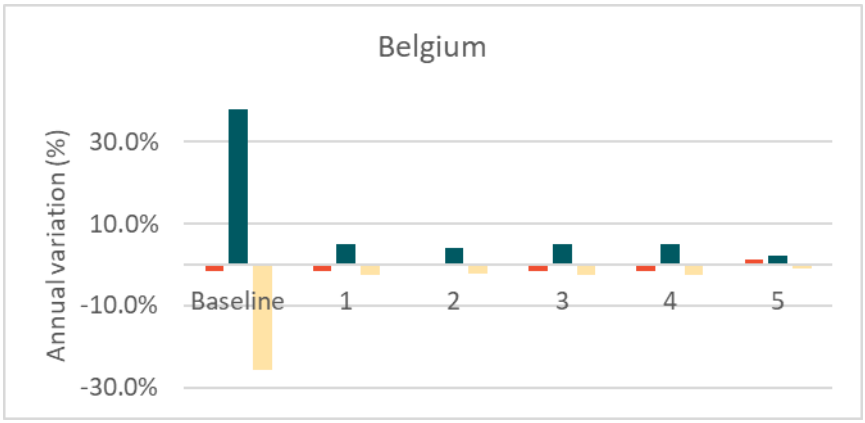
Country	Baseline	1/1B	2	3	4	5
SI	100%	100%	100%	100%	100%	100%
EU level						
EU	100%	99.2%	104%	100.2%	99.7%	110.1%
EU obligation (thousand tonnes)	**108 338**	**107 473**	**112 653**	**108 520**	**108 000**	**119 330**
EU stocks needed to meet obligation ('000 tonnes)	**120 375**	**119 415**	**125 170**	**120 577**	**120 000**	**132 589**

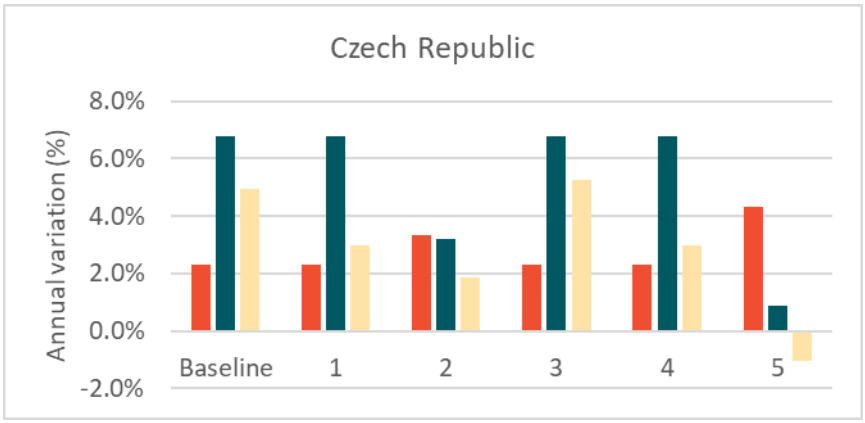
In the case of option 6, the obligation will depend on the type and amount of naphtha held and used by each country. For example, the obligation would increase for those Member States that use little naphtha for non-energy purposes as the amount which is deducted from the obligation diminishes. Yet, for Member States which have significant naphtha stocks for energy purposes, the option would allow these stocks to become eligible to meet the obligation. However, given that the – throughput – stocks of naphtha are generally rather low it is expected that the cons for these countries are much larger than the benefits in terms of calculating and meeting the obligation. The net effect will depend on the specific amounts of naphtha for energy and non-energy purposes and will differ between Member States.

Impact on the volatility of the stockholding obligation

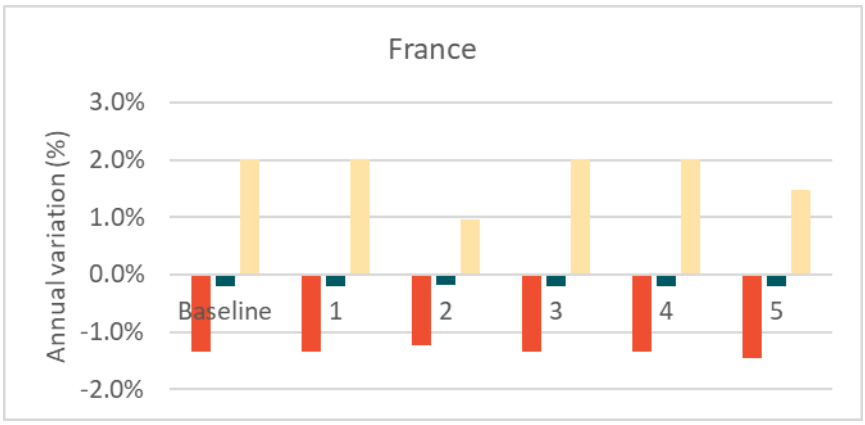
In the case of countries with no naphtha yield, the annual percentage change in the obligation is the same across the baseline and the five options (for each country). The figures below present the annual percentage change of the obligation for those countries with naphtha yields crossing the 7% trigger in the last years. Detailed results for all countries are presented in Annex C.

Figure 6-2 Impact in the volatility of the obligation[46] for countries with naphtha yields crossing the 7% trigger



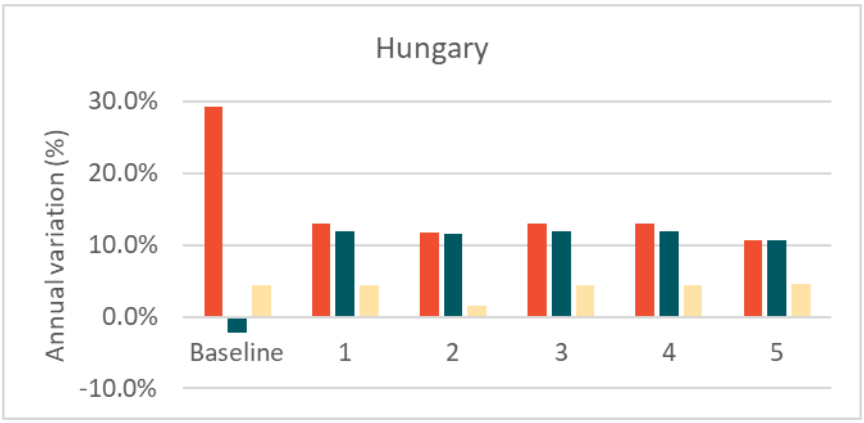


Czech Republic's naphtha yield went from 8.5% in 2016 to 6.9% in 2017.

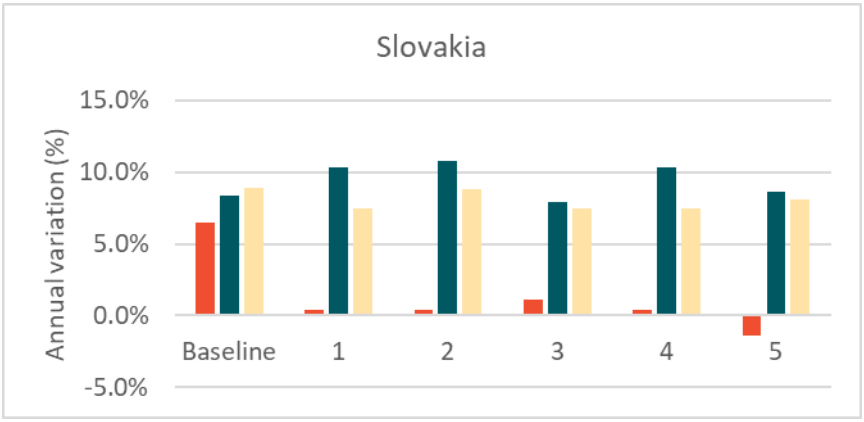


France's naphtha yield crossed the trigger from 7.1% in 2012 to 6.9% in 2013 to 8.2% in 2014. However, due to lack of information it has not been possibleto calculate the obligation or its volatility in those years.

[46] Not accounting for the 10% deduction rule to meet the obligation



Hungary's naphtha yield went from 7.9% in 2014 to 6.9% in 2015 and then 7.1% in 2016 which are both reflected in the obligation's volatility.



The spike in 2014-2015 for the baseline reflects the change in methodology, as Slovakia's naphtha yield went from 7.2% in 2014 to 6.9% in 2015

Legend (options): % 2014-2015 % 2015-2016 % 2016-2017

Each option results in a different volatility of the CSO obligation for every country. Table 6-3 shows the accumulated absolute annual variation from 2014 to 2017, adjusted for the CSO level and indexed (with the baseline as 100%). This allows to observe the variation without the CSO level effect or the effect from changes in the oil import data (which also play a role in the annual variations for each country). Note that since the Netherlands has no variation at all in the baseline, options 2 and 5 (which do show a variation across years) are displayed as a magnitude larger (because of the absence of any variation in the baseline, the formula [variation in the option/ variation in the baseline *100%] results in an infinitely high number).

Table 6-3 Index per country based on the absolute annual variation of stock levels required to meet the obligation (cumulative for 2014-2017, adjusted for the CSO effect at EU level), where the baseline is 100%

Country	Baseline	1/1B	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	100%	12%	11%	12%	12%	8%
CZ	100%	86%	59%	102%	86%	44%
FR	100%	101%	65%	100%	100%	87%
HU	100%	85%	76%	84%	85%	83%
SK	100%	75%	79%	68%	74%	77%
Countries with a naphtha yield consistently above 7%						
AT	100%	101%	81%	100%	100%	79%
DE	100%	101%	64%	100%	100%	62%
NL	100%	100%	1000%	100%	100%	1000%
PT	100%	101%	96%	113%	100%	88%
Countries with a naphtha yield consistently below 7%						
BG	100%	91%	87%	103%	90%	93%
ES	100%	101%	81%	107%	107%	93%

Country	Baseline	1/1B	2	3	4	5
FI	100%	101%	101%	107%	108%	95%
GR	100%	96%	91%	107%	95%	97%
HR	100%	101%	96%	96%	101%	88%
IE	100%	101%	97%	101%	101%	92%
IT	100%	141%	145%	140%	140%	111%
PL	100%	103%	99%	109%	103%	92%
RO	100%	101%	96%	100%	100%	91%
SE	100%	101%	91%	103%	104%	88%
UK	100%	101%	96%	100%	100%	91%
Countries with no naphtha yield						
CY	100%	101%	96%	100%	100%	91%
DK	100%	101%	96%	100%	100%	91%
EE	100%	101%	96%	100%	100%	91%
LT	100%	101%	100%	103%	104%	94%
LU	100%	101%	96%	100%	100%	91%
LV	100%	101%	96%	100%	100%	91%
MT	100%	101%	96%	100%	100%	91%
SI	100%	101%	96%	100%	100%	91%
EU level						
EU	100%	84%	74%	87%	85%	95%
Cumulative variation of the obligation of all MSs [47] (thousand tonnes)	**13 156**	**11 089**	**9 752**	**11 433**	**11 218**	**12 503**
Cumulative variation of stocks needed to meet the obligation[48] (thousand tonnes)	**14 618**	**12 321**	**10 836**	**12 703**	**12 464**	**13 892**

Legend	
Red	Option volatility is higher than baseline
Green	Option volatility is lower than baseline

Unlike the case of the stockholding obligation level, none of the options consistently outperforms all other options (though options 2 and 5 perform best at country level[49]). Further, there are significant differences across countries. However, all options are an improvement or as good as the baseline for those countries crossing the 7% trigger (except for option 1 for France and option 3 for Czech Republic). These improvements are most significant for Belgium.

At EU level, option 2 is the best performing one, leading to the least volatility.

The volatility resulting from the additional option (option 6) is difficult to estimate since the deduction of naphtha yield would be dependent on more factors than in the baseline scenario.

Impact on the total costs of holding emergency stocks

This section estimates the impact on the total costs of holding emergency stocks, by calculating the savings or additional costs of holding the calculated obligation level for each option compared to the baseline. In order to do this, we have used a cost range of 17.5-25 euro/tonne/year. Detailed impacts are presented in Annex C.

[47] Measured as the addition (in absolute values) of the annual variations of the CSO for the 28 Member States between 2014 and 2017, adjusted for the EU CSO level effect.
[48] Measured as the addition (in absolute values) of the annual variations of the CSO for the 28 Member States between 2014 and 2017, adjusted for the EU CSO level effect, and accounting for the 10% deduction rule.
[49] However, both options 2 and 5 have a considerable negative impact for the Netherlands (given that the baseline has no volatility, as the naphtha yield in the last years has remained constant).

Table 6-4: Impact on the total costs of holding emergency stocks (average for 2014-2017, accounting for the 10% deduction rule, using a cost range of 17.5-25 euro/tonne/year) in million Euros

Country	Baseline	1/1B	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	-	-6 / -8	13 / 18	-6 / -8	-6 / -8	23 / 33
CZ	-	-0.2 / -0.3	0.6 /0.8	0	-0.2 / -0.3	4 / 5
FR	-	0	7 / 10	0	0	28 / 40
HU	-	-0.7 / -1	1 / 2	-0.7 / -1	-0.7 / -1	4 / 5
SK	-	-0.5 / -0.7	-0.5 / -0.7	-0.4 / -0.6	-0.5 / -0.8	1 / 2
Countries with a naphtha yield consistently above 7%						
AT	-	0	0.8 / 1	0	0	5 / 7
DE	-	0	50 / 72	0	0	82 / 117
NL	-	0	290 / 414	0	0	20 / 28
PT	-	0	0	0.9 / 1	0	5 / 8
Countries with a naphtha yield consistently below 7%						
BG	-	-0.1 / -0.2	-0.1 / -0.2	1 / 2	-0.1 / -0.2	1 / 2
ES	-	0	9 / 12	5 / 7	5 / 7	12 / 17
FI	-	0	1 / 2	0.5 / 0.7	0.5 / 0.7	2 / 3
GR	-	-1 / -2	-1 / -2	5 / 7	-1 / -2	5 / 7
HR	-	0	0.3 / 0.4	0.5 / 0.7	0.3 / 0.4	0.5 / .07
IE	-	0	0.5 / 0.7	0.6 / 0.9	0.5 / 0.7	0.6 / 0.9
IT	-	-7 / -11	-2 / -3	-7 / -11	-7 / -11	12 / 17
PL	-	-1 / -2	-1 / -2	0.2	-1 / -2	5 / 7
RO	-	0	0	0	0	0
SE	-	0	3 / 5	3 / 4	3 / 4	4 / 5
UK	-	0	0	0	0	0
Countries with no naphtha yield						
CY	-	0	0	0	0	0
DK	-	0	0	0	0	0
EE	-	0	0	0	0	0
LT	-	0	2 / 3	2 / 3	2 / 3	2 / 3
LU	-	0	0	0	0	0
LV	-	0	0	0	0	0
MT	-	0	0	0	0	0
SI	-	0	0	0	0	0
EU level						
EU	-	-17 / -24	84 / 120	4 / 5	-7 / -9	214 / 305

The estimated costs are proportional to the obligations calculated above; therefore, there are expected savings for option 1/1B and 4 at EU level ranging from 7 to 24 million Euros annually. On the other hand, there are additional costs for the rest of the options with option 5 being the most expensive, with additional annual costs ranging from 214 to 305 million Euros at EU level.

Impact on the security of supply

As a next step, it is important to assess to what level these lower obligations (compared to the baseline) pose a threat in terms of security of supply. The main assumptions used in the assessment are that the current calculation is considered as a fair way of calculating the 90 days or 61 days' obligation, and that going beyond this obligation the positive benefits due to increased security of supply would not outweigh the negative cost impact due to the additional costs of keeping the stocks.

Given this, we see that options 1/1B, 3 and 4 have a marginal or no effect compared to the baseline in terms of CSO level (see table 6-2). Therefore, we assume that in these cases, the impacts on security of supply and the cost of holding stocks balance themselves out. However, options 2 and 5 have a more significant effect; where option 2 implies holding 4% more stocks and option 5, 10% more stocks would be required than

the baseline scenario. In these cases, we expect the additional cost of holding stocks to outweigh the positive benefits in security of supply derived from increased stocks.

It is not possible to assess option 6 in the same way; however, we expect a (minor) positive impact on the security of supply since it would better reflect the stocks that can be used for energy purposes. Under this option, all stocks held for energy purposes can be used to meet the CSO obligation; however, given the low throughput, this is fairly a small effect.

Impact on compliance with IEA obligations

The current approach is in line with IEA obligations and methodology; however, all proposed alternatives would imply a slight change in the calculation of the obligation. This would imply misalignment with IEA regarding the methodology to calculate the obligation unless the IEA would also change its methodology. With regard to actual compliance, these changes would have no impact since either the obligation goes up (therefore complying with IEA obligations), or the obligation goes marginally down (which will be covered by the commercial stocks in practice, with no impact in IEA compliance).

Impact on the administrative burden

All options (1/1B, 2, 3, 4, 5 and 6) will have a one-off training moment and learning process to ensure that relevant stakeholders are well-informed of the change and its implications. However, the most relevant impacts are as follows:

- Option 5 will simplify calculations and reporting (by avoiding the naphtha correction altogether).
- Option 6 will require significant changes to the current data collection and reporting methodology, to ensure that the distinction between naphtha used for energy purposes and non-energy purposes is included and readily available for the different calculations required.

6.2.2. *Comparison of the options*

The following table provides an overview of the different options and the main impacts identified above. Based on the comparison, it appears that the preferred option is 1/1B (followed closely by option 4), which lead to lower CSOs and reduced volatility; while expected to have no impact in security of supply when compared to the baseline. While the quantitative assessment of options 1 and 1B are the same, it is important to highlight that option 1B removes the threshold and provides equal treatment to all Member States; while option 1 has two different approaches and moves the threshold from 7% to 4%.

Table 6-5 Overview of policy options and impacts of changing the naphtha yield rule

	Impacts on:					
Policy option	**Obligation compared to baseline**	**Volatility of obligation** (compared to baseline)	**Additional cost of holding stocks** (million Euro)	**Security of supply**	**Compliance with IEA**	**Administrative burden**
Baseline	100%	100% (High volatility for countries crossing trigger)	Baseline	Baseline	Yes	Baseline
Option 1/1B	99.2% (Lower or	84%	-17 to -24 (savings)	No impact	Commercial stocks	One-off

Impacts on:						
Policy option	**Obligation compared to baseline**	**Volatility of obligation** (compared to baseline)	**Additional cost of holding stocks** (million Euro)	**Security of supply**	**Compliance with IEA**	**Administrative burden**
	equal for all MSs)				expected to cover marginal CSO decrease	
Option 2	104.0%	74%	84 to 120	Positive SoS impact (Increased costs due to higher CSO outweigh SoS benefits)	Compliant, misalignment in methodology	One-off
Option 3	100.2%	87%	4 to 5	No impact	Compliant, misalignment in methodology	One-off
Option 4	99.7%	85%	-7 to -9 (savings)	No impact	Commercial stocks expected to cover marginal CSO decrease	One-off
Option 5	110.1% (Higher or equal for all MSs)	95%	214 to 315	Positive SoS impact (Increased costs due to higher CSO outweigh SoS benefits)	Compliant, misalignment in methodology	Positive impact due to simplification in reporting and calculations
Option 6	NA	NA	NA	NA	Misalignment in methodology	Negative impact due to complex additional reporting requirements

6.3. Impacts of changing the 10% deduction rule

6.3.1. *Impacts of the options*

For convenience, we reiterate the options that we address in this section:

- Baseline - When calculating the level of emergency oil stocks actually held, the Member State would apply to the quantities of stocks a correction factor of 10%, to take account of the amount of stocks that might not be accessible (e.g. tank bottoms);
- Option 1 - The 10% deduction rule would not be applicable for emergency stocks owned by Central Stockholding Entities[50], because there would be no doubt about the availability of these emergency stocks;

[50] See footnote 43 – could also cover government-owned stocks

- Option 2 - The 10% deduction rule would not be applicable for those Member States that commit to make sure that, in addition to the emergency stocks, at least 10 days of commercial stocks (or 6.8 for Member States under 61-day-obligation) will be held;
- Option 3 - The 10% would be replaced by a 5% reduction (or any other percentage figure that can be justified based on existing literature or practices);
- Option 4 - No deduction percentage would be introduced (the last two paragraphs of Annex III would be deleted).
-

Impact on the stockholding obligation

Table 6-7 shows the impact of the four options on the stockholding obligation as compared to the baseline for the Member States and the EU as a whole. This impact calculation is based on the average figures for 2016 for the CSO, the emergency stocks and the commercial stocks from the MOS-statistics supplemented with self-reported average figures for the level of CSE-owned stocks (Table 6-6).

Table 6-6 CSO, emergency, CSE-owned and commercial stocks in 2016 (in thousand COE)

Country	CSO	Emergency stocks	CSE-owned stocks	Commercial stocks	Commercial/ CSO
AT	2,578	3,143	2,100	276	10.7%
BE	4,718	4,653	4,211	3,525	74.7%
BG	989	961	272	590	59.6%
CY	585	634	213	47	8.0%
CZ	1,933	2,011	1,950	785	40.6%
DE	19,823	24,635	23,561	8,679	43.8%
DK	1,203	1,391	1,149	2,146	178.4%
EE	185	230	232	126	67.9%
EL	2,679	4,196	-	425	15.9%
ES	11,521	16,639	6,874	1,444	12.5%
FI	1,910	4,200	n.a.	2,330	122.0%
FR	17,381	18,713	13,821	3,662	21.1%
HR	597	636	557	800	134.1%
HU	1,130	1,329	1,287	1,106	97.9%
IE	1,714	2,138	1,614	613	35.7%
IT	11,281	12,439	755	5,589	49.5%
LT	428	480	196	465	108.7%
LU	697	756	-	35	4.9%
LV	355	352	-	81	22.7%
MT	122	157	-	124	101.4%
NL	3,662	4,963	3,490	11,971	326.9%
PL	5,357	6,283	2,068	2,396	44.7%
PT	2,247	2,755	943	855	38.1%
RO	1,250	1,274	-	603	48.2%
SE	2,143	2,486	-	2,642	123.3%
SI	572	550	577	115	20.2%
SK	717	815	845	467	65.1%
UK	10,956	12,066	-	2,887	26.3%
TOTAL	**108,733**	**130,884**	**66,714**	**54,780**	**50.4%**

Source: E-mail questionnaire Trinomics (CSE-owned stocks), MOS statistics.
Note: The figures are average values for 2016 (CSE-owned stocks) or for April-December 2016 (other indicators). N.a. is non-available: Finland considers the level of CSE-owned stocks classified information. The CSO is the actual stockholding obligation, meaning that in order to meet the CSO, the level of emergency stocks should be 11% (CSO/(1-10%)) higher than the CSO.

Table 6-7 Impact on the stockholding obligation (2016 reference year, in thousand COE)

Country	Option 1	Option 2	Option 3	Option 4
AT	-210.0	-286.4	-164.6	-286.4
BE	-421.1	-524.2	-301.1	-524.2
BG	-27.2	-109.9	-63.1	-109.9
CY	-21.3		-37.3	-65.0
CZ	-195.0	-214.8	-123.4	-214.8
DE	-2,356.1	-2,202.6	-1,265.3	-2,202.6
DK	-114.9	-133.7	-76.8	-133.7
EE	-23.2	-20.6	-11.8	-20.6
EL	-	-297.7	-171.0	-297.7
ES	-687.4	-1,280.1	-735.4	-1,280.1
FI	n.a.	-212.2	-121.9	-212.2
FR	-1,382.1	-1,931.2	-1,109.4	-1,931.2
HR	-55.7	-66.3	-38.1	-66.3
HU	-128.7	-125.6	-72.1	-125.6
IE	-161.4	-190.4	-109.4	-190.4
IT	-75.5	-1,253.4	-720.1	-1,253.4
LT	-19.6	-47.6	-27.3	-47.6
LU	-		-44.5	-77.4
LV	-	-39.4	-22.7	-39.4
MT	-	-13.6	-7.8	-13.6
NL	-349.0	-406.9	-233.7	-406.9
PL	-206.8	-595.2	-341.9	-595.2
PT	-94.3	-249.7	-143.4	-249.7
RO	-	-138.9	-79.8	-138.9
SE	-	-238.1	-136.8	-238.1
SI	-57.7	-63.6	-36.5	-63.6
SK	-84.5	-79.7	-45.8	-79.7
UK	-	-1,217.3	-699.3	-1,217.3
TOTAL	**-6,671**	**-11,939**	**-6,940**	**-12,081**
As % of CSO+	**-5.5%**	**-9.9%**	**-5.7%**	**-10.0%**

Source: Calculations Trinomics based on Table 6-6
Note: Option 1 is calculated as -10% of the level of CSE-owned stocks. Option 2 and option 4 are calculated as CSO–(CSO/0.9), but note that option 2 excludes the CSO impact for countries having a commercial stocks/ CSO ratio of less than 10%. Option 3 measures the impact of lowering the current 10% deduction to 4% deduction. There are no studies that arrive at a precise estimate for the percentage of technically unavailable stocks. The available information (survey responses, interview responses, practical experience of countries that recently refreshed oil or oil products in storage facilities) point to 3-4% of the stocks being technically unavailable. Within this range we have opted for 4% technically unavailable stocks to analyse option 3.

Impact on the total costs of holding emergency stocks

Table 6-8 shows the impact of the options on the total costs of holding emergency stocks. This impact is calculated as the average total annual costs to hold one tonne of emergency stocks (measured in crude oil equivalent and as discussed in section 6.1) multiplied by the estimated reduction in the actual stockholding obligation per option in the previous section.

With regard to options 2-4, for the average annual costs to hold one tonne of emergency stocks we use a range of 17.5-25.0 euro/tonne/year. With regard to option 1, we use a cost range of 24.0-28.0 euro/tonne/year (see section 6-1), acknowledging the fact that we need to estimate the cost impact of a lower level of CSE-owned stocks. Hence, this does not concern industry stocks and neither stocks held by CSEs in the form of tickets.

Table 6-8: Impact on the costs of holding emergency stocks at EU level (2016 reference year, in million euro)

Cost/tonne/year (€)	Option 1	Option 2	Option 3	Option 4
24	-160			
28	-187			
17.5		-209 (*max)	-121	-211
25		-298 (*max)	-174	-302

Source: Calculations Trinomics.
*Note: total costs as compared to the baseline (the current 10% deduction rule). *max = this cost effect would only materialise if the 10 days of commercial stocks that should be present at MS level would not be included in the obligation of the economic operators in that MS. See section 6.1 for an explanation of the cost/tonne/year figures used in the calculations.*

As can be seen in Table 6-8, as compared to the baseline, the total costs of holding emergency costs at EU level would be € 121-174m lower per year in option 3, € 160-187 million lower in option 1 and around € 210-300m lower in options 2 and 4.

With regard to option 2, the amounts in Table 6-8 should be seen as maximum values. Three Member States indicated in the survey that they would not rely on the 'de facto' availability of at least 10 days of commercial stocks, but would rather add these days to the stockholding obligation of economic operators. In this case, there would be no practical difference between the current, baseline, situation and the situation under option 2, mitigating the impact on the costs of holding emergency stocks of option 2. Seven Member States answered that the obligation would in fact go down with 10 days and that they would rely on the existence of at least ten days of commercial stocks in their country, while another seven Member States stated that they could at the moment not make a choice between the two options mentioned above and 11 Member States left the question unanswered. Hence, the actual implementation of this option per Member State will most probably differ per country and overall is rather uncertain at the moment.

Impact on the security of supply

As discussed in earlier chapters, the 10% deduction can be seen to compensate for technically unavailable stocks (e.g. tank bottoms) and working stocks that may be technically fully available but need to be built up after an emergency stock release as quickly as possible to ensure uninterrupted operations of economic operators. Whereas technically unavailable stocks may apply to both CSE-owned stocks and industry stocks, working stocks only apply to industry stocks. Another notion that applies is that, as long as obligated parties have commercial stocks on top of emergency stocks and stocks on the basis they sold tickets on, the emergency stocks may in fact be fully available (not only contractually, but also in reality) if any unavailable stocks (tank bottoms, working stocks) are in fact part of these commercial stocks.[51]

Applying the above to the impact on the security of supply, the negative impact of option 1 on the security of supply is rather minor. As option 1 abolishes the 10% for CSE-owned stocks only, there is no (potential) impact of working stocks on the security of supply. Moreover, in the survey the vast majority of respondents indicated that all CSE-owned stocks would be fully available. The impact of tank bottoms were mentioned by some, but tank bottoms apply to not more than 1-3% of the CSE-owned stocks and mention was made that also these stocks would be recoverable (albeit that recovery would take more time). Clearly, as the total stockholding obligation would go down as compared to the baseline, the security of supply would go down to some extent as well. Given the

[51] Unfortunately, the available information from Eurostat does not allow for this type of analysis at the level of individual obligated parties.

discussion above, the (positive) cost impact of removing the 10% deduction for CSE-owned stocks however outweighs the (negative) impact on the security of supply.

Under option 2, the actual level of stocks held by a Member State (either as emergency stocks or as commercial stocks) would be at least at the level of the stockholding obligation plus 11%. The actual burden of the EU obligation would under this option move towards the actual burden of the IEA obligation.[52] The security of supply would hence remain higher than if only the IEA requirements would be fulfilled. Compared to the baseline, however, the security of supply worsens. For emergency stocks there are clear rules and contractual obligations as regards the location of the stocks and the actual availability and accessibility in case of a crisis. This is not the case with regard to the additional commercial stocks that should be present in this option: although these stocks are available to the market, there is no mechanism in place to legally enforce the release of these stocks in a crisis situation. This means that these commercial stocks are not a 100% substitute for any unavailable emergency stocks in practice (because of technical unavailability or use of working stocks). As the issue of making these commercial stocks available to the market would only apply after releasing the emergency stocks, this negative impact on the security of supply would be minor, but on the other hand cannot be ignored. Note that the 10 days of commercial stocks not being a 100% substitute for emergency stocks is only relevant if there is a discrepancy between the situation at the level of individual obligated parties (some might not have commercial stocks in addition to the mandatory emergency stocks; this can be the case for traders for example) and the situation at Member State level, which may be influenced by the existence of large commercial stocks at a limited number of economic operators (probably mainly refineries).

Option 3 does not make a distinction between CSE-owned stocks and industry owned stocks and tickets sold by industry. The underlying logic seems to address the issue that the deduction for technically unavailable stocks should be less than 10%, but ignores the fact that working stocks may be used to comply with the obligation and that these working stocks at a macro level (after release, they need to be build up again quickly) are de facto not leading to additional supplies to the market. There is evidence that working stocks are in fact used for compliance purposes, but the extent to which this is the case at EU level is unclear. Hence, whereas reducing the deduction for CSE-owned stocks is well founded (see also the discussion under option 1 above), there is a negative, though uncertain in terms of the level, impact on the security of supply if the deduction percentage would be lowered for industry stocks. In our line of reasoning, this negative impact on the security of supply is not outweighed by the positive cost impact, in particular where it concerns the deduction required for industry stocks.

Compared to option 3, option 4 worsens the balance between the negative impact on the security of supply and the positive cost impact on holding emergency stocks, as the 10% deduction is abolished for industry stocks altogether without any safeguards in terms of the requirement to hold at least 10 days of commercial stocks as in option 2: in this option the amount of emergency stocks that would in fact, also in the medium term, be available to the market would be less than 90 or 61 days.

Impact on compliance with IEA obligations

Currently the EU and the IEA use a different calculation methodology to establish whether or not countries comply with the stockholding obligation, the most important difference being that in the IEA system also commercial stocks may be counted. Changing the EU methodology (in this case the 10% deduction rule) therefore does not

[52] Note that the actual burden of the obligation is still higher in the EU system under option 2, as for example the product requirements continue to exist.

fundamentally alter the already existing non-alignment of the two systems in this respect.

In practice, however, meeting the EU stockholding obligations in the baseline situation automatically implies that also the IEA obligation is met.[53] This would remain the case under option 2, but would not automatically be the case under the other options. In practice, however, the overwhelming majority of countries would, if they would comply with the EU obligation under options 1, 3 and 4, also comply with the IEA obligation.

Impact on the administrative burden

Options 1, 3 and 4 concern fairly simple and straightforward changes to the calculation of the level of eligible emergency stocks and would require one-off changes in the calculation rules at Member State level and MOS-reporting. We assess these one-off changes to have a minor impact on administrative burden. The (negative) impact on the administrative burden is larger under option 2, because of the inherent complexities of this option and the expectation that some Member States will add the 10 days of commercial stocks to the stockholding obligation while others will decide not to do so.

6.3.2. *Comparison of the options*

Table 6-9 presents a summary overview of the impacts of the four options. According to Trinomics, based on the analysis above, option 1 would be the preferred option. The cost savings per year are substantial and around equal to the cost savings under options 2 (probably) and option 3, whereas the impact on the security of supply is smallest and more than offset by the cost savings. Moreover, holding emergency stocks on top of what the industry would hold anyway creates a real buffer that can be put on the market in case of a supply disruption of any kind – that is why CSE-owned stocks are the most robust type of emergency stocks. As they are on average also the most expensive emergency stocks to hold, this adds to the logic behind removing the 10% deduction for CSE-owned stocks.

Table 6-9: Comparison of impacts of the four policy options

Impact	Option 1	Option 2	Option 3	Option 4
Stockholding obligation (mt, base year 2016)	-6.7	-11.9	-6.9	-12.1
Cost savings per year (m€)	160-187	Max 209-298 (3 out of 10 MSs: no savings)	121-174	211-302
Security of supply	Slightly negative – cost savings more than outweigh this	Slightly negative	Negative, exact impact unclear	More negative than under option 3
IEA compliance	No, but in practice yes for almost all MSs	Yes	No, but in practice yes for almost all MSs	No, but in practice yes for almost all MSs
Admin burden / equal treatment of MS	Only minor one-off costs	Only minor one-off costs; no equal treatment	Only minor one-off costs	Only minor one-off costs

[53] This is not valid the other way around: meeting the IEA obligation does not necessarily mean that countries would meet the EU obligation.

6.4. Impacts of moving the start date of the stockholding obligation

6.4.1. *Impacts of the options*

Impact on the administrative burden

The baseline situation is that in some Member States with CSEs the CSEs have problems in complying with the current deadline (due to public procurement requirements, the need for official approval, public tendering procedures etc). Therefore, the baseline option has a high administrative burden, but it is not possible to quantify because it doesn't actually imply extra costs, just a process which is not possible to complete on time – so technically it is more of an administrative barrier (for some), than an administrative burden.

Shifting the compliance date to May should have a lower administrative burden than the baseline because the obligated parties have 1.5 months (from mid-March when the official figures are confirmed, to the end of April, when the opening stocks reported in May need to be in place) to purchase extra stocks in years when their obligation increases. Based on the assumption that 1.5 months is long enough to organise an oil purchase, and there would be no additional benefit from increasing this to 3.5 months, this scores equally with option 1 of shifting the compliance date to July.

Impact on the cost of meeting the obligation – increasing obligation years

The baseline option presents the highest risk of paying a higher cost for oil in years when the obligation increases (because of the short period available to make the purchases). Discussions with the CSE of the Netherlands indicate that a typical / normal time allowance for making the decision to purchase oil stocks, making the purchase, and arriving at the point where the stocks can be included in the obligation for reporting purposes, is 6-7 weeks. This indicates that as the final official figures on the obligation are available between February and late March there is only 2-3 weeks to arrange for an increase in oil stocks to be in place by April 1st. The average appears to be mid-March, though the previous year's data should be available in the country with the submission of the December MOS oil submission on 24th February, which implies some delay in the obligated parties being told their obligation in some MSs. With regard to placing a figure on the potential size of the cost uplift that a 'rushed' purchase would entail, this is very difficult to do because (as indicated in the survey response) this will vary according to the status of the oil market at that time. By way of illustration, in 2016-2017 a 1% premium on 'rushed' oil purchases for those MSs that saw an increase would mean paying 1% more on 2,588 ktonnes of oil which equates to a total premium of €7.8million (based on a €50/barrel oil price[54]) if all purchases were affected. However, from the stakeholder consultation it appears that not all purchases are affected (countries with CSEs seem to be more affected) so it is likely to be less than this. Based on 70% of the EU wide stocks being CSE stocks the figure would be €5 million.

The May and July options should have no risk of paying a higher cost for oil in years when the obligation increases (because of the short period available to make the purchases). There should be no difference between the May and July options because both offer longer than 6-7 weeks to make purchases in years when the stock obligation increases.

The following table illustrates the number of years over the last four in which each Member State has had to increase its stocks, and therefore faced the potential

[54] Based on 7.145 barrels per tonne of oil and a €:$ exchange rate of 1:1.18.

administrative burden / barriers of having to do this. The table also shows the potential cost risk over the last four years, based on the same illustrative 1% 'premium' on a $50/barrel oil price.

Table 6-10: Member States with years of increasing CSO (from 2013 to 2017) and an indication of cost risk if a 1% premium was paid to meet this increased CSO

	Increase years	Increase year cost (risk) € (2013-17)
Belgium	1	3,929,750
Bulgaria	4	644,867
Czech Republic	3	787,161
Denmark	2	136,239
Germany	2	1,858,911
Estonia	4	69,633
Ireland	3	1,495,606
Greece	2	523,765
Spain	2	2,652,127
France	1	505,600
Croatia	0	0
Italy	0	0
Cyprus	3	290,644
Latvia	2	127,157
Lithuania	4	348,167
Luxembourg	1	15,138
Hungary	2	938,538
Malta	2	157,432
Netherlands	1	2,101,114
Austria	2	475,324
Poland	2	2,936,716
Portugal	3	1,335,146
Romania	3	363,305
Slovenia	1	96,881
Slovakia	4	547,985
Finland	2	1,235,237
Sweden	0	0
United Kingdom	2	660,004
EU total	**58**	**24,232,449**

The table shows that this risk is largest for Member States with years of large increases, either caused by the Naphtha yield adjustment, e.g. Belgium, or increases in demand, e.g. Spain and Poland. If the figure of 70% of CSE held stocks for the whole of Europe is used the total for the EU over the last four years is €17 million of potential excess costs, or €4.25 million per year.

Impact on the cost of meeting the obligation – decreasing obligation years

The baseline option offers the lowest cost of holding excess stocks in years of decreasing obligation, because the stocks could be reduced within 0.5 months of the obligation volume being confirmed. The May and July options would impose a higher cost of holding excess stocks in years of decreasing obligation. In 2016-17 the July option would have meant the Member States having to hold 1,672 ktonnes 'extra' for three months longer than the baseline – which at a typical cost of 17.5-25 euro/tonne/year[55] equates to between €7.4 million and €10.5 million. For the May option the additional cost (for an extra month of holding stocks compared to the baseline) would be between €2.44 million and €3.48 million. Technically the baseline option implies a short period of excess stock but this figure has not been calculated as it applies to all three options.

The table below shows the costs over the last four years that would have been incurred by each Member State for the May and July options, based on the high and low cost of holding oil. The figures have been calculated over four years to account for Member States which change between increasing and decreasing obligations and to try and average out the volatility apparent in some years in some Member States.

Table 6-11: Member States costs of holding excess stocks for an extra 1 month and an extra 3 months (from 2013 to 2017) under a high and low cost of stockholding assumption

	Extra 1 month holding costs - May		Extra 3 months holding costs - July	
	min (€ 2013-17)	max (€ 2013 -17)	min (€ 2013-17)	max (€2013 -17)
Belgium	3,228,750	4,612,500	9,686,250	13,837,500
Bulgaria	0	0	0	0
Czech Republic	198,333	283,333	595,000	850,000
Denmark	125,417	179,167	376,250	537,500
Germany	5,481,875	7,831,250	16,445,625	23,493,750
Estonia	0	0	0	0
Ireland	0	0	0	0
Greece	736,458	1,052,083	2,209,375	3,156,250
Spain	3,055,208	4,364,583	9,165,625	13,093,750
France	2,022,708	2,889,583	6,068,125	8,668,750
Croatia	135,625	193,750	406,875	581,250
Italy	4,135,833	5,908,333	12,407,500	17,725,000
Cyprus	188,125	268,750	564,375	806,250
Latvia	8,750	12,500	26,250	37,500
Lithuania	0	0	0	0
Luxembourg	58,333	83,333	175,000	250,000
Hungary	199,792	285,417	599,375	856,250
Malta	182,292	260,417	546,875	781,250
Netherlands	14,583	20,833	43,750	62,500
Austria	495,833	708,333	1,487,500	2,125,000
Poland	1,381,042	1,972,917	4,143,125	5,918,750
Portugal	78,750	112,500	236,250	337,500
Romania	151,667	216,667	455,000	650,000
Slovenia	131,250	187,500	393,750	562,500

[55] See section 6.1.

	Extra 1 month holding costs - May		Extra 3 months holding costs - July	
	min (€ 2013-17)	max (€ 2013 -17)	min (€ 2013-17)	max (€2013 -17)
Slovakia	0	0	0	0
Finland	1,064,583	1,520,833	3,193,750	4,562,500
Sweden	1,117,083	1,595,833	3,351,250	4,787,500
United Kingdom	732,083	1,045,833	2,196,250	3,137,500
EU total	24,924,375	35,606,250	74,773,125	106,818,750

The table shows that for the EU as a whole the May option would have imposed extra holding costs of €25.9 million to €35.6 million over the last 4 years (€6.2 million to €8.9 million per year), while the July option would have imposed extra holding costs of €74.7 million to €106.8 million over the last 4 years (€18.7 million to €26.7 million per year).

Impact on Security of Supply – increasing obligation years

The baseline option should lead to the quickest possible increase of oil stocks (even if some Member States cannot comply quickly enough). Therefore, this option gives a higher overall security of supply than the other two options. On the assumption that Member States would take as long as possible to increase their stocks (to defer costs) the July option would imply lower stocks (and hence lower security of supply) for a longer period than both the baseline and the May option.

Impact on Security of Supply – decreasing obligation years

The baseline option should lead to the quickest decrease of oil stocks in years of decreasing obligation, on the assumption that stockholders would reduce their stockholdings and therefore costs, as soon as possible. This would give a slightly lower security of supply than the May and July options, because the 'excess' stocks would be held for a shorter period than for the other two options. The value of the increased security of supply of this excess stock is hard to measure because it could be assumed that the correct level is sufficient, and any excess does not add value. It is also reasonable to point out that the additional costs of holding this excess will outweigh any marginal increase in security.

The table below shows the actual changes in obligation for each Member State over the last four years. In years when the obligation goes down (i.e. a negative number) the number is the excess stock that the Member State would hold for two to three weeks under the baseline option, one month extra under the May option and three months extra under the July option. In years when the obligation goes up (i.e. a positive number) the number is the 'shortfall' that the Member State would have for two to three weeks under the baseline option, one month extra under the May option and three months extra under the July option. The last two columns convert these figures into percentages, to illustrate the relative size of the excesses or shortfalls. It is interesting to note that for the EU 28 in total the average excess is 5%, whereas the average shortfall is 1%. This illustrates the general downward trend in oil consumption.

Table 6-12: Member State CSO changes from 2013 to 2017

	Security of Supply (Averages 2013-17)					
	Change 2013-2014	Change 2014-2015	Change 2015-2016	Change 2016-2017	Decrease year - excess (%)	Increase year shortfall (%)
Belgium	-947	-50	1,298	-1,217	16	38
Bulgaria	41	62	58	52	0	6
Czech Rep.	-136	41	123	96	7	5
Denmark	-62	-24	4	41	3	2
Germany	-2,746	-1,013	381	233	8	2
Estonia	3	5	1	14	0	3
Ireland	428	0	55	11	0	10
Greece	-475	-30	22	151	8	3
Spain	-2,059	-36	302	574	8	4
France	-1,102	-237	-48	167	2	1
Croatia	-32	-48	0	-13	4	0
Italy	-2,092	-298	-4	-442	5	0
Cyprus	-129	27	31	38	20	9
Latvia	28	14	-6	0	2	4
Lithuania	18	52	1	44	0	7
Luxembourg	-4	-24	-12	5	2	1
Hungary	-111	261	-26	49	7	17
Malta	-26	5	-99	47	28	20
Netherlands	694	0	-10	0	0	12
Austria	-172	-168	50	107	6	3
Poland	-877	-70	370	600	8	9
Portugal	359	-54	12	70	2	7
Romania	-104	26	15	79	8	3
Slovenia	-75	-7	-8	32	5	6
Slovakia	23	39	55	64	0	7
Finland	-617	324	-113	84	16	12
Sweden	-140	-150	-476	0	9	0
United Kingdom	-440	188	-62	30	2	1
EU total	**-10,752**	**-1,165**	**1,914**	**1,258**	**5**	**1**

Impact on alignment with IEA procedures

The May option would improve alignment with the IEA, in that it negates the reporting difference from stocks being required to be available at all times for the Directive.

6.4.2. *Comparison of the options*

The following table compares the options based on the discussion in the previous sections:

Table 6-13: Comparison of baseline and two option s on changing the CSO annual compliance date

	Options		
	Baseline: April	**One: July**	**Two: May**
Administrative burden	High – some CSEs cannot comply on time	Lower than the baseline	Lower than the baseline
Risk of higher cost oil purchase - increase years	A 1% premium implies an extra €4.25 million per year on average over the last 4 years	No risk of this	No risk of this
Cost of holding excess stock - decrease years	Lowest cost because the stocks are reduced as quickly as possible (€3-4m/year if two weeks in April would be needed to decrease the stocks fully)	Extra holding costs of €18.7 million to €26.7 million per year on average over the last 4 years	Extra holding costs of €6.2 million to €8.9 million per year on average over the last 4 years
Security of supply – increase years	An EU wide average (over the last 4 years) 1% shortfall for 0.5 months	An EU wide average (over the last 4 years) 1% shortfall for 3.5 months	An EU wide average (over the last 4 years) 1% shortfall for 1.5 months
Security – decrease years	An EU wide average (over the last 4 years) 5% surplus for 0.5 months	An EU wide average (over the last 4 years) 5% surplus for 3 months	An EU wide average (over the last 4 years) 5% surplus for 1 months
IEA Alignment	Baseline	Negative – larger difference introduced	Positive

In order to identify a favoured option it is useful to carry out a weighting exercise between the impacts.

The most important impacts are arguably the risk of higher cost oil purchase in increasing years and the cost of holding excess stock in decreasing years.

The next most important appears to be the IEA alignment (although this is not a legal obligation). This is followed by the security of supply benefit from having the stock levels increase more quickly in years when the obligation increases, this is useful but the additional stock (and security) is on average only 1% of the EU total.

The least important appear to be the security of supply bonus from holding 'excess' stocks in decreasing years. This lower importance relates to the fact that all three options would still see each Member State with the required minimum at all times and the ranking is a measure of how long an excess of this would be available. However, it is also worth remembering that a decreasing obligation is expected to be more common (because of energy policy goals associated with energy efficiency, increased use of renewable energy sources, increased use of electric vehicles etc.).

Based on this ranking and weighting it appears that the baseline is the least attractive option, largely because of the risk of high oil cost in increasing obligation years. Option two appears better than option one because of the lower additional stocks holding costs in decrease years and the improved IEA alignment.

6.5. Impacts of clarifying the Directive's rules on holding cross border stocks

6.5.1. *Impacts of the options*

As established in chapter 6, the main category of impacts from clarifying the Directive's rules on cross-border stocks are economic. Particularly, we distinguish the following specific impacts:

1. Impact on the share of stocks held cross-border by Member States
2. Impact on total costs of holding emergency stocks by obligated parties
3. Impact on ability to secure (oil) supply in times of crisis
4. Impact on transparency of cross-border stocks
5. Impact on administrative burden for public authorities

In the following sections, we provide our assessment of the expected impacts of the three policy options considered for this measure (see Section 5.5) for each of these impact areas. We use both a qualitative analysis[56] and where possible a quantitative assessment of the expected impacts of the options. Despite having further specified the scope and details of the three options in chapter 4, the impact of the options still strongly depends on the level of ambition in the harmonisation that is chosen. For example, for option 1, setting a common limit on the share of cross-border stocks held by obligated parties at 30% will create different a different magnitude of impacts than setting the limit at 100% (completely liberalised). In order to illustrate the difference in impacts, we will assume two possible levels of common limits that are deemed realistic in the Directive, namely 30% (the minimum level of the obligation that obligated parties should be able to delegate) and 50% representing an ambitious scenario.

Impact on share of stocks held cross-border by Member States

The intention of option 1 and option 2 is to make it equally easy across Member States to use cross-border stock opportunities (tickets and storage). Option 1 would do so most directly by setting an equal maximum level of restrictions on cross-border stocks that Member States may impose, so that at least a similar minimum share of cross-border stocks can be used across the EU. The volume of stocks held cross-border in the EU could then increase, mostly in countries that currently have high levels of restrictions in place.

To illustrate the effects at EU level, we simulate the effect on cross-border stocks with two possible harmonisation levels of the maximum restriction of cross-border stocks set at maximum 30% and maximum 50%. This implies that obligated parties in all EU countries may at least use 30% or 50% cross-border stocks, while a higher percentage is also possible if the member State so decides. Per Member State, we then estimate the potential impact of setting the maximum restriction of cross-border stocks to 30% and 50%, respectively, through looking at the current share of cross-border stocks held and the current restrictions in the country. There are a number of possibilities:

1. The current restrictions are already less severe than the 30% of 50% that would be the required minimum percentage set for all Member States: in these cases no changes in cross-border stockholdings are to be expected. This applies to all countries where the cells in the last two columns in table 7-9 are not shaded;

[56] Interviews with obligated parties (both CSEs and economic operators), the survey results and a focus group discussion with representatives from public authorities from nine Member States held on 8-11-2017 in Brussels and attended by the Netherlands, Spain, Ireland, the UK, France, Luxembourg, Finland, Slovakia, Belgium

2. The current level of cross-border stockholding is significantly less than the percentage restrictions that national regulation puts on cross-border stockholding: also in these cases no changes in cross-border stockholdings are to be expected as apparently the national restrictions did not act as an upper boundary in practice (otherwise the cross-border stockholdings would be on or just somewhat below the maximum percentage allowed for in national regulation). This applies to Bulgaria, Finland, Greece, Spain and Sweden;
3. The current restrictions to hold cross-border stocks are severe **and** the entire obligation is put on the CSE. In this case, it is likely that the current Member State policy to restrict cross-border stocks will be transformed into guidance to the CSE not to hold large (or any) amounts of cross-border stocks, also if option 1 would be implemented. For these Member States (Croatia, Czech Republic, Germany, Hungary, Ireland and Italy) we assume that the level of cross-border stocks would grow by maximum 10 percentage points (so from 0% to 10% in Austria or from 8% to 18% in Croatia);
4. The current restrictions to hold cross-border stocks are severe **and** the obligation is put on the CSE and also on industry. In these cases we took the extreme position that the percentage of cross-border stocks held by industry would grow to 30% and 50% respectively, while, for the same reasons as under point 3, the level of cross-border stocks held by the CSE would grow by 10 percentage points. This applies to Austria, Denmark, France, Poland, Portugal and Romania, although the latter does not have a CSE.

Table 6-14 presents the results of the corresponding calculations. We estimate that harmonising the level of maximum restrictions on cross-border stocks at 30% would yield a maximum increase in the volume of cross-border stocks of around **7.9-8.3 million tonne**, as compared to the current level of cross-border stocks and tickets of around 13.3 million tonne. A maximum level of cross-border stock restrictions of 50% would yield a maximum increase in the volume of cross-border stocks of approximately **9.4-9.9 million tonne.**[57] The variation in the estimates is the uncertainty of the current level of restrictions for Portugal, who did not reply to the questions asked in the consultation. In percentages, the share of cross-border stocks would grow from the current 12.1% to a maximum of 19.2% (based on 30%, excl. Portugal) to 21.1% (based on 50%, incl. Portugal).

Table 6-14 Impact of harmonising limits on the share of cross-border stocks in 2017 (Option 1)

	CSO 2017 (Eurostat)	% CSE	% industry	BA required?	Current max. share cross-border (stocks)	Current max. share cross-border (tickets)	Share cross-border stocks (2017)	Impact ('000t) – limit to max 30%	Impact ('000t) – limit to max 50%
AT	2,685	73%	27%	n.a.	0%	0%	0%	413 [c]	558
BE	3,501	100%	0%	No	30% [A]	30% [A]	56%	0	0
BG	1,041	33%	67%	Yes	30%	100%	17%	0	0
CY	623	100%	0%	No	100%	100%	37%	0	0
CZ	2,029	100%	0%	Yes	100%	0%	2%	203	203
DE	20,056	100%	0%	No	100%	10%	1%	2,006	2,006
DK	1,244	70%	30%	Yes	12.5%	12.5%	3%	188	262
EE	199	100%	0%	Yes	100%	20%	53%	0	0
EL	2,830	0%	100%	Yes	30%	30%	0%	0	0
ES	12,095	42%	58%	No	40%	40%	2%	0	0

57 We calculate this effect by comparing the current level of restrictions to the current share of cross-border stocks. If the current limit on cross-border stocks is 0% (no cross-border stocks allowed), then the current share of cross-border stocks is also 0% and the maximum increase in volume of cross-border stocks on the basis of 2017 obligation is then: [compulsory stockholding obligation * 30%]. If the current restriction is already on 30%, but the level of cross-border stocks below 30%, then there is no assumed impact as the opportunity for 30% cross-border stocks is already there.

	CSO 2017 (Eurostat)	% CSE	% industry	BA required?	Current max. share cross-border (stocks)	Current max. share cross-border (tickets)	Share cross-border stocks (2017)	Impact ('000t) – limit to max 30%	Impact ('000t) – limit to max 50%
FI	1,994	60%	40%	No	30%	30%	0%	0	0
FR	17,548	85%	15%	No	10%	10%	4%	2,176	2,702
HR	584	100%	0%	Yes	0%	0%	8%	58	58
HU	1,179	100%	0%	Yes	100%[D]	100%[D]	0%	118	118
IE	1,725	100%	0%	Yes	100%	100%	29%	173	173
IT	10,839	33%	67%	Yes	67% [B]	67% [B]	19%	1,084	1,084
LT	472	32%	68%	No	100%	75%	2%	0	0
LU	702	0%	100%	No	92%	92%	83%	0	0
LV	355	100%	0%	Yes	75%	100%	34%	0	0
MT	169	0%	100%	No	100%	100%	95%	0	0
NL	3,672	80%	20%	Yes	100%	100%	34%	0	0
PL	5,957	60%	40%	Yes	5%	5%	0%	1,072	1,549
PT	2,317	55%	45%	Yes	?	?	5%	*388*	*597*
RO	1,329	0%	100%	N.A.	0%	0%	2%	372	638
SE	2475	0%	100%	Yes	30%	30%	11%	0	0
SI	604	100%	0%	No	100%	100%	26%	0	0
SK	781	100%	0%	Yes	100%	100%	0%	0	0
UK	10,986	0%	100%	No	100%	100%	39%	0	0
Maximum increase in ('000) tonnes of cross-border stocks								**7,863**	**9,351**
Maximum possible increase in ('000) tonnes of cross-border stocks (including countries with unknown limits (?))								**8,251**	**9,948**

Source: Eurostat, Trinomics stakeholder survey for this contract (August-September 2017), stakeholder interviews
A) Belgium only imposes restrictions on oil products (not on crude oil)
B) Italy forbids cross-border stocks for its CSE
C) Green means that changing the limit to 30% and 50% respectively would cause a change in national legislation
D) Hungary does not apply any restrictions on cross-border stocks, but the policy of the CSE (who holds 100% of the obligation) is to not store/hold stocks cross-border. Thus in practice a 100% barrier.

The impact of harmonising the steps and deadlines behind the authorisation procedure (option 2, also included in option 1) on share of cross-border stocks across the EU is more uncertain depending on how the procedure will be harmonised. Setting the application deadline at the relatively common level of 30 days before the start of a foreign ticket or storage contract would increase the ease of arranging stocks cross-border for some countries where the current deadline is earlier, but increase the barrier for other countries where the deadline is later. Harmonising the type of information required across countries and the level of detail needed could also facilitate decision making for national authorities on the requests and reduce the overall burden needed for requesting approval for cross-border stocks for obligated parties (especially economic operators that are active in multiple EU countries). That could increase the attractiveness of cross-border stock alternatives and might also reduce the number of rejections as there will be less confusion at Ministerial level regarding the information on the contracts. Lastly, the choice for automatic rejection or automatic approval after expiry of the deadline for authorities to respond is also important for the impact on the share of cross-border stocks. A choice for automatic approval likely increases the share of cross-border

stocks deals approved as delays in the procedure would result in automatic approval and it reverses the burden of proof (for rejection) to be on authorities. They would need to provide evidence on why the deal would be rejected before the deadline in order not to invoke the automatic approval.

Table 6-15 provides an overview of the differences in the deadlines applied by Member States regarding the authorisation procedure and an indication of whether harmonising the process would make cross-border stocks more or less attractive for obligated parties (using a ++ to – – scale). The standard procedure would imply a 30 day deadline for the submission of the request and 7 days deadline for the authority to communicate the approval decision (see section 4.5 for specification of option 2). Note that these are the expected effects holding everything else equal (so not also adopting option 1 for example).

Table 6-15 Estimate of impact on share of cross-border stocks from harmonisation of procedure deadlines (option 2, also included in option 1)

	CSO 2017	% CSE	% industry	Share cross-border stocks (2017)	Application deadline (days before contract start)	Decision deadline (days before contract start)	Impact on share of cross-border stocks
AT	2,685	73%	27%	0%	N.A.[A]	N.A.	**0**
BE	3,501	100%	0%	56%	30	No deadline	**+**
BG	1,041	33%	67%	17%	20	7	**-**
CY	623	100%	0%	37%	30	10	**0**
CZ	2,029	100%	0%	2%	N.A.[B]	N.A.	**0**
DE	20,056	100%	0%	1%	?	?	**?**
DK	1,244	70%	30%	3%	Not specified	Not specified	**+**
EE	199	100%	0%	53%	?	?	**?**
EL	2,830	0%	100%	0%	40	20	**+**
ES	12,095	42%	58%	2%	90[D]	No deadline	**++**
FI	1,994	60%	40%	0%	30	?	**0**
FR	17,548	85%	15%	4%	30	No deadline	**+**
HR	584	100%	0%	8%	?	?	**?**
HU	1,179	100%	0%	0%	?	?	**?**
IE	1,725	100%	0%	29%	90[D]	No deadline	**++**
IT	10,839	33%	67%	19%	Variable[C]	~10[C]	**0**
LT	472	32%	68%	2%	15	?	**-**
LU	702	0%	100%	83%	30-60	30	**0**
LV	355	100%	0%	34%	?	?	**?**
MT	169	0%	100%	95%	30	No deadline	**+**
NL	3,672	80%	20%	34%	30	7	**0**
PL	5,957	60%	40%	0%	?	?	**?**
PT	2,317	55%	45%	5%	?	?	**?**
RO	1,329	0%	100%	2%	N.A.[A]	N.A.	**0**
SE	2475	0%	100%	11%	30	No deadline	**0**
SI	604	100%	0%	26%	30	7	**0**
SK	781	100%	0%	0%	?	?	**?**
UK	10,986	0%	100%	39%	30	No deadline[E]	**0**
EU-average							+

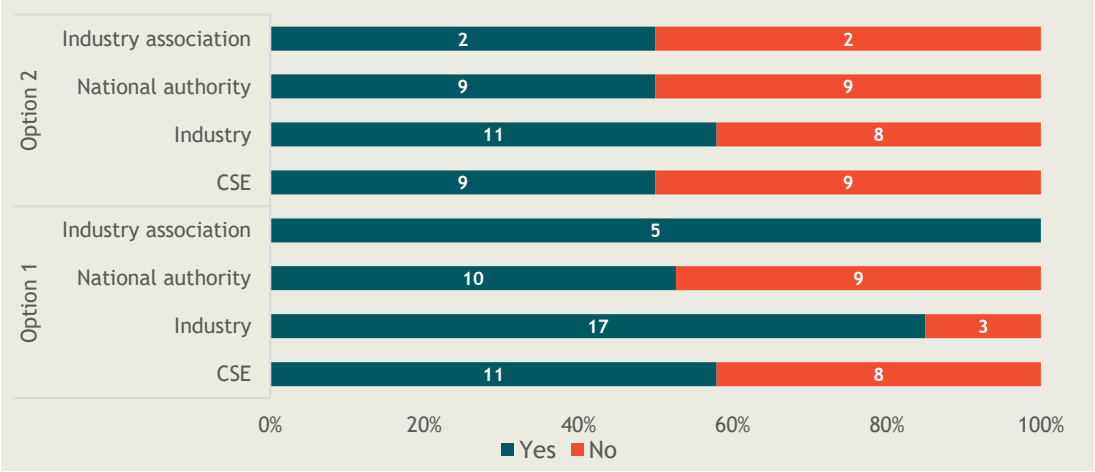
A = No cross-border stocks allowed
B = The Czech Republic has 100% CSE stocks and the CSE itself is responsible for the authorisation procedure

C = Dependent on specific agreements in its bilateral agreements or MoUs
D = Different deadlines apply according to applicable bilateral agreements
E = In practice last-minute approvals possible (in case bilateral agreement is in place)

Overall, there are more countries for which a positive impact on cross-border stocks is expected, i.e. where the current deadline date is more than 30 days or the approval decision from the Ministry is later than 7 days. Moreover, it is expected that the harmonisation of the authorisation procedure leads to an extra positive effect on the share of stocks held cross-border as in most countries an harmonisation of the remainder of the procedure would lead to less checks and balances on the side of the Ministries (as they ask for equal information and use similar product codes), and therefore a more certain and speedy process, likely with a lower number of rejections due to the adoption of similar processes.

Also the stakeholder survey conducted for this study confirms that most stakeholders believe that the volume of cross-border stocks under option 1 increases. Especially industry expects that the share of cross-border stocks would increase. Stakeholders are more uncertain about the impact of option 2 on the share of cross-border stocks, as the positive and negative responses are more balanced. It is likely though that the respondents could not assess the precise impact well at the time of answering as the options were not yet fully specified as now done in section 5.5. From the additional written consultation with stakeholders performed after the draft version of this report, representatives from eight Member States that answered seemed in favour of adopting option 2 as it would simplify administrative processes and increase the transparency surrounding cross-border stocks (see later in the section). This input however does not change the expected slightly positive impact expected on the share of cross-border stocks in option 2 as concluded above.

Figure 6-3 Will the share of cross-border stocks increase if one of the proposed options would be adopted?



Source: Trinomics stakeholder survey for this contract (August-September 2017)
Note: 62 out of the 94 stakeholders responded to this question, covering 28/28 Member States

Option 3 is not expected to lead directly to an impact on the share of cross-border stocks. Indirectly, though, it might be possible that the increase in transparency regarding cross-border stocks increases Member States' comfort about cross-border stocks, which in turn might drive them to increase the maximum limit allowed on cross-border stocks. However, the focus group discussion with authorities showed that limits on cross-border stocks are not mainly placed for uncertainty about transparency. Therefore, we expect this option to have little effect on the share of cross-border stocks.

Impact on the total costs of holding emergency stocks by obligated parties

The main impact of option 1 and 2 is the potential for obligated parties to gain better access to the international ticket and storage market. This opportunity allows them to choose between international tickets, cross-border storage and domestic alternatives, whichever is cheaper. Above we estimated the maximum impact of option 1 on cross-border stocks in the range of maximum plus 8-10 million tonne, while 50% of this growth is probably more realistic to expect.

The question now is how to value this potential development. This depends both on the type of cross-border stocks that will increase (what will be the ratio between higher physical stocks held abroad and the purchase of international tickets?) and which of the domestic alternatives will decrease (will less domestic tickets be bought and/or less use made of domestic storage options?). Obviously this will differ per obligated operator, and consequently the cost impact per obligated operator will differ, and may well differ substantially, as well. In the absence of detailed data per obligated party and Member State (ticket prices[58], storage costs), we use an average price differential between the domestic and international alternatives of €10 per tonne, which is a considerable price differential given the average cost of holding emergency stocks throughout the EU we use in this study (€17.5-25 per tonne). Using these figures as crude estimates we arrive at an indicative potential cost reduction of option 1 in the range of maximum €80-100 million per year. As said above, 50% of this may be more realistic to realise, resulting in an indicative potential cost efficiency gain of €40-50 million per year at EU level. In the latter case, the percentage of stocks held cross-border would need to increase from ca. 12% to ca. 16%.

In option 2, the potential reduction in the total costs of meeting the obligation would also result from the impact on the increased share of cross-border stocks and the difference in ticket and storage prices charged domestically and internationally. Depending on the differences between the international ticket or storage prices and the domestic ones for these countries as well as individual countries' differences in authorisation procedures, the impact on the total costs of meeting the obligation will differ from country to country. It is difficult to put a precise number to the expected increase in the share of cross-border stocks and consequently the impact on potential cost savings is also difficult to estimate, but can easiest be seen as a driver to achieve the maximum cost savings discussed above (or as a share of these cost savings when option 2 is treated in isolation).

Impact on the ability to security of oil supply during times of crisis

The impact on the ability to secure the supply of oil during times of crisis relates to the physical availability and accessibility of stocks. The objective of the policy options regarding cross-border stocks is to ensure no negative impact on the physical availability and accessibility of EU emergency stocks, in line with the main objective of the Directive. Without any adjustments to the framework governing cross-border stocks, however, an increase in the share of cross-border stocks has a negative impact on security of supply in the EU, particularly through the negative effect of tickets on the physical availability and accessibility of emergency stocks.

Tickets are typically sold by stock owners on stocks that they hold for commercial (operational or speculative) reasons and for which they are sure that they will not need them for the tenor of the ticket. When the oil market is in contango (higher future prices of oil are expected), stocks of oil are typically high as companies hold on to the stocks in order to sell them at the future higher price. In such a situation of the market, the

[58] We only obtained indicative information on domestic ticket prices for five Member States (AT, BG, FR, PL and RO). The variation in ticket prices was substantial: the highest prices being four times as much as the lowest ticket prices of these five countries.

availability of tickets is high as there are excess speculative stocks. However, in a backwardation market, companies will sell as much of their stocks as possible as there is no incentive to hold stocks. The availability of tickets will decline significantly. Obligated parties that are dependent on buying tickets to meet their emergency stock holding obligation might then struggle to find tickets or will have to pay a high price for them. Similarly, in a situation where supply of oil is disrupted, oil companies will draw from their commercial stocks in order to fill the gap and the availability of tickets also reduces. Countries in which obligated parties meet a large share of their obligation with tickets will struggle to meet their obligation in those situations (if they have to renew their tickets) and their ability to secure the supply of oil with emergency stocks declines. In comparison to proprietary stocks that are owned by obligated parties, the availability of tickets is therefore lower in times of crisis and thus the impact of a higher share of cross-border tickets negative on security of supply.

The impact of option 2 on security of supply is therefore expected to be slightly negative since the harmonisation of authorisation procedures could lead to a slightly higher share of cross-border tickets used through the increased transparency of the authorisation system (see earlier). Moreover, if an automatic approval of cross-border stocks would be enacted when authorities fail to meet their deadline, the impact on security of supply would also be negative. In the case the reason for not meeting the deadline was uncertainty regarding the information provided or non-agreement with the partner Member State on auditing stocks for example, there is no full certainty about the availability and accessibility of the stocks, while the deal would be automatically approved.

Option 1 on the other hand includes harmonisation of rules on tickets, which can create a positive impact on security of supply if the 'right' level of harmonisation is chosen. If harmonised rules could be enforced on a minimum tenor of tickets (e.g. a minimum of 3 or 6 months) and on a specific set of common product definitions are also in practice being used (including no more 'any oil' category), the availability and accessibility of tickets across the EU would increase. As a result, the negative impact on security of supply from increased cross-border tickets could be offset by a harmonisation and tighter set of rules, such that cross-border tickets would in principle not be worse in quality than domestic ones. That would however not undo the principle negative impact that tickets have on security of supply, as explained above. Depending on the level of ambition reached in option 1, the effect on security of supply is therefore either significantly negative or negative.

The effect of option 3 on security of supply would be (slightly) positive through the effect on increased transparency about cross-border stocks and tickets. A publicly accessible register of cross-border stocks and tickets would reduce statistical discrepancies and would give a more a more realistic picture about the live location of emergency stocks. An updated register will help authorities releasing the underlying emergency oil products in times of crisis and reduce the scope for misunderstandings or – worse – situations where stocks turn out to be misreported.

Impact on transparency of cross-border stocks

A part of the reason why Member States regulate cross-border stocks (see chapter on problem assessment) and national authorities are not unanimously in favour of an increased share of cross-border stocks in the EU (see chapter on options) is that they regard the transparency surrounding cross-border stocks lower than domestic stocks. As a result, authorities proposed to improve the functioning of the Directive in this area by creating a database of cross-border stocks that would be accessible at all times by authorities (and/or obligated parties) and show the bilateral positions in stocks and tickets (option 3). As a result, option 3 would increase the speed, frequency and visibility of reporting on cross-border stocks compared to the situation today. As a result, by

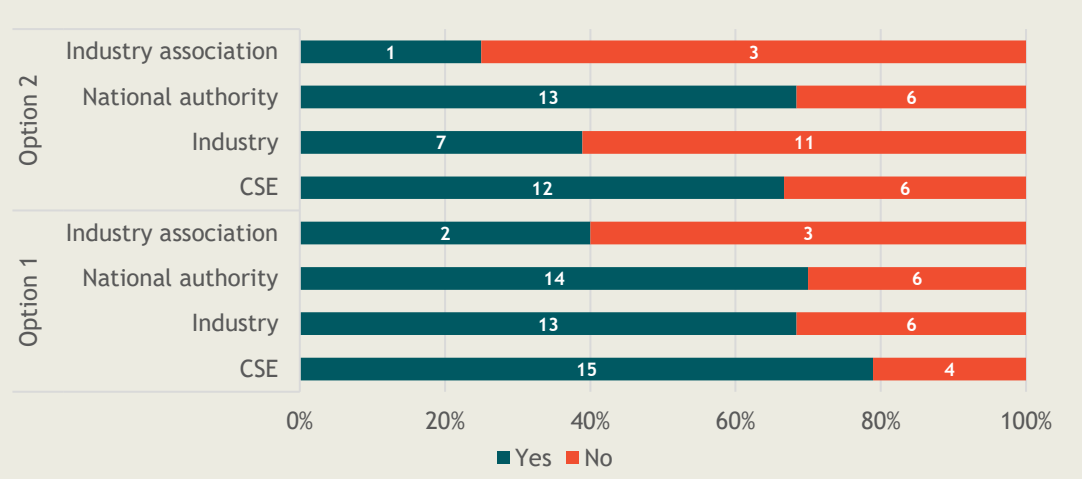
having an live and up to date overview of cross-border stocks data, authorities are better able to act upon statistical discrepancies and aim to clarify the location and type of underlying stocks more effectively, increasing the level of transparency regarding cross-border stocks. We would in that situation be sure which country holds precisely which stocks or tickets for what partner and where. With the current statistical discrepancies and delay in access of cross-border stock data for authorities, the level of transparency would improve. Since the discrepancies and uncertainties surrounding tickets is largest, the effect on tickets would also be highest.

Option 1 is also likely to have a positive impact on the level of transparency of cross-border stocks. By defining which type of information is shared between Member States and in which way (with common product definitions and common frequency levels), the *quality* of the data reported on cross-border stocks should increase and the share of discrepancies in reporting should diminish. Moreover, transparency on cross-border stocks would further increase under option 1 through the harmonisation of the type of information and the frequency of information that is shared between Member States. When all Member States report in the exact same product codes and at the exact same times with the exact same level of detail on location and so forth, the data submitted should be completely comparable.

Option 1 would therefore increase transparency of cross-border stocks by improving the quality on cross-border stocks data. Data will not be submitted or shared more often, but information on cross-border stocks would become more reliable. Option 3 also increases transparency of cross-border stocks, though does nothing with regard to the harmonisation of the underlying data. By increasing the speed and frequency of sharing cross-border data and making it publicly accessible for obligated parties in the EU will lay bare discrepancies in data more easily and thus increase transparency. However, it would not increase the quality of data submitted itself. Option 3 would enable authorities to identify discrepancies and aim to solve and clarify them between respective authorities on a case by case basis.

Option 2 is expected to have little effect on the transparency of cross-border stocks as the option does not include a measure that would increase the level of information available or improve the underlying data collection. The majority of stakeholders that completed the survey (covering all EU Member States) also think that option 1 would lead to an increase of transparency regarding cross-border stocks (particularly representatives from national authorities and CSEs). A similar share of national authority and CSE representatives think that option 2 would lead to an increase in transparency. From their supporting explanations, however, it becomes clear they might have misinterpreted the option as most cite the need for a pan-European database of cross-border stocks (in effect option 3) or the need for a standardisation of product definitions and rules (option 1). We therefore conclude that mostly option 1, as well as option 3 might impact the transparency of cross-border stocks (positively).

Figure 6-4 Will the transparency of cross-border stocks increase if one of the proposed options would be adopted?



Source: Trinomics stakeholder survey for this contract (August-September 2017)
Note: 62 out of the 94 stakeholders responded to this question, covering 28/28 Member States

Impact on administrative burden for public authorities

The impact on administrative burden for public authorities is largely positive for all options and highest in option 1, because when also common rules on inspections, tickets, accounting and information sharing are agreed authorities do not have to check or worry about the standards and procedures in other countries and an almost immediately authorisation decision can be made. There is no need to conclude bilateral agreements anymore as the contents of bilateral agreements could be included in the Directive, saving more time for public authorities. These structural time gains however can only be realised if in the beginning time is invested in creating common rules and adjusting national legislation to incorporate the common rules. Therefore, in the short term the impact on administrative burden is negative, while positive in the long term.

The impact of option 3 on administrative burden for public authorities is negative as both an investment into harmonising product definitions on international transactions needs to be made as well as an extra structural effort to submit new cross-border ticket and storage contracts data needs to be sent to the Commission on a frequent basis.

6.5.2. *Comparison of the options*

Table 6-16 summarises the impacts of the three policy options with respect to the baseline (the situation today) as presented in the preceding sections.

Table 6-16 Summary of impacts of policy options regarding cross-border stocks

	Impact of policy options compared to baseline				
	Share of cross-border stocks	**Reduction in total costs to meet the obligation**	**Transparency of stocks**	**Security of supply**	**Administrative burden**
Option 1	**+**	**+**	**+**	**- - to -**	**++**
Option 2	**0/ +**	**0 / +**	**0**	**-**	**+**
Option 3	**0**	**0**	**+**	**0 / +**	**-**

++ Significantly positive / **+** Positive / **0** No significant impact/ - Negative /**--** Significantly negative

From this overview, the trade-offs between positive and negative impacts for the three options become clear. Option 1 and 2 would directly contribute to the objective of removing impediments to accessing the cross-border stocks and tickets market in the EU for certain countries. As option 1 includes option 2 and goes further by harmonising the existing limits on cross-border stocks, option 1 is more pronounced in the positive

economic effects from the potential cost savings for meeting the total obligation and the negative effects on the security of supply that can be achieved by this option compared to option 2. By potentially further clarifying rules on tickets on the definition of physical accessibility and availability, a large share of the potential negative effects on security of supply could be also be undone by option 1. Moreover, by potentially harmonising product definitions and rules on auditing and inspections, transparency of stocks would be increased. A structural decrease in administrative burden for authorities would also be achieved (just like for option 2), as the harmonisation of authorisation procedures should save time for discussions between authorities. Option 1 would further reduce the time needed for authorisations as harmonised rules on auditing as well as the definition of accessibility and availability would reduce the need for checks on Member States' standards with respect to these.

By creating a continuously updated database of cross-border stocks accessible for obligated parties and authorities, administrative burden would increase slightly for authorities due to the need for frequent updates, but by being able to double check data entered on cross-border deals directly, statistical discrepancies can be reduced. Moreover, by having the information on location and product of cross-border stocks available for all authorities at any time, the information on stocks and ability to secure supply in times of crisis increases slightly.

Combination of options

The options for improving the functioning of the Directive in the area of cross-border stocks are not entirely mutually exclusive and can partially be combined. Since the specification of option 1 already automatically includes option 2, the only relevant combination of options would be option 1+3 and option 2+3. Table 6-17 summarises the impact of the combination of options compared to the baseline. By enhancing transparency but also increasing administrative burden slightly, the integration of option 3 in either option 1 or 2 would likely nullify the expected positive impacts on administrative burden of the options in isolation. At the same time, transparency of stocks would be increased and as a result, also a positive effect on security of supply created.

Table 6-17 Summary of impacts of combination of policy options regarding cross-border stocks

	Impact of policy options compared to baseline				
	Share of cross-border stocks	**Reduction in total costs to meet the obligation**	**Transparency of stocks**	**Security of supply**	**Administrative burden**
Option 1 + 3	**+**	**+**	**++**	**-** to **0**	**0**
Option 2 + 3	**+**	**0 / +**	**+**	**0**	**0**

++ Significantly positive / **+** Positive / **0** No significant impact/ **-** Negative /**--** Significantly negative

6.6. Impacts of combining options across measures 1 and 2

In this section we present the impacts of combining all the options of measure 1 (changing the naphtha rule) with option 4 (no deduction at all), option 3 (4% rather than 10% deduction) and option 1 (no 10% deduction for CSE-owned stock) of measure 2. We have not analysed the impact of combining the options of measure 1 with option 2 of measure 2 separately, as the results would be largely the same as the results of combining measure 1 with option 4 of measure 2.

6.6.1. *Impact of combining measure 1 (all options) with measure 2 (option 4)*

In the tables below we have defined the baseline as the current situation, that is, the obligation with the current naphtha yield rule and accounting for 10% deduction (thus obligation divided by 0.9). As we compare the baseline with option 4 of measure 2 (no

deduction at all), in the other calculations we take the obligation at 100% (so without 10% deduction) while using the options for the naphtha rule as in section 6.2.

Impact on the stockholding obligation

Table 6-18 shows the combined impact of measure 1 and measure 2 (option 4) on the level of the stockholding obligation, both at Member State and EU level.

Table 6-18 Index per country based on the average stocks to meet obligation (2014-2017), where the baseline is 100% (combined impact of measure 1 and measure 2, option 4 – no deduction at all)

Country	Baseline	1	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	100%	83%	105%	83%	83%	118%
CZ	100%	90%	92%	90%	90%	99%
FR	100%	90%	92%	90%	90%	97%
HU	100%	87%	95%	87%	87%	105%
SK	100%	87%	87%	87%	87%	99%
Countries with a naphtha yield consistently above 7%						
AT	100%	90%	91%	90%	90%	98%
DE	100%	90%	102%	90%	90%	109%
NL	100%	90%	90%	90%	90%	115%
PT	100%	90%	90%	92%	90%	101%
Countries with a naphtha yield consistently below 7%						
BG	100%	89%	89%	96%	89%	96%
ES	100%	90%	93%	92%	92%	95%
FI	100%	90%	93%	91%	91%	95%
GR	100%	88%	88%	98%	88%	98%
HR	100%	90%	92%	94%	92%	94%
IE	100%	90%	91%	92%	91%	92%
IT	100%	87%	89%	87%	87%	95%
PL	100%	89%	89%	90%	89%	94%
RO	100%	90%	90%	90%	90%	90%
SE	100%	90%	96%	95%	95%	96%
UK	100%	90%	90%	90%	90%	90%
Countries with no naphtha yield						
CY	100%	90%	90%	90%	90%	90%
DK	100%	90%	90%	90%	90%	90%
EE	100%	90%	90%	90%	90%	90%
LT	100%	90%	109%	109%	109%	109%
LU	100%	90%	90%	90%	90%	90%
LV	100%	90%	90%	90%	90%	90%
MT	100%	90%	90%	90%	90%	90%
SI	100%	90%	90%	90%	90%	90%
EU level						
EU	100%	89%	94%	90%	90%	99%
EU stocks to meet obligation (thousand tonnes)	**120 375**	**107 473**	**112 653**	**108 520**	**108 000**	**119 330**

Table 6-18 shows that, at EU level, the combined effect on the stockholding obligation varies between minus 11% and minus 1%. Note that the combined impact shows the same outcome of the options relative to each other as the analysis in section 6.2, albeit at a lower level: option 1 results in the lowest total stockholding obligation, closely followed by options 3 and 4. As in section 6.2, option 5 results in the highest total stockholding obligation. Table 6-14 also shows that almost all Member States would end up with a lower stockholding obligation, with three exceptions for option 2 (Belgium, Germany, Lithuania), one for options 3 and 4 (Lithuania) and six exceptions for option 5 (Belgium, Denmark, Hungary, Lithuania, the Netherlands, Portugal).

Impact on the volatility of the stockholding obligation

Table 6-19 shows the combined impact of measure 1 and measure 2 (option 4) on the volatility of the stockholding obligation at EU level. We have not included the percentage values per Member State in Table 6-19: note that combining the options of measure 1 with fully abolishing the 10% deduction results in the same outcomes per Member State as the outcomes presented on volatility in section 6.2 already. The absolute values of the volatility are however 10% lower than those presented (at EU level) in Table 6-3 above.

Table 6-19 Index based on the absolute annual variation of the stocks to meet the obligation (EU level, cumulative for 2014-2017, adjusted for the CSO effect), where the baseline is 100% (combined impact of measure 1 and measure 2, option 4 – no deduction at all)

EU level	Baseline	1	2	3	4	5
EU (variation)	100%	84%	74%	87%	85%	95%
EU stocks to meet the obligation[59] (`000 tonnes)	**14,618**	**12,321**	**10,836**	**12,703**	**12,464**	**13,892**

Impact on the total costs of holding emergency stocks

Table 6-20 shows the corresponding impact on the total costs of holding emergency stocks per Member State and at EU level of combining the options of measure 1 with option 4 of measure 2 (removing the 10% deduction altogether). In line with the changes in the total stockholding obligation discussed above, option 1 gives the highest reduction of the total costs of holding emergency costs, closely followed by options 3 and 4. Note that in combination with abolishing the 10% deduction rule, all options would lead to cost savings.

Table 6-20: Impact on the total costs of holding emergency stocks needed to cover the obligation (average for 2014-2017, using a cost range of 17.5-25 euro/tonne/year) in million Euro (combined impact of measure 1 and measure 2, option 4 – no deduction at all)

Country	Baseline	1	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	-	-12 / -18	4 / 6	-12 / -18	-12 / -18	13 / 19
CZ	-	-4 / -5	-3 / -4	-4 / -5	-4 / -5	-0.5 / -0.7
FR	-	-34 / -49	-28 / -40	-34 / -49	-34 / -49	-9 / -13
HU	-	-3 / -4	-1 / -2	-3 / -4	-3 / -4	1
SK	-	-2 / -3	-2 / -3	-2	-2 / -3	-0.2
Countries with a naphtha yield consistently above 7%						
AT	-	-5 / -7	-4 / -6	-5 / -7	-5 / -7	-0.8 / -1
DE	-	-39 / -55	6 / 9	-39 / -55	-39 / -55	35 / 50
NL	-	-7 / -10	-7 / -10	-7 / -10	-7 / -10	10 / 15
PT	-	-4 / -6	-4 / -6	-4 / -5	-4 / -6	0.4 / 0.5
Countries with a naphtha yield consistently below 7%						
BG	-	-2 / -3	-2 / -3	-0.7 / -1	-2 / -3	-0.7 / -1
ES	-	-22 / -32	-15 / -21	-18 / -26	-18 / -26	-12 / -17
FI	-	-4 / -5	-2 / -3	-3 / -5	-3 / -5	-2
GR	-	-6 / -9	-6 / -9	-0.8 / -1	-6 / -9	-0.8 / -1
HR	-	-1	-0.9 / -1	-0.7 / -1	-0.9 / -1	-0.7 / -1
IE	-	-3 / -5	-3 / -4	-3 / -4	-3 / -4	-3 / -4
IT	-	-29 / -41	-24 / -34	-29 / -41	-29 / -41	-11 / -16
PL	-	-11 / -16	-11 / -16	-10 / -15	-11 / -16	-6 / -9
RO	-	-2 / -3	-2 / -3	-2 / -3	-2 / -3	-2 / -3
SE	-	-5 / -7	-2 / -3	-3 / -4	-3 / -4	-2
UK	-	-21 / -30	-21 / -30	-21 / -30	-21 / -30	-21 / -30
Countries with no naphtha yield						
CY	-	-1 / -2	-1 / -2	-1 / -2	-1 / -2	-1 / -2
DK	-	-2 / -3	-2 / -3	-2 / -3	-2 / -3	-2 / -3
EE	-	-0.4 / -0.5	-0.4 / -0.5	-0.4 / -0.5	-0.4 / -0.5	-0.4 / -0.5

[59] Measured as the addition (in absolute values) of the annual variations of the CSO for the 28 Member States between 2014 and 2017, adjusted for CSO level effect.

Country	Baseline	1	2	3	4	5
LT	-	-0.8 / -1	0.7 / 1	0.7 / 1	0.7 / 1	0.7 / 1
LU	-	-1 / -2	-1 / -2	-1 / -2	-1 / -2	-1 / -2
LV	-	-0.7 / -1	-0.7 / -1	-0.7 / -1	-0.7 / -1	-0.7 / -1
MT	-	-0.3 / -0.5	-0.3 / -0.5	-0.3 / -0.5	-0.3 / -0.5	-0.3 / -0.5
SI	-	-1 / -2	-1 / -2	-1 / -2	-1 / -2	-1 / -2
EU level						
EU	-	-226 / -323	-135 / -193	-207 / -296	-217 / -309	-18 / -26

6.6.2. *Impact of combining measure 1 (all options) with measure 2 (option 3)*

In the tables below we have defined the baseline as the current situation, that is the obligation with the current naphtha yield rule and accounting for 10% deduction (thus obligation divided by 0.9). As we compare the baseline with option 3 of measure 2 (4% deduction instead of 10% deduction), in the other calculations we account for 4% deduction through dividing the obligation by 0.96.

Impact on the stockholding obligation

Table 6-21 shows the combined impact of measure 1 and measure 2 (option 3) on the level of the stockholding obligation, both at Member State and EU level.

Table 6-21: Index per country based on the average stocks to meet obligation (2014-2017), where the baseline is 100% (combined impact of measure 1 and measure 2, option 3 – 4% deduction)

Country	Baseline	1	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	100%	87%	110%	87%	87%	123%
CZ	100%	93%	95%	94%	93%	103%
FR	100%	94%	96%	94%	94%	101%
HU	100%	91%	99%	91%	91%	109%
SK	100%	90%	91%	91%	90%	103%
Countries with a naphtha yield consistently above 7%						
AT	100%	94%	95%	94%	94%	102%
DE	100%	94%	106%	94%	94%	113%
NL	100%	94%	94%	94%	94%	119%
PT	100%	94%	94%	96%	94%	105%
Countries with a naphtha yield consistently below 7%						
BG	100%	93%	93%	100%	93%	100%
ES	100%	94%	97%	96%	96%	99%
FI	100%	94%	97%	95%	95%	99%
GR	100%	91%	91%	102%	91%	103%
HR	100%	94%	96%	98%	96%	98%
IE	100%	94%	95%	95%	95%	95%
IT	100%	91%	93%	91%	91%	99%
PL	100%	93%	93%	94%	93%	98%
RO	100%	94%	94%	94%	94%	94%
SE	100%	94%	100%	99%	99%	100%
UK	100%	94%	94%	94%	94%	94%
Countries with no naphtha yield						
CY	100%	94%	94%	94%	94%	94%
DK	100%	94%	94%	94%	94%	94%
EE	100%	94%	94%	94%	94%	94%
LT	100%	94%	113%	113%	113%	113%
LU	100%	94%	94%	94%	94%	94%
LV	100%	94%	94%	94%	94%	94%
MT	100%	94%	94%	94%	94%	94%
SI	100%	94%	94%	94%	94%	94%
EU level						
EU	100%	93%	97%	94%	93%	103%
EU stocks to meet obligation (‘000 tonnes)	**120 375**	**111 952**	**117 347**	**113 041**	**112 500**	**124 303**

The figures in Table 6-21 are basically 4% higher than those in table 6-18 and show the same dynamics. In this case, the combined effect on the stockholding obligation at EU level varies between minus 7% and plus 3%. Again, the combined impact shows the same outcome of the options relative to each other as the analysis in section 6.2, albeit at a lower level: option 1 results in the lowest total stockholding obligation, closely followed by options 3 and 4. As in section 6.2, option 5 results in the highest total stockholding obligation. Table 6-18 also shows that for options 1-4 almost all Member States would end up with a lower stockholding obligation, with three exceptions for option 2 (Belgium, Germany, Lithuania), two for option 3 and 4 (Greece and Lithuania) and one for option 4 (Lithuania). The combined effect with option 5 is that 11 Member States would get a higher stockholding obligation.

Impact on the volatility of the stockholding obligation

Table 6-22 shows the combined impact of measure 1 and measure 2 (option 3) on the volatility of the stockholding obligation at EU level. As in the section above, we have not included the percentage values per Member State in table 6-22 as these percentages are the same as already presented in section 6.2 (whereas the absolute volatility of the combined measures is 6% lower than those reported in section 6.2, the relative volatility across the options remains the same).

Table 6-22: Index based on the absolute annual variation of the stocks to meet the obligation (EU level, cumulative for 2014-2017, adjusted for the CSO effect), where the baseline is 100% (combined impact of measure 1 and measure 2, option 3 – 4% deduction)

EU level	Baseline	1	2	3	4	5
EU (variation)	100%	84%	74%	87%	85%	95%
EU stocks to meet obligation[60] (thousand tonnes)	**14 618**	**12 321**	**10 836**	**12 703**	**12 464**	**13 892**

Impact on the total costs of holding emergency stocks

Table 6-23 shows the corresponding impact on the total costs of holding emergency stocks per Member State and at EU level of combining the options of measure 1 with option 3 of measure 2 (4% deduction instead of 10% deduction). Again, although the absolute figures differ from those presented in section 6.2 and table 6-21, the figures are the same relative to each other. Hence, option 1 produces the largest cost reduction.

Table 6-23: Impact on the total costs of holding emergency stocks needed to cover the obligation (average for 2014-2017, using a cost range of 17.5-25 euro/tonne/year) in million Euro (combined impact of measure 1 and measure 2, option 3 – 4% deduction)

Country	Baseline	1	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	-	-10 / -14	7 / 10	-10 / -14	-10 / -14	17 / 24
CZ	-	-3 / -4	-2	-2 / -3	-3 / -4	1 / 2
FR	-	-21 / -31	-15 / -21	-21 / -31	-21 / -31	5 / 7
HU	-	-2 / -3	-0.2 / -0.3	-2 / -3	-2 / -3	2 / 3
SK	-	-1 / -2	-1 / -2	-1 / -2	-1 / -2	0.4 / 0.6
Countries with a naphtha yield consistently above 7%						
AT	-	-3 / -5	-2 / -4	-3 / -5	-3 / -5	1 / 2
DE	-	-24 / -35	23 / 33	-24 / -35	-24 / -35	52 / 75
NL	-	-5 / -6	-4 / -6	-5 / -6	-5 / -6	14 / 20
PT	-	-3 / -4	-3 / -4	-2 / -3	-3 / -4	2 / 3
Countries with a naphtha yield consistently below 7%						
BG	-	-1 / -2	-1 / 2	0	-1 / -2	0 / 0
ES	-	-14 / -20	-6 / -8	-10 / -14	-10 / -14	-3 / -4
FI	-	-2 / -3	-1	-2 / -3	-2 / -3	-0.3 / -0.4

[60] Measured as the addition (in absolute values) of the annual variations of the CSO for the 28 Member States between 2014 and 2017, adjusted for CSO level effect.

Country	Baseline	1	2	3	4	5
GR	-	-4 / -6	-4 / -6	1 / 2	-4 / -6	1 / 2
HR	-	-0.7 / -1	-0.4 / -0.6	-0.3 / -0.4	-0.4 / -0.6	-0.3 / -0.4
IE	-	-2 / -3	-2 / -2	-2	-2 / -2	-2
IT	-	-21 / -30	-15 / -22	-21 / -30	-21 / -30	-2 / -3
PL	-	-8 / -11	-8 / -11	-6 / -9	-8 / -11	-2 / -3
RO	-	-2 / -2	-2	-2	-2	-2
SE	-	-3 / -4	0.2	-0.7 / -1	-0.7 / -1	0.2 / 0.3
UK	-	-13 / -19	-13 / -19	-13 / -19	-13 / -19	-13 / -19
Countries with no naphtha yield						
CY	-	-0.7 / -1	-0.7 / -1	-0.7 / -1	-0.7 / -1	-0.7 / -1
DK	-	-2	-2	-2	-2	-2
EE	-	-0.2 / -0.3	-0.2 / -0.3	-0.2 / -0.3	-0.2 / -0.3	-0.2 / -0.3
LT	-	-0.5 / -0.7	1 / 2	1 / 2	1 / 2	1 / 2
LU	-	-0.9 / -1	-0.9 / -1	-0.9 / -1	-0.9 / -1	-0.9 / -1
LV	-	-0.4 / -0.6	-0.4 / -0.6	-0.4 / -0.6	-0.4 / -0.6	-0.4 / -0.6
MT	-	-0.2 / -0.3	-0.2 / -0.3	-0.2 / -0.3	-0.2 / -0.3	-0.2 / -0.3
SI	-	-0.7 / -1	-0.7 / -1	-0.7 / -1	-0.7 / -1	-0.7 / -1
EU level						
EU	-	-147 / -211	-53 / -76	-128 / -183	-138 / -197	69 / 98

6.6.3. *Impact of combining measure 1 (all options) with measure 2 (option 1)*

In the tables below we have defined the baseline as the current situation, that is the obligation with the current naphtha yield rule and accounting for 10% deduction (thus obligation divided by 0.9). As we compare the baseline with option 1 of measure 2, in the other calculations we account for no deduction for CSE-owned stocks and 10% deduction on all other stocks. In practice, this means that we first calculated the obligation [step 1] for all years for all options of measure 1, then defined the baseline for meeting the obligation as (calculated) obligation divided by 0.9 [step 2], and from these latter figures we subtracted 10% of the CSE-owned stocks as reported in table 6-6 in section 6.3 [step 3]. If the CSE-owned stocks were higher than the obligation [as calculated in step 2], we subtracted 10% of the obligation [as calculated in step 2] from the obligation as calculated in step 2. Note that we only obtained information on the level of CSE-owned stocks in 2016, which makes the analysis somewhat less precise (but not less meaningful) than the analyses presented above in this section.

Impact on the stockholding obligation

Table 6-24 shows the combined impact of measure 1 and measure 2 (option 1) on the level of the stockholding obligation, both at Member State and EU level. Compared with the results for combining measure 1 with option 3 or 4 of measure 2, the figures in table 6-20 show a somewhat higher variation between Member States. This reflects the fact that, in this option, Member States with high volumes of CSE-owned stocks can more easily meet the obligation (as compared to the baseline), whereas for countries that have no CSE-owned stocks, the situation as compared to the baseline remains the same. For these countries (such as Sweden and the UK), the figures in table 6-24 are the same as in table 6-2. At EU level, the figures are comparable with the figures presented in section 6.6.2 above.

Table 6-24 Index per country based on the average stocks to meet obligation (2014-2017), where the baseline is 100% (combined impact of measure 1 and measure 2, option 1 – no deduction for CSE-owned stocks)

Country	Baseline	1	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	100%	83%	107%	83%	83%	121%
CZ	100%	90%	92%	91%	90%	100%
FR	100%	93%	95%	93%	93%	101%
HU	100%	87%	95%	87%	87%	106%
SK	100%	87%	87%	87%	87%	99%
Countries with a naphtha yield consistently above 7%						
AT	100%	93%	94%	93%	93%	102%
DE	100%	90%	102%	90%	90%	110%
NL	100%	91%	92%	91%	91%	119%
PT	100%	96%	96%	98%	96%	108%
Countries with a naphtha yield consistently below 7%						
BG	100%	97%	97%	104%	97%	104%
ES	100%	95%	98%	97%	97%	100%
FI	100%	100%	104%	101%	101%	106%
GR	100%	98%	98%	109%	98%	109%
HR	100%	91%	94%	96%	94%	96%
IE	100%	91%	93%	93%	93%	93%
IT	100%	96%	99%	96%	96%	105%
PL	100%	95%	96%	97%	96%	101%
RO	100%	100%	100%	100%	100%	100%
SE	100%	100%	107%	105%	105%	107%
UK	100%	100%	100%	100%	100%	100%
Countries with no naphtha yield						
CY	100%	97%	97%	97%	97%	97%
DK	100%	92%	92%	92%	92%	92%
EE	100%	90%	90%	90%	90%	90%
LT	100%	96%	117%	117%	117%	117%
LU	100%	100%	100%	100%	100%	100%
LV	100%	100%	100%	100%	100%	100%
MT	100%	100%	100%	100%	100%	100%
SI	100%	91%	91%	91%	91%	91%
EU level						
EU	100%	94%	98%	95%	94%	105%
EU stocks to meet obligation ('000 tonnes)	**120 375**	**112 941**	**118 517**	**114 103**	**113 526**	**125 924**

Impact on the volatility of the stockholding obligation

Table 6-25 shows the combined impact of measure 1 and measure 2 (option 1) on the volatility of the stockholding obligation at EU level. The figures are somewhat different from the figures on volatility presented in section 6.2, without changing the overall conclusions. Also here option 2 performs best in terms of reduction in volatility, at some distance followed by options 1/1B, 4 and 3. Option 5 performs worst.

Table 6-25 Index based on the absolute annual variation of the stocks to meet the obligation (EU level, cumulative for 2014-2017, adjusted for the CSO effect), where the baseline is 100% (combined impact of measure 1 and measure 2, option 1 – – no deduction for CSE-owned stocks)

Country	Baseline	1	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	100%	12%	12%	11%	11%	8%
CZ	100%	91%	62%	108%	90%	47%
FR	100%	107%	69%	105%	106%	92%
HU	100%	82%	75%	81%	81%	86%
SK	100%	71%	75%	65%	71%	77%
Countries with a naphtha yield consistently above 7%						
AT	100%	107%	86%	105%	106%	84%
DE	100%	96%	67%	95%	95%	65%
NL	100%	100%	10000%	100%	100%	10000%
PT	100%	107%	102%	119%	106%	93%
Countries with a naphtha yield consistently below 7%						
BG	100%	96%	92%	108%	96%	98%
ES	100%	107%	86%	113%	113%	98%
FI	100%	107%	107%	114%	114%	101%
GR	100%	101%	96%	113%	101%	102%
HR	100%	107%	102%	102%	106%	92%
IE	100%	107%	102%	107%	107%	97%
IT	100%	149%	153%	148%	148%	117%
PL	100%	109%	105%	115%	109%	97%
RO	100%	107%	102%	105%	106%	96%
SE	100%	107%	97%	109%	110%	93%
UK	100%	107%	102%	105%	106%	96%
Countries with no naphtha yield						
CY	100%	107%	102%	105%	106%	96%
DK	100%	107%	102%	105%	106%	96%
EE	100%	96%	91%	95%	95%	86%
LT	100%	107%	105%	109%	110%	99%
LU	100%	107%	102%	105%	106%	96%
LV	100%	107%	102%	105%	106%	96%
MT	100%	107%	102%	105%	106%	96%
SI	100%	107%	102%	105%	106%	96%

Country	Baseline	1	2	3	4	5
EU level						
EU	100%	87%	78%	90%	88%	100%
EU stocks to meet obligation[61] ('000 tonnes)	**14 618**	**12 755**	**11 408**	**13 156**	**12 904**	**14 614**

Impact on the total costs of holding emergency stocks

Table 6-26 shows the corresponding impact on the total costs of holding emergency stocks per Member State and at EU level of combining the options of measure 1 with option 1 of measure 2 (no deduction of CSE-owned stocks). At EU level, the cost savings are comparable with those when the options of measure 1 are combined with option 3 of measure 2 (4% rather than 10% deduction).

Table 6-26 : Impact on the total costs of holding emergency stocks needed to cover the obligation (average for 2014-2017, using a cost range of 17.5-25 euro/tonne/year) in million Euro (combined impact of measure 1 and measure 2, option 1 – no deduction for CSE-owned stocks)

Country	Baseline	1	2	3	4	5
Countries with naphtha yield crossing the 7% trigger						
BE	-	-12 / -18	5 / 7	-12 / -18	-12 / -18	15 / 22
CZ	-	-4 / -5	-3 / -4	-3 / -5	-4 / -5	0
FR	-	-24 / -35	-17 / -25	-24 / -35	-24 / -35	4 / 5
HU	-	-3 / -4	-1 / -1	-3 / -4	-3 / -4	1 / 2
SK	-	-2 / -3	-2 / -3	-2 / -2	-2 / -3	0
Countries with a naphtha yield consistently above 7%						
AT	-	-4 / -5	-3 / -4	-4 / -5	-4 / -5	1 / 2
DE	-	-39 / -55	9 / 13	-39 / -55	-39 / -55	40 / 58
NL	-	-6 / -9	-6 / -8	-6 / -9	-6 / -9	13 / 19
PT	-	-2 / -2	-2 / -2	-1 / -1	-2 / -2	4 / 5
Countries with a naphtha yield consistently below 7%						
BG	-	-1 / -1	-1 / -1	1 / 1	-1 / -1	1 / 1
ES	-	-12 / -17	-3 / -5	-7 / -10	-7 / -10	0
FI	-	0	1 / 2	0 / 1	0 / 1	2 / 3
GR	-	-1 / -2	-1 / -2	5 / 7	-1 / -2	5 / 7
HR	-	-1 / -1	-1 / -1	0 / -1	-1 / -1	0 / -1
IE	-	-3 / -4	-2 / -3	-2 / -3	-2 / -3	-2 / -3
IT	-	-9 / -12	-3 / -5	-9 / -12	-9 / -12	11 / 16
PL	-	-5 / -7	-5 / -7	-3 / -5	-5 / -7	1 / 1
RO	-	0	0	0	0	0
SE	-	0	3 / 5	2 / 4	2 / 4	3 / 5
UK	-	0	0	0	0	0

[61] Measured as the addition (in absolute values) of the annual variations of the CSO for the 28 Member States between 2014 and 2017, adjusted for CSO level effect.

Country	Baseline	1	2	3	4	5
Countries with no naphtha yield						
CY	-	0 / -1	0 / -1	0 / -1	0 / -1	0 / -1
DK	-	-2 / -3	-2 / -3	-2 / -3	-2 / -3	-2 / -3
EE	-	0 / -1	0 / -1	0 / -1	0 / -1	0 / -1
LT	-	0	1 / 2	1 / 2	1 / 2	1 / 2
LU	-	0	0	0	0	0
LV	-	0	0	0	0	0
MT	-	0	0	0	0	0
SI	-	-1 / -1	-1 / -1	-1 / -1	-1 / -1	-1 / -1
EU level						
EU	-	-130 / -186	-33 / -46	-110 / -157	-120 / -171	97 / 139

7. CONCLUSION AND RECOMMENDATIONS

In this report we estimated the impact of a potential revision of the Directive for four potential measures:

- Changing the methodology for calculating the crude oil equivalent of imports of petroleum products (naphtha yield rule);
- Changing the 10% deduction applicable when calculating the level of emergency stocks held (Annex III);
- Moving the date of start of the stockholding obligation from 1st April to 1st July;
- Clarifying the Directive's rules on holding cross-border stocks.

For each of the measures the impact of various options were compared with the baseline situation of not changing the Directive for that particular measure.

7.1. Changing the naphtha yield rule

The problem connected to the current naphtha yield rule is that it causes inefficiencies in meeting the annual stockholding obligation for certain Member States, caused by the (large) annual changes in the stockholding obligation if the naphtha yield moves from above the 7% threshold to below this threshold and the other way around. At EU-level, the problem connected to the naphtha yield rule does not seem particularly large as it applies to a minority of the Member States. We see, however, a clear justification for the EU to act on this matter, because the effect of the naphtha rule on individual Member States could be considerable and could (*de facto*) be in contradiction with the principle of equal treatment of all Member States.

The following options were included in the analysis:

- Option 1 - Countries with a naphtha yield lower than 4% apply a 4% deduction; countries with a naphtha yield higher than 4% deduct the actual naphtha consumption or actual naphtha yield (whichever is smaller) from the net imports;
- Option 1b - This would imply removing the trigger from the calculation and basing the calculation of the CSO on the lowest value from two calculations:
    - Obligation = actual naphtha yield deducted from net imports, but if the actual naphtha yield is <4%, the average naphtha yield of 4% is deducted;
    - Obligation = net imports – actual naphtha consumption;
- Option 2 - Actual naphtha yield deducted from the COE of net imports;
- Option 3 - Actual naphtha consumption deducted from the COE of net imports;
- Option 4 - Actual naphtha yield or consumption would be deducted (whichever is smaller);
- Option 5 - No naphtha yield correction;
- Option 6 – The share naphtha used for energy purposes will be included in the calculation of the CSO (Annex I) and stocks of stocks of naphtha used for energy purposes will be included as eligible to meet the CSO (annex III).

Our preferred option is option 1B. This option produces the same results as option 1, but has the theoretical benefit that the volatility is less in certain circumstances that may (or may not, these circumstances did not occur in the period 2014-2017) prevail in future. Option 1B is therefore more robust than option 1. Option 1(B) leads to the lowest overall stockholding obligation and to the one but last lowest level of expected volatility in the stockholding obligation at EU level. Options 3 and 4 produce comparable, but slightly worse, results as option 1(B): instead of an annual cost saving in the range of €17-24

million, there is a cost saving of €7-9 million (option 4) or cost increase of €4-5 million (option 3).

Option 2 leads to the largest reduction of the expected annual volatility of the stockholding obligation, both for the group of five countries that passed the 7% threshold on or more times in recent years and for the EU at large. The negative impact on the overall stockholding obligation however more than outweighs this positive impact: in option 2 the annual costs are expected to increase in the range of €84-120 million.

Also options 5 and 6 are not recommended. Although there is a strong decrease of the relative volatility within Members States (note that these figures were adapted for the level of the obligation as compared to the level of the obligation in the baseline situation to single out the impact on volatility from the impact on the stockholding obligation), the negative impact on the total stockholding obligation is the largest amongst the options, giving rise to large cost increases (ca. €214-305 million annually) and even a high absolute volatility at EU level (without adjusting for the impact on the obligation for each Member State). Option 6 has a strong negative impact on the stockholding obligation on some Member States and seems difficult to realise in practice because of data limitations.

7.2. Changing the 10% deduction rule

Whereas in the IEA system there is a clear justification for the 10% deduction of unavailable stocks, in the EU system this justification is much weaker. Firstly, part of the unavailable stocks may in fact be part of the commercial stocks of the Member State concerned, which may not be counted for meeting the obligation anyway. Secondly, the Directive stipulates that all emergency stocks should be accessible and available at all times, which is inconsistent with the 10% deduction for unavailable stocks. The problem that emerges is that the emergency stocks might currently be higher than strictly needed, which would correspondingly lead to higher total costs of holding these emergency stocks.

The following options were included in the analysis:

- Baseline - When calculating the level of emergency oil stocks actually held, the Member State would apply to the quantities of stocks a correction factor of 10%, to take account of the amount of stocks that might not be accessible (e.g. tank bottoms);
- Option 1 - The 10% deduction rule would not be applicable for emergency stocks owned by Central Stockholding Entities, because there would be no doubt about the availability of these emergency stocks;
- Option 2 - The 10% deduction rule would not be applicable for those Member States that commit to make sure that, in addition to the emergency stocks, at least 10 days of commercial stocks (or 6.8 for Member States under 61-day-obligation) will be held;
- Option 3 - The 10% would be replaced by a 5% reduction (or any other percentage figure that can be justified based on existing literature or practices);
- Option 4 - No deduction percentage would be introduced (the last two paragraphs of Annex III would be deleted).

Our preferred option is option 1. Implementing option 1 would result in annual cost savings of ca. €160-187 million, whereas the impact on the security of supply would only be slightly negative (note that CSE-owned stocks by definition do not include working stocks) and the cost savings would more than outweigh this negative effect. CSE-owned stocks are held on top of what is available in the market already and are therefore not only the most expensive type of emergency stocks, but also the most robust type of emergency stocks. Implementing option 1 could also act as a stimulus to increase the level of CSE-owned stocks in the EU over time.

An option that could be considered, but does not have our preference, is option 4. This option would generate the highest cost savings (€211-302 million per year), but also the highest negative impact on the security of supply. The justification to select this option would be to argue that since the establishment of the emergency stockholding system in the 1970s, the level of working stocks has gradually gone down over the years and that the actual contribution of the system to the security of supply is currently much larger than 40 years ago.

The other two options are not recommended. Option 2 would potentially generate higher cost savings than option 1 (of maximum €209-298 million per year), but only if Member States would not add the 10 days of commercial stocks to the obligation of economic operators. If the 10 days commercial stocks obligation was added to the obligation, the situation would not alter as compared to the current baseline situation and no cost savings would be generated. At the moment, there is a high level of uncertainty how this option would work out in practice and the administrative burden would most likely increase.

Option 3 does not make a distinction between CSE-owned stocks, industry stocks or tickets. We note that the rationale for lowering the 10% deduction in this option is that the deduction would account for technically unavailable stocks only and not for working stocks. Using 4% deduction as an alternative figure, the cost savings would be somewhat lower than in option 1 (€121-174 million per year). As working stocks are not accounted for, there is a negative, though uncertain in terms of the level, impact on the security of supply for the industry emergency stocks and the tickets issued by industry. Regarding the latter, the cost reductions do not outweigh this negative impact on the security of supply.

7.3. Moving the start date of the stockholding obligation

The problem is related to the current start date of the stockholding obligation of April 1st and the fact that the period between calculating and communicating the new (annual) obligation and when this obligation should be complied with, is very short. This short period does not allow for efficient buying decisions in years when the obligation goes up. This inability, in some Member States, to increase the stock holding quickly enough also implies a risk of non-compliance in April.

The following options were included in the analysis:

- Baseline (do nothing) – Member States would remain obliged to comply with the stockholding obligation as from 1st of April (March MoS submission) each year;
- Option 1 – Member States would be obliged to comply with the stockholding obligation as from 1st of July each year;
- Option 2 – Member States would be obliged to comply with the stockholding obligation as from 1st of May each year (the same data as the IEA is effectively requiring, being the 30th of April).

Our preferred option is option 2. One month extra will reduce the administrative costs and the risk of non-compliance in years that the obligation gets up and limits the extra costs of holding higher stocks to one month if the obligation would go down. Option 1 would only reduce the administrative costs and the risk of non-compliance in years that the obligation gets up somewhat further, and this does not outweigh the extra costs of holding higher stocks for three months if the obligation would go down. The May option has the additional benefit of improving alignment with the IEA.

7.4. Clarifying the Directive's rules on holding cross-border stocks

According to the Directive, holding stocks in other Member States (cross-border stocks) is allowed, provided that prior authorisation is provided by both Member States. This should lead to a level playing field for the obligated parties across Member States and increased cost-effectiveness for meeting the obligation to hold emergency stocks. At the same time, in view of ensuring the availability and accessibility of emergency stocks at all times, Member States may impose limits and conditions on the extent to which their obligated parties are allowed to use cross-border stocks. As a result, there are large differences across Member States in the limits imposed on the share of cross-border stocks allowed, the stringency of the authorisation procedures and other restrictions imposed on cross-border stocks.

The resulting problem is that the total costs that obligated parties have to make to meet the stockholding obligation maybe higher than strictly necessary in some Member States, provided that the impediments for cross-border stockholding could be brought down without having an impact on the security of supply in times of a crisis.

The following options were included in the analysis:

- Option 1: Option 2 plus fully harmonising limits, procedures and requirements;
- Option 2: Harmonising procedural steps and deadlines in the authorisation process;
- Option 3: A continuously updated EU register of cross-border stocks.

The impacts of these options strongly depend on the exact way in which they would be designed. On the basis of stakeholder consultation throughout the study, the options were further defined on the basis of the most common procedures and limits in the EU, as follows:

Option 1

- Option 2 and:
- Harmonising the share of stocks allowed cross-border
    - A minimum of 30% for all countries (in line with the requirement from the Directive to allow a minimum share of 30% delegation for economic operators);
- Common rules on the responsibility for auditing and inspection of cross-border stocks;
- Common rules on tickets
    - Minimum duration of 3 months;
    - Maximum duration of 12 months;
    - Specific list with commonly allowed products and their definitions in line with the products listed in Annex III of the Directive and their definition in Regulation (EC) No 1099/2008 (not 'any oil');
- Common rules on the physical availability and accessibility of emergency stocks
    - Emergency stocks should be able to be put on the domestic (or European) market within five working days by ship, rail or road.

Option 2

- Harmonise the deadlines in the authorisation process
    - Application received at least 30 days before contract start;
    - Approval decision at latest 7 days before contract start;
- Provide automatic acceptance of the cross-border deal after passing of the deadline;

- Harmonisation of the type of information to be provided (see Chapter 4).

Our preferred option is the joint implementation of options 1 and 3. By harmonising restriction levels, other rules on cross-border stocks and the underlying authorisation procedure, option 1 creates the most significant impacts in terms of the expected increase in the share of cross-border stocks and potential economic savings. A drawback is however that option 1 is expected to have a negative impact on the security of supply as the increase in the share of cross-border stocks is expected to be mainly composed of tickets. Since tickets are sold on excess stocks held by industry for commercial purposes, they are less certain to be available and accessible in times of crisis and transparency of cross-border tickets still is an issue.

By only harmonising the underlying authorisation procedure, option 2 is likely to realise a much smaller portion of the impacts (including a less negative impact on the security of supply), but would be positive as some more cross-border stocks are still expected from a more streamlined authorisation process. We note that most Member States favour this option as they would maintain their authority over the set limits of allowed cross-border stocks.

Option 3 would not directly contribute to meeting the objective of reducing impediments to cross-border stockholdings, but would have a positive impact on the transparency of cross-border stocks as through a continuously updated EU register of cross-border stocks information about cross-border stocks would be shared more frequently and become better accessible for authorities and obligated parties. Due to the increased demand for data, the administrative burden for the national authorities would however increase.

Combining options 1 and 3 therefore potentially achieves the best effects by simultaneously removing barriers to cross-border stockholding as well as increasing transparency and quality of cross-border stocks. However, the overall potential to realise a net positive impact from this combination of options requires a careful definition of rules regarding the length and definition of tickets, allowed product categories and auditing and inspection.

7.5. Impact of combining different options

The quantitative assessment of the impact of combining the different options of measure 1 and 2 on the level of the stockholding obligation, the associated total costs to hold emergency stocks and the annual volatility of the obligation at Member State and EU level. Whereas the absolute impacts obviously differ from the impacts of the options considered on their own, the impacts relative to each other largely remain the same. Hence, the results of the joint impact assessment do not alter our conclusion and underlying arguments on the preferred option per measure discussed above.

8. ANNEX A – ADDITIONAL FIGURES AND TABLES

Figure 8-1 Current number of bilateral agreements in the EU

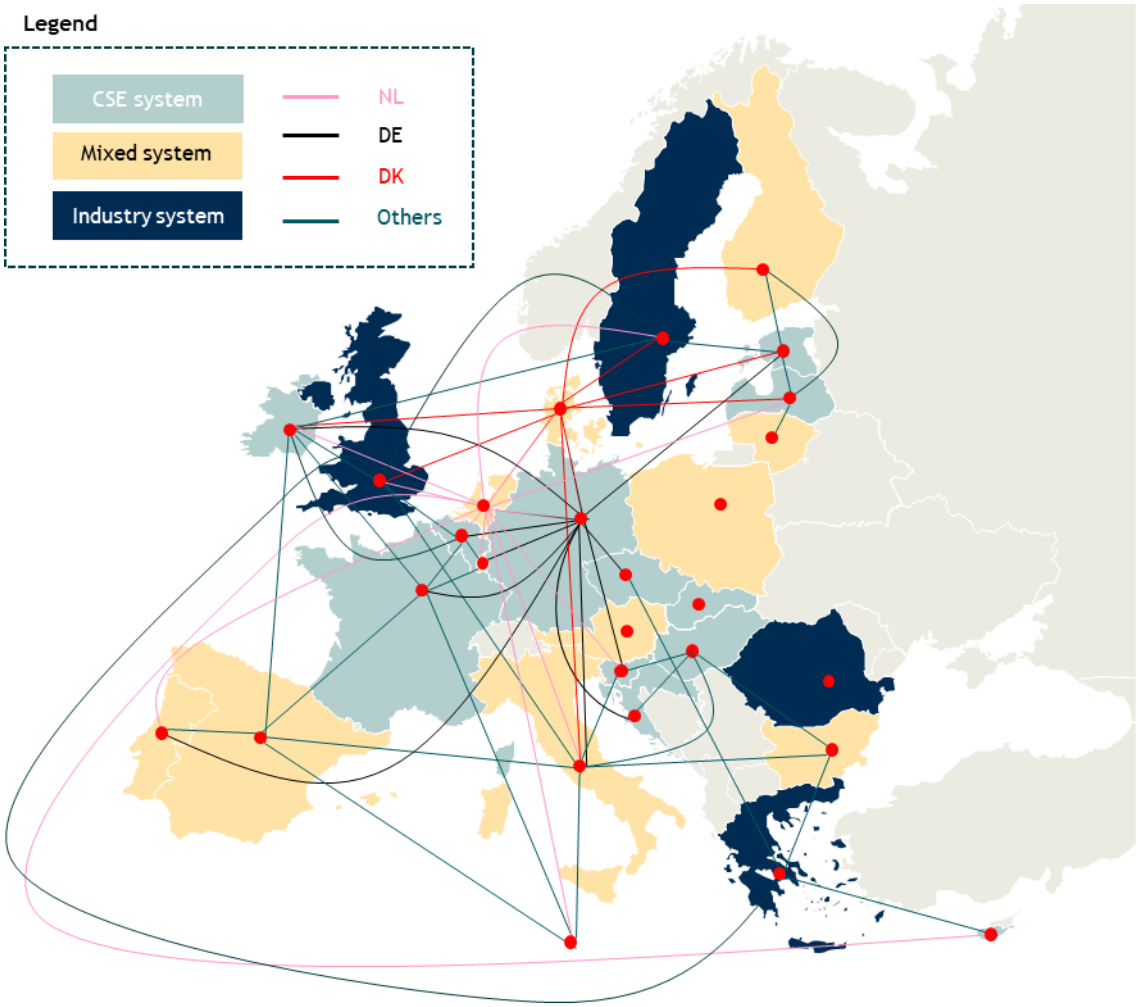
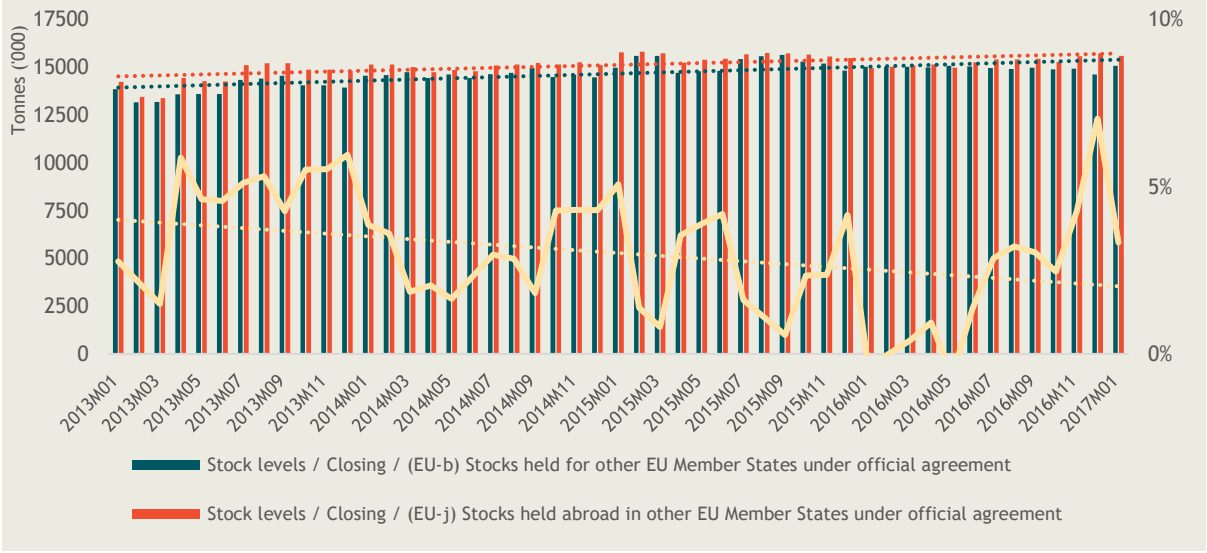


Figure 8-2 Discrepancy in reporting of cross-border emergency stocks



Source: Author's calculation based on Eurostat, nrg_141m – crude oil and all eligible petroleum products

Table 8-1 Share of tickets as % of stocks held cross-border, average for the years 2013-2017

	2013	2014	2015	2016	2017		2013	2014	2015	2016	2017
AT	n.a.	n.a.	n.a.	n.a.	n.a.	**IE**	2%	2%	0%	0%	0%
BE	2%	5%	1%	2%	3%	**IT**	100%	100%	100%	100%	100%
BG	n.a.	0%	0%	0%	0%	**LT**	0%	0%	0%	0%	0%
CY	47%	55%	74%	87%	86%	**LU**	100%	100%	100%	100%	100%
CZ	0%	0%	0%	0%	0%	**LV**	100%	100%	100%	100%	100%
DE	61%	50%	29%	5%	8%	**MT**	100%	100%	102%	100%	100%
DK	100%	100%	100%	100%	100%	**NL**	2%	1%	1%	7%	3%
EE	0%	0%	0%	0%	0%	**PL**	No stocks held cross-border based on MOS data				
EL	No stocks held cross-border based on MOS data					**PT**	0%	34%	58%	60%	33%
ES	100%	100%	100%	100%	100%	**RO**	n.a.	n.a.	0%	0%	0%
FI	n.a.	100%	100%	100%	n.a.	**SE**	100%	100%	100%	100%	100%
FR	0%	0%	0%	0%	0%	**SI**	34%	38%	18%	21%	16%
HR	0%	0%	0%	0%	0%	**SK**	No stocks held cross-border based on MOS data				
HU	No stocks held cross-border based on MOS data					**UK**	100%	100%	100%	100%	100%

Author's calculation based on Eurostat, nrg_142m - crude oil and all eligible petroleum products

9. ANNEX B – LIST OF EXPERTS INTERVIEWED AND FOCUS GROUP AGENDA

9.1. List of experts interviewed

- Jan Bartos & Aad van Bohemen (IEA)
- Lizi Meuleman & Bernard Claeys (APETRA)
- Stinne Maria Thomassen (Danish Energy Agency)
- Peter Dam Hendriksen (FDO)
- Pálmai Márton, Németi Krisztina, Karagiannidou-Rosiek Maria-Anna (MOL)
- Francesco Dolci & Amedeo Giammattei
- Frans Wieleman (Ministry of Economic Affairs, Netherlands)
- Hugues Maillot (Ministère de la transition écologique et solidaire
- Giorgia Manno (FuelsEurope)
- John Twamley (Ministry of Energy, Ireland)
- Jyrki Pohjolainen (Ministry Economic Affairs, Finland)
- Juan Bta. Sánchez-Peñuela Lejarraga (Ministry for Energy Policy and Mining, Spain)
- Marko Naraločnik (Agency of The Republic of Slovenia for Commodity Reserves)
- James Baker (Department for Business, Energy and Industrial Strategy, UK)
- George Lanners (Ministry of Economic Affairs, Luxembourg)

9.2. Annotated agenda for the focus group discussion

[***As distributed to participants in nov-2017***]

For the discussion points on the agenda, we refer to the sections below, in which we provide some background information about our assessment until now. **This assessment is preliminary and draft and open to all your suggestions and input during the workshop!** The workshop is specifically meant to sharpen the analysis on all of the discussion points, so please do not hesitate and bring all your ammunition (data, information and input from your colleagues).

As you can see in the agenda, the workshop is ***very interactive*** and relies on your input and preparation. In order to help you prepare, we provide background information in the following sections and include questions to you per section that we expect you to prepare for next week.

Time	Agenda item	Who?	Your contribution
13:00 – 13:30	**Sandwiches**		
13:30 – 13:45	**Introduction**	Trinomics	Pose questions for clarification
13:45 – 14:45	**Discuss "What is the problem"**	Trinomics introduces, all discuss	**See section 1.2.1**: - Answers to questions
14:45 – 15:00	*Break (coffee & tea)*		
15:00 – 15:30	**Discuss "What should be achieved?"**	Trinomics introduces, participants present and discuss	**See section 1.2.2:** - Present your answer to Q.11 & Q.12

Time	Agenda item	Who?	Your contribution
	and "What are the options?"		- Answers to other questions
15:30 – 16:30	**Discuss "What are the impacts?"**	Trinomics introduces, all discuss	**See section 1.2.3:** - Answers to questions
16:30 – 17:00	**Wrap up & conclusions**	Workshop participants	Three participants summarise the outcomes of the meeting
17:00 -	**Drinks at a café**	For those interested	

What is the problem?

1.1 Questions for participants (please prepare)

1. **Why do you set conditions to limit stocks held cross-border in your country?**
2. **Do any requirements in the Directive force you to apply rules and restrictions in relation to cross-border stocks?**
3. **For your country (and for other countries that you are aware of), is the information in rules and restrictions table (attached to the mail) correct?**

4. **If you require a bilateral agreement to be in place, why do you require the presence of a bilateral agreement? What are the precise contents of your bilateral agreements (rules for auditing, rules on release, rules on information)?** ***Please bring one as an example if possible***
5. **If you do not require a bilateral agreement for your obligated parties to hold stocks cross-border, what conditions do you set before you authorise a cross-border stock deal?**
6. **What information do you require to authorise a cross-border stocks for obligated parties in your country?**
7. **What does the procedure in your country look like when an obligated party requests stocks to be held cross-border? (e.g. who authorises, who sends information when, how long in advance does this need to happen)?**

What should be achieved and what are the options to achieve this objective?

2.1 Questions for participants (please prepare)

8. **Which rules and requirements in relation to cross-border stocks do you consider necessary to apply (from the rules and requirements discussed in section 1.2.1), from the perspective of compliance with the Directive?**
9. **Which rules and requirements in relation to cross-border stocks that you know other Member States apply do you consider unnecessary from the perspective of compliance with the Directive?**
10. **For option 1: If you could make the harmonised rules and requirements for cross-border stocks that all Member States should adopt (through an additional article in the Directive), which rules and regulations would you include and why?**
11. **For option 2: If you could make the partially harmonised rules on the authorisation procedure for cross-border stocks (through an article in the Directive), what procedure would you prescribe for all Member States?**

What are the impacts of the proposed options?

3.1 Questions for participants (please prepare)

12. **Regarding option 1, do you think it will be possible to find common rules and restrictions that all Member States will accept? What would they look like (only necessary rules)?**
13. **Regarding option 2, do you think it will be possible to find a common procedures that all Member States will accept? What would they look like?**
14. **What are the precise benefits of holding more stocks abroad in your country (e.g. what is the difference between domestic and international ticket prices)?**
15. **If option 1 would be adopted (a common set of rules and restrictions in Member States, no bilateral agreements), what would be the impacts in your country?**
    a. **More cross-border stocks?**
    b. **Lower costs for obligated parties to meet obligation (traders, producers, all)?**
    c. **Concerns about availability of accessibility of stocks?**
16. **If option 2 would be adopted (a common authorisation procedure, differing rules and restrictions), what would be the impacts in your country?**
    a. **More cross-border stocks?**
    b. **Lower costs for obligated parties to meet obligation (traders, producers, all)?**
    c. **Concerns about availability of accessibility of stocks?**
17. **If option 3 would be adopted (a ticket register and harmonised statistical codes), what would be the impacts in your country?**
    a. **More cross-border stocks?**
    b. **Lower costs for obligated parties to meet obligation (traders, producers, all)?**

10. ANNEX C – DETAILED IMPACTS DUE TO CHANGES TO THE NAPHTHA YIELD RULE

On the level of the obligation

Level of the obligation

		MINIMUM STOCK LEVEL FOR COMPLIANCE				
MS	**Option**	**2014**	**2015**	**2016**	**2017**	**Average 2014-2017**
BE	Baseline	3470	3420	4718	3501	**3777**
BE	1	3470	3420	3589	3501	**3495**
BE	2	4369	4349	4531	4430	**4420**
BE	3	3470	3420	3589	3501	**3495**
BE	4	3470	3420	3589	3501	**3495**
BE	5	4859	4918	5031	4984	**4948**
BG	Baseline	869	931	989	1041	**958**
BG	1	866	931	982	1022	**951**
BG	2	866	932	982	1022	**951**
BG	3	932	991	1054	1109	**1022**
BG	4	866	932	982	1022	**951**
BG	5	932	991	1054	1109	**1022**
CZ	Baseline	1769	1810	1933	2029	**1885**
CZ	1	1769	1810	1933	1990	**1876**
CZ	2	1832	1893	1954	1990	**1917**
CZ	3	1769	1810	1933	2034	**1887**
CZ	4	1769	1810	1933	1990	**1876**
CZ	5	1999	2085	2103	2081	**2067**
DK	Baseline	1223	1199	1207	1244	**1218**
DK	1	1223	1199	1207	1244	**1218**
DK	2	1223	1199	1207	1244	**1218**
DK	3	1223	1199	1207	1244	**1218**
DK	4	1223	1199	1207	1244	**1218**
DK	5	1223	1199	1207	1244	**1218**
DE	Baseline	20447	19459	19817	20057	**19945**
DE	1	20447	19459	19817	20057	**19945**
DE	2	23010	22238	22365	22517	**22532**
DE	3	20447	19459	19817	20057	**19945**
DE	4	20447	19459	19817	20057	**19945**
DE	5	24613	23836	23991	24144	**24146**
EE	Baseline	179	184	185	199	**187**
EE	1	179	184	185	199	**187**
EE	2	179	184	185	199	**187**
EE	3	179	184	185	199	**187**
EE	4	179	184	185	199	**187**
EE	5	179	184	185	199	**187**
IE	Baseline	1639	1702	1699	1794	**1709**
IE	1	1639	1702	1699	1794	**1709**
IE	2	1661	1725	1724	1821	**1733**
IE	3	1667	1732	1733	1830	**1740**
IE	4	1661	1725	1724	1821	**1733**
IE	5	1667	1732	1733	1830	**1740**
GR	Baseline	2687	2657	2285	2851	**2620**
GR	1	2631	2607	2232	2750	**2555**
GR	2	2631	2607	2232	2750	**2555**
GR	3	2914	2910	2503	3124	**2863**
GR	4	2631	2607	2232	2750	**2555**
GR	5	2917	2911	2506	3125	**2865**
ES	Baseline	11255	11049	11536	12077	**11479**
ES	1	11255	11049	11536	12077	**11479**
ES	2	11781	11590	11890	12442	**11926**
ES	3	11452	11260	11795	12388	**11723**
ES	4	11452	11260	11795	12388	**11723**
ES	5	11846	11646	12176	12710	**12094**
FR	Baseline	17666	17429	17394	17745	**17559**
FR	1	17666	17429	17394	17745	**17559**
FR	2	18055	17833	17803	17972	**17916**
FR	3	17666	17429	17394	17745	**17559**

MS	Option	MINIMUM STOCK LEVEL FOR COMPLIANCE				
		2014	2015	2016	2017	Average 2014-2017
FR	4	17666	17429	17394	17745	**17559**
FR	5	19157	18877	18838	19116	**18997**
HR	Baseline	549	597	597	584	**582**
HR	1	549	597	597	584	**582**
HR	2	562	612	612	600	**596**
HR	3	573	619	622	613	**607**
HR	4	562	612	612	600	**596**
HR	5	573	619	622	613	**607**
IT	Baseline	11520	11285	11291	10839	**11234**
IT	1	11099	10946	11042	10321	**10852**
IT	2	11471	11167	11275	10644	**11139**
IT	3	11099	10946	11042	10321	**10852**
IT	4	11099	10946	11042	10321	**10852**
IT	5	12145	11862	11955	11483	**11861**
CY	Baseline	526	555	636	612	**583**
CY	1	526	555	636	612	**583**
CY	2	526	555	636	612	**583**
CY	3	526	555	636	612	**583**
CY	4	526	555	636	612	**583**
CY	5	526	555	636	612	**583**
LV	Baseline	290	332	457	396	**369**
LV	1	290	332	457	396	**369**
LV	2	290	332	457	396	**369**
LV	3	290	332	457	396	**369**
LV	4	290	332	457	396	**369**
LV	5	290	332	457	396	**369**
LT	Baseline	375	427	428	472	**425**
LT	1	375	427	428	472	**425**
LT	2	468	505	515	570	**515**
LT	3	468	505	515	570	**515**
LT	4	468	505	515	570	**515**
LT	5	468	505	515	570	**515**
LU	Baseline	733	707	698	704	**711**
LU	1	733	707	698	704	**711**
LU	2	733	707	698	704	**711**
LU	3	733	707	698	704	**711**
LU	4	733	707	698	704	**711**
LU	5	733	707	698	704	**711**
HU	Baseline	895	1156	1130	1179	**1090**
HU	1	895	1010	1130	1179	**1053**
HU	2	994	1111	1238	1258	**1150**
HU	3	895	1010	1130	1179	**1053**
HU	4	895	1010	1130	1179	**1053**
HU	5	1103	1220	1348	1410	**1270**
MT	Baseline	215	221	123	149	**177**
MT	1	215	221	123	149	**177**
MT	2	215	221	123	149	**177**
MT	3	215	221	123	149	**177**
MT	4	215	221	123	149	**177**
MT	5	215	221	123	149	**177**
NL	Baseline	3672	3672	3672	3672	**3672**
NL	1	3672	3672	3672	3672	**3672**
NL	2	3672	3732	3672	3672	**3687**
NL	3	3672	3672	3672	3672	**3672**
NL	4	3672	3672	3672	3672	**3672**
NL	5	4812	5382	3672	4839	**4676**
AT	Baseline	2696	2528	2576	2685	**2621**
AT	1	2696	2528	2576	2685	**2621**
AT	2	2705	2582	2632	2734	**2663**
AT	3	2696	2528	2576	2685	**2621**
AT	4	2696	2528	2576	2685	**2621**
AT	5	2913	2783	2824	2938	**2865**
PL	Baseline	5060	4987	5362	5958	**5342**
PL	1	5060	4937	5267	5882	**5286**

MS	Option	MINIMUM STOCK LEVEL FOR COMPLIANCE 2014	2015	2016	2017	Average 2014-2017
PL	2	5068	4937	5267	5882	**5288**
PL	3	5116	4972	5346	5967	**5350**
PL	4	5068	4937	5267	5882	**5288**
PL	5	5290	5217	5611	6204	**5581**
PT	Baseline	2411	2235	2247	2317	**2302**
PT	1	2411	2235	2247	2317	**2302**
PT	2	2411	2235	2247	2317	**2302**
PT	3	2414	2266	2298	2411	**2347**
PT	4	2411	2235	2247	2317	**2302**
PT	5	2682	2508	2545	2585	**2580**
RO	Baseline	1209	1235	1253	1329	**1257**
RO	1	1209	1235	1253	1329	**1257**
RO	2	1209	1235	1253	1329	**1257**
RO	3	1209	1235	1253	1329	**1257**
RO	4	1209	1235	1253	1329	**1257**
RO	5	1209	1235	1253	1329	**1257**
SI	Baseline	587	580	572	604	**586**
SI	1	587	580	572	604	**586**
SI	2	587	580	572	604	**586**
SI	3	587	580	572	604	**586**
SI	4	587	580	572	604	**586**
SI	5	587	580	572	604	**586**
SK	Baseline	622	662	717	781	**695**
SK	1	622	624	688	739	**668**
SK	2	622	624	691	752	**672**
SK	3	631	637	688	739	**674**
SK	4	622	624	688	739	**668**
SK	5	724	714	776	838	**763**
FI	Baseline	1699	2023	1861	2031	**1904**
FI	1	1699	2023	1861	2031	**1904**
FI	2	1763	2086	1927	2132	**1977**
FI	3	1727	2037	1865	2087	**1929**
FI	4	1727	2037	1865	2087	**1929**
FI	5	1812	2138	1963	2149	**2016**
SE	Baseline	2759	2619	2143	2473	**2498**
SE	1	2759	2619	2143	2473	**2498**
SE	2	2922	2799	2331	2640	**2673**
SE	3	2922	2715	2269	2596	**2625**
SE	4	2922	2715	2269	2596	**2625**
SE	5	2922	2799	2331	2659	**2678**
UK	Baseline	10830	11018	10986	10986	**10955**
UK	1	10830	11018	10986	10986	**10955**
UK	2	10830	11018	10986	10986	**10955**
UK	3	10830	11018	10986	10986	**10955**
UK	4	10830	11018	10986	10986	**10955**
UK	5	10830	11018	10986	10986	**10955**
EU	Baseline	107852	106677	108513	110309	**108338**
EU	1	107373	106054	106952	109515	**107473**
EU	2	112655	111585	112005	114369	**112653**
EU	3	108322	106946	107959	110852	**108520**
EU	4	107896	106490	107467	110146	**108000**
EU	5	119225	118772	117712	121613	**119330**

Level of stocks to comply for the obligation (accounting for 10% deduction rule)

MS	Option	2014	2015	2016	2017	Average 2014-2017	Index Baseline = 100%
BE	Baseline	3856	3799	5242	3890	**4197**	100%
BE	1	3856	3799	3988	3890	**3883**	93%
BE	2	4854	4833	5034	4922	**4911**	117%
BE	3	3856	3799	3988	3890	**3883**	93%

MS	Option	2014	2015	2016	2017	Average 2014-2017	Index Baseline = 100%
BE	4	3856	3799	3988	3890	**3883**	93%
BE	5	5399	5465	5590	5538	**5498**	131%
BG	Baseline	965	1035	1099	1157	**1064**	100%
BG	1	963	1035	1092	1136	**1056**	99%
BG	2	963	1035	1092	1136	**1056**	99%
BG	3	1035	1101	1171	1232	**1135**	107%
BG	4	963	1035	1092	1136	**1056**	99%
BG	5	1036	1101	1171	1232	**1135**	107%
CZ	Baseline	1966	2011	2148	2254	**2095**	100%
CZ	1	1966	2011	2148	2212	**2084**	99%
CZ	2	2035	2103	2171	2212	**2130**	102%
CZ	3	1966	2011	2148	2261	**2096**	100%
CZ	4	1966	2011	2148	2212	**2084**	99%
CZ	5	2221	2317	2337	2312	**2297**	110%
DK	Baseline	1358	1332	1341	1382	**1353**	100%
DK	1	1358	1332	1341	1382	**1353**	100%
DK	2	1358	1332	1341	1382	**1353**	100%
DK	3	1358	1332	1341	1382	**1353**	100%
DK	4	1358	1332	1341	1382	**1353**	100%
DK	5	1358	1332	1341	1382	**1353**	100%
DE	Baseline	22719	21621	22019	22286	**22161**	100%
DE	1	22719	21621	22019	22286	**22161**	100%
DE	2	25567	24709	24850	25019	**25036**	113%
DE	3	22719	21621	22019	22286	**22161**	100%
DE	4	22719	21621	22019	22286	**22161**	100%
DE	5	27348	26484	26656	26827	**26829**	121%
EE	Baseline	199	205	206	221	**208**	100%
EE	1	199	205	206	221	**208**	100%
EE	2	199	205	206	221	**208**	100%
EE	3	199	205	206	221	**208**	100%
EE	4	199	205	206	221	**208**	100%
EE	5	199	205	206	221	**208**	100%
IE	Baseline	1821	1892	1888	1993	**1899**	100%
IE	1	1821	1892	1888	1993	**1899**	100%
IE	2	1845	1917	1916	2023	**1925**	101%
IE	3	1852	1924	1925	2033	**1934**	102%
IE	4	1845	1917	1916	2023	**1925**	101%
IE	5	1852	1924	1925	2033	**1934**	102%
GR	Baseline	2985	2952	2539	3167	**2911**	100%
GR	1	2923	2896	2480	3056	**2839**	98%
GR	2	2923	2896	2480	3056	**2839**	98%
GR	3	3238	3233	2781	3472	**3181**	109%
GR	4	2923	2896	2480	3056	**2839**	98%
GR	5	3241	3234	2784	3473	**3183**	109%
ES	Baseline	12505	12277	12818	13419	**12755**	100%
ES	1	12505	12277	12818	13419	**12755**	100%
ES	2	13090	12877	13211	13824	**13251**	104%

MS	Option	2014	2015	2016	2017	Average 2014-2017	Index Baseline = 100%
ES	3	12724	12511	13105	13764	**13026**	102%
ES	4	12724	12511	13105	13764	**13026**	102%
ES	5	13162	12940	13529	14123	**13438**	105%
FR	Baseline	19629	19365	19327	19717	**19510**	100%
FR	1	19629	19365	19327	19717	**19510**	100%
FR	2	20062	19814	19781	19969	**19906**	102%
FR	3	19629	19365	19327	19717	**19510**	100%
FR	4	19629	19365	19327	19717	**19510**	100%
FR	5	21285	20974	20932	21240	**21108**	108%
HR	Baseline	610	663	664	649	**646**	100%
HR	1	610	663	664	649	**646**	100%
HR	2	625	680	680	667	**663**	103%
HR	3	636	688	692	681	**674**	104%
HR	4	625	680	680	667	**663**	103%
HR	5	636	688	692	681	**674**	104%
IT	Baseline	12800	12539	12546	12043	**12482**	100%
IT	1	12332	12163	12269	11467	**12058**	97%
IT	2	12746	12408	12527	11826	**12377**	99%
IT	3	12332	12163	12269	11467	**12058**	97%
IT	4	12332	12163	12269	11467	**12058**	97%
IT	5	13494	13180	13283	12759	**13179**	106%
CY	Baseline	585	617	707	680	**647**	100%
CY	1	585	617	707	680	**647**	100%
CY	2	585	617	707	680	**647**	100%
CY	3	585	617	707	680	**647**	100%
CY	4	585	617	707	680	**647**	100%
CY	5	585	617	707	680	**647**	100%
LV	Baseline	322	369	508	440	**410**	100%
LV	1	322	369	508	440	**410**	100%
LV	2	322	369	508	440	**410**	100%
LV	3	322	369	508	440	**410**	100%
LV	4	322	369	508	440	**410**	100%
LV	5	322	369	508	440	**410**	100%
LT	Baseline	416	474	475	525	**473**	100%
LT	1	416	474	475	525	**473**	100%
LT	2	520	561	573	633	**572**	121%
LT	3	520	561	573	633	**572**	121%
LT	4	520	561	573	633	**572**	121%
LT	5	520	561	573	633	**572**	121%
LU	Baseline	815	785	776	782	**790**	100%
LU	1	815	785	776	782	**790**	100%
LU	2	815	785	776	782	**790**	100%
LU	3	815	785	776	782	**790**	100%
LU	4	815	785	776	782	**790**	100%
LU	5	815	785	776	782	**790**	100%
HU	Baseline	994	1285	1255	1310	**1211**	100%
HU	1	994	1123	1255	1310	**1170**	97%
HU	2	1104	1234	1376	1398	**1278**	106%
HU	3	994	1123	1255	1310	**1170**	97%
HU	4	994	1123	1255	1310	**1170**	97%
HU	5	1225	1355	1498	1567	**1411**	117%
MT	Baseline	239	245	136	165	**196**	100%
MT	1	239	245	136	165	**196**	100%
MT	2	239	245	136	165	**196**	100%
MT	3	239	245	136	165	**196**	100%
MT	4	239	245	136	165	**196**	100%

MS	Option	2014	2015	2016	2017	Average 2014-2017	Index Baseline = 100%
MT	5	239	245	136	165	**196**	100%
NL	Baseline	4080	4080	4080	4080	**4080**	100%
NL	1	4080	4080	4080	4080	**4080**	100%
NL	2	4080	4146	4080	4080	**4097**	100%
NL	3	4080	4080	4080	4080	**4080**	100%
NL	4	4080	4080	4080	4080	**4080**	100%
NL	5	5346	5980	4080	5376	**5196**	127%
AT	Baseline	2996	2808	2862	2984	**2913**	100%
AT	1	2996	2808	2862	2984	**2913**	100%
AT	2	3005	2869	2924	3038	**2959**	102%
AT	3	2996	2808	2862	2984	**2913**	100%
AT	4	2996	2808	2862	2984	**2913**	100%
AT	5	3237	3092	3138	3265	**3183**	109%
PL	Baseline	5622	5541	5957	6620	**5935**	100%
PL	1	5622	5485	5852	6535	**5874**	99%
PL	2	5631	5485	5852	6535	**5876**	99%
PL	3	5684	5524	5940	6630	**5945**	100%
PL	4	5631	5485	5852	6535	**5876**	99%
PL	5	5878	5797	6235	6893	**6201**	104%
PT	Baseline	2679	2483	2496	2574	**2558**	100%
PT	1	2679	2483	2496	2574	**2558**	100%
PT	2	2679	2483	2496	2574	**2558**	100%
PT	3	2682	2518	2553	2678	**2608**	102%
PT	4	2679	2483	2496	2574	**2558**	100%
PT	5	2980	2786	2827	2872	**2866**	112%
RO	Baseline	1344	1372	1393	1477	**1396**	100%
RO	1	1344	1372	1393	1477	**1396**	100%
RO	2	1344	1372	1393	1477	**1396**	100%
RO	3	1344	1372	1393	1477	**1396**	100%
RO	4	1344	1372	1393	1477	**1396**	100%
RO	5	1344	1372	1393	1477	**1396**	100%
SI	Baseline	652	644	636	671	**651**	100%
SI	1	652	644	636	671	**651**	100%
SI	2	652	644	636	671	**651**	100%
SI	3	652	644	636	671	**651**	100%
SI	4	652	644	636	671	**651**	100%
SI	5	652	644	636	671	**651**	100%
SK	Baseline	691	735	797	867	**773**	100%
SK	1	691	693	765	822	**743**	96%
SK	2	691	693	768	836	**747**	97%
SK	3	701	708	765	822	**749**	97%
SK	4	691	693	765	822	**743**	96%
SK	5	805	794	862	932	**848**	110%
FI	Baseline	1888	2248	2068	2256	**2115**	100%
FI	1	1888	2248	2068	2256	**2115**	100%
FI	2	1959	2318	2141	2369	**2197**	104%
FI	3	1918	2263	2072	2319	**2143**	101%
FI	4	1918	2263	2072	2319	**2143**	101%
FI	5	2013	2376	2181	2388	**2240**	106%
SE	Baseline	3066	2910	2381	2747	**2776**	100%
SE	1	3066	2910	2381	2747	**2776**	100%
SE	2	3247	3110	2590	2934	**2970**	107%
SE	3	3247	3016	2521	2884	**2917**	105%
SE	4	3247	3016	2521	2884	**2917**	105%
SE	5	3247	3110	2590	2954	**2975**	107%
UK	Baseline	12034	12242	12206	12206	**12172**	100%

MS	Option	2014	2015	2016	2017	Average 2014-2017	Index Baseline = 100%
UK	1	12034	12242	12206	12206	**12172**	100%
UK	2	12034	12242	12206	12206	**12172**	100%
UK	3	12034	12242	12206	12206	**12172**	100%
UK	4	12034	12242	12206	12206	**12172**	100%
UK	5	12034	12242	12206	12206	**12172**	100%
EU	Baseline	119836	118530	120570	122566	**120375**	100.0%
EU	1	119303	117837	118835	121684	**119415**	99.2%
EU	2	125172	123983	124449	127076	**125170**	104.0%
EU	3	120358	118829	119954	123169	**120577**	100.2%
EU	4	119885	118323	119408	122384	**120000**	99.7%
EU	5	132472	131969	130791	135125	**132589**	110.1%

On the volatility of the obligation level

Absolute variation of the level of stocks needed to meet the obligation per country (2014-2017, adjusted for the CSO effect at EU level in thousand metric tonnes)

MS	Option	2014-2015	2015-2016	2016-2017	2014-2017	Adjusted to EU level	Index Baseline = 100%
BE	Baseline	56	1443	1352	2851	2851	100%
BE	1	56	189	98	343	346	12%
BE	2	22	202	112	336	323	11%
BE	3	56	189	98	343	342	12%
BE	4	56	189	98	343	344	12%
BE	5	66	125	52	243	221	8%
BG	Baseline	70	64	58	192	192	100%
BG	1	72	57	44	173	174	91%
BG	2	73	56	44	173	166	87%
BG	3	66	70	61	197	197	103%
BG	4	73	56	44	173	173	90%
BG	5	65	70	61	197	179	93%
CZ	Baseline	45	137	106	288	288	100%
CZ	1	45	137	64	246	248	86%
CZ	2	68	68	41	177	170	59%
CZ	3	45	137	113	295	294	102%
CZ	4	45	137	64	246	247	86%
CZ	5	96	20	25	141	128	44%
DK	Baseline	26	9	41	76	76	100%
DK	1	26	9	41	76	77	101%
DK	2	26	9	41	76	74	96%
DK	3	26	9	41	76	76	100%
DK	4	26	9	41	76	77	100%
DK	5	26	9	41	76	69	91%
DE	Baseline	1098	399	266	1763	1763	100%
DE	1	1098	399	266	1763	1778	101%
DE	2	858	141	169	1169	1124	64%
DE	3	1098	399	266	1763	1760	100%
DE	4	1098	399	266	1763	1769	100%
DE	5	864	172	170	1206	1095	62%
EE	Baseline	6	1	16	23	23	100%
EE	1	6	1	16	23	23	101%
EE	2	6	1	16	23	22	96%
EE	3	6	1	16	23	22	100%
EE	4	6	1	16	23	23	100%
EE	5	6	1	16	23	20	91%
IE	Baseline	70	3	105	179	179	100%
IE	1	70	3	105	179	180	101%
IE	2	72	1	107	180	173	97%
IE	3	72	1	108	181	180	101%
IE	4	72	1	107	180	180	101%
IE	5	72	1	108	181	164	92%
GR	Baseline	33	413	628	1074	1074	100%

MS	Option	2014-2015	2015-2016	2016-2017	2014-2017	Adjusted to EU level	Index Baseline = 100%
GR	1	27	417	576	1019	1028	96%
GR	2	27	417	576	1019	980	91%
GR	3	5	452	690	1147	1145	107%
GR	4	27	417	576	1019	1023	95%
GR	5	7	450	689	1145	1040	97%
ES	Baseline	228	541	601	1370	1370	100%
ES	1	228	541	601	1370	1381	101%
ES	2	213	334	613	1160	1115	81%
ES	3	213	594	659	1467	1464	107%
ES	4	213	594	659	1467	1471	107%
ES	5	222	590	594	1405	1276	93%
FR	Baseline	264	38	390	692	692	100%
FR	1	264	38	390	692	698	101%
FR	2	248	33	189	470	452	65%
FR	3	264	38	390	692	691	100%
FR	4	264	38	390	692	694	100%
FR	5	312	42	309	663	602	87%
HR	Baseline	53	1	15	69	69	100%
HR	1	53	1	15	69	69	101%
HR	2	55	0	13	69	66	96%
HR	3	51	4	11	66	66	96%
HR	4	55	0	13	69	69	101%
HR	5	51	4	11	66	60	88%
IT	Baseline	261	6	503	770	770	100%
IT	1	170	106	801	1077	1086	141%
IT	2	338	120	701	1159	1114	145%
IT	3	170	106	801	1077	1075	140%
IT	4	170	106	801	1077	1081	140%
IT	5	314	103	524	941	854	111%
CY	Baseline	32	90	26	148	148	100%
CY	1	32	90	26	148	150	101%
CY	2	32	90	26	148	143	96%
CY	3	32	90	26	148	148	100%
CY	4	32	90	26	148	149	100%
CY	5	32	90	26	148	135	91%
LV	Baseline	47	139	68	254	254	100%
LV	1	47	139	68	254	256	101%
LV	2	47	139	68	254	244	96%
LV	3	47	139	68	254	253	100%
LV	4	47	139	68	254	254	100%
LV	5	47	139	68	254	230	91%
LT	Baseline	58	1	50	109	109	100%
LT	1	58	1	50	109	109	101%
LT	2	41	11	60	112	108	100%
LT	3	41	11	60	112	112	103%
LT	4	41	11	60	112	113	104%
LT	5	41	11	60	112	102	94%
LU	Baseline	30	9	7	46	46	100%
LU	1	30	9	7	46	46	101%
LU	2	30	9	7	46	44	96%
LU	3	30	9	7	46	46	100%
LU	4	30	9	7	46	46	100%
LU	5	30	9	7	46	41	91%
HU	Baseline	291	29	54	374	374	100%
HU	1	129	133	54	316	318	85%
HU	2	130	142	22	294	283	76%
HU	3	129	133	54	316	315	84%

MS	Option	2014-2015	2015-2016	2016-2017	2014-2017	Adjusted to EU level	Index Baseline = 100%
HU	4	129	133	54	316	316	85%
HU	5	130	143	69	341	310	83%
MT	Baseline	6	109	29	144	144	100%
MT	1	6	109	29	144	145	101%
MT	2	6	109	29	144	139	96%
MT	3	6	109	29	144	144	100%
MT	4	6	109	29	144	145	100%
MT	5	6	109	29	144	131	91%
NL	Baseline	0	0	0	0	0	100%
NL	1	0	0	0	0	0	100%
NL	2	66	66	0	132	127	10000%
NL	3	0	0	0	0	0	100%
NL	4	0	0	0	0	0	100%
NL	5	634	1900	1296	3830	3477	10000%
AT	Baseline	187	54	121	363	363	100%
AT	1	187	54	121	363	366	101%
AT	2	137	56	114	306	294	81%
AT	3	187	54	121	363	362	100%
AT	4	187	54	121	363	364	100%
AT	5	145	46	127	317	288	79%
PL	Baseline	81	416	662	1160	1160	100%
PL	1	137	367	683	1186	1196	103%
PL	2	145	367	683	1195	1149	99%
PL	3	160	416	690	1267	1264	109%
PL	4	145	367	683	1195	1199	103%
PL	5	81	438	659	1178	1069	92%
PT	Baseline	196	13	78	287	287	100%
PT	1	196	13	78	287	290	101%
PT	2	196	13	78	287	276	96%
PT	3	165	35	126	325	325	113%
PT	4	196	13	78	287	288	100%
PT	5	193	41	45	279	253	88%
RO	Baseline	29	20	84	133	133	100%
RO	1	29	20	84	133	135	101%
RO	2	29	20	84	133	128	96%
RO	3	29	20	84	133	133	100%
RO	4	29	20	84	133	134	100%
RO	5	29	20	84	133	121	91%
SI	Baseline	8	9	36	52	52	100%
SI	1	8	9	36	52	53	101%
SI	2	8	9	36	52	50	96%
SI	3	8	9	36	52	52	100%
SI	4	8	9	36	52	52	100%
SI	5	8	9	36	52	47	91%
SK	Baseline	45	61	71	177	177	100%
SK	1	3	71	57	131	132	75%
SK	2	3	74	68	145	139	79%
SK	3	8	56	57	121	121	68%
SK	4	3	71	57	131	131	74%
SK	5	11	69	69	149	136	77%
FI	Baseline	360	180	188	728	728	100%
FI	1	360	180	188	728	734	101%
FI	2	359	178	229	766	736	101%
FI	3	345	191	247	783	782	107%
FI	4	345	191	247	783	786	108%
FI	5	363	195	207	765	695	95%
SE	Baseline	156	529	367	1052	1052	100%

MS	Option	2014-2015	2015-2016	2016-2017	2014-2017	Adjusted to EU level	Index Baseline = 100%
SE	1	156	529	367	1052	1060	101%
SE	2	137	520	343	1000	961	91%
SE	3	231	495	364	1090	1088	103%
SE	4	231	495	364	1090	1093	104%
SE	5	137	520	364	1021	927	88%
UK	Baseline	208	35	0	244	244	100%
UK	1	208	35	0	244	246	101%
UK	2	208	35	0	244	234	96%
UK	3	208	35	0	244	243	100%
UK	4	208	35	0	244	245	100%
UK	5	208	35	0	244	221	91%
EU	Baseline	1176	1836	1796	14618	14618	100%
EU	1	1319	898	2563	12222	12321	84%
EU	2	1070	419	2364	11267	10836	74%
EU	3	1376	1013	2894	12725	12703	87%
EU	4	1406	977	2679	12425	12464	85%
EU	5	453	1060	3900	15302	13892	95%

On the cost of the obligation level

Using 17.5 and 25 EUR/tonne/year

MS	Option	Cost of change in stocks (thousand EUR/tonne) 2014	2015	2016	2017	Average 2014-2017
BE	1	0	0	-21944 / -31348	0	0
BE	2	17474 / 24962	18080 / 25828	-3636 / -5194	18056 / 25794	17474 / 24962
BE	3	0	0	-21944 / -31348	0	0
BE	4	0	0	-21944 / -31348	0	0
BE	5	26996 / 38566	29141 / 41630	6089 / 8698	28840 / 41199	26996 / 38566
BG	1	-46 / -66	0	-125 / -179	-377 / -539	-46 / -66
BG	2	-46 / -66	5 / 7	-125 / -179	-377 / -539	-46 / -66
BG	3	1227 / 1754	1160 / 1656	1267 / 1809	1320 / 1885	1227 / 1754
BG	4	-46 / -66	5 / 7	-125 / -179	-377 / -539	-46 / -66
BG	5	1233 / 1761	1160 / 1656	1267 / 1809	1320 / 1885	1233 / 1761
CZ	1	0	0	0	-742 / -1060	0
CZ	2	1216 / 1737	1617 / 2310	407 / 581	-742 / -1060	1216 / 1737
CZ	3	0	0	0	115 / 164	0
CZ	4	0	0	0	-742 / -1060	0
CZ	5	4463 / 6375	5351 / 7645	3315 / 4736	1024 / 1462	4463 / 6375
DK	1	0	0	0	0	0
DK	2	0	0	0	0	0
DK	3	0	0	0	0	0
DK	4	0	0	0	0	0
DK	5	0	0	0	0	0
DE	1	0	0	0	0	0
DE	2	49846 / 71208	54040 / 77201	49533 / 70762	47826 / 68323	49846 / 71208
DE	3	0	0	0	0	0
DE	4	0	0	0	0	0
DE	5	81009 / 115728	85110 / 121585	81144 / 115921	79462 / 113517	81009 / 115728
EE	1	0	0	0	0	0
EE	2	0	0	0	0	0
EE	3	0	0	0	0	0
EE	4	0	0	0	0	0
EE	5	0	0	0	0	0
IE	1	0	0	0	0	0

MS	Option	Cost of change in stocks (thousand EUR/tonne) 2014	2015	2016	2017	Average 2014-2017
IE	2	417 / 596	439 / 627	482 / 688	522 / 745	417 / 596
IE	3	543 / 776	572 / 817	644 / 920	697 / 996	543 / 776
IE	4	417 / 596	439 / 627	482 / 688	522 / 745	417 / 596
IE	5	543 / 776	572 / 817	644 / 920	697 / 996	543 / 776
GR	1	-1080 / -1543	-970 / -1386	-1035 / -1478	-1953 / -2790	-1080 / -1543
GR	2	-1080 / -1543	-970 / -1386	-1035 / -1478	-1953 / -2790	-1080 / -1543
GR	3	4427 / 6325	4919 / 7027	4239 / 6055	5322 / 7603	4427 / 6325
GR	4	-1080 / -1543	-970 / -1386	-1035 / -1478	-1953 / -2790	-1080 / -1543
GR	5	4478 / 6398	4939 / 7056	4290 / 6128	5342 / 7632	4478 / 6398
ES	1	0	0	0	0	0
ES	2	10229 / 14612	10505 / 15007	6875 / 9821	7096 / 10138	10229 / 14612
ES	3	3830 / 5472	4095 / 5850	5020 / 7172	6043 / 8633	3830 / 5472
ES	4	3830 / 5472	4095 / 5850	5020 / 7172	6043 / 8633	3830 / 5472
ES	5	11485 / 16407	11596 / 16565	12440 / 17771	12318 / 17598	11485 / 16407
FR	1	0	0	0	0	0
FR	2	7569 / 10813	7856 / 11223	7936 / 11337	4411 / 6302	7569 / 10813
FR	3	0	0	0	0	0
FR	4	0	0	0	0	0
FR	5	28988 / 41411	28155 / 40222	28078 / 40112	26654 / 38077	28988 / 41411
HR	1	0	0	0	0	0
HR	2	260 / 371	292 / 417	287 / 410	312 / 445	260 / 371
HR	3	461 / 659	429 / 613	490 / 700	559 / 798	461 / 659
HR	4	260 / 371	292 / 417	287 / 410	312 / 445	260 / 371
HR	5	461 / 659	429 / 613	490 / 700	559 / 798	461 / 659
IT	1	-8194 / -11706	-6593 / -9419	-4849 / -6928	-10079 / -14398	-8194 / -11706
IT	2	-958 / -1369	-2301 / -3287	-321 / -459	-3799 / -5427	-958 / -1369
IT	3	-8194 / -11706	-6593 / -9419	-4849 / -6928	-10079 / -14398	-8194 / -11706
IT	4	-8194 / -11706	-6593 / -9419	-4849 / -6928	-10079 / -14398	-8194 / -11706
IT	5	12144 / 17348	11212 / 16017	12902 / 18432	12531 / 17902	12144 / 17348
CY	1	0	0	0	0	0
CY	2	0	0	0	0	0
CY	3	0	0	0	0	0
CY	4	0	0	0	0	0
CY	5	0	0	0	0	0
LV	1	0	0	0	0	0
LV	2	0	0	0	0	0
LV	3	0	0	0	0	0
LV	4	0	0	0	0	0
LV	5	0	0	0	0	0
LT	1	0	0	0	0	0
LT	2	1821 / 2602	1525 / 2179	1710 / 2443	1889 / 2699	1821 / 2602
LT	3	1821 / 2602	1525 / 2179	1710 / 2443	1889 / 2699	1821 / 2602
LT	4	1821 / 2602	1525 / 2179	1710 / 2443	1889 / 2699	1821 / 2602
LT	5	1821 / 2602	1525 / 2179	1710 / 2443	1889 / 2699	1821 / 2602
LU	1	0	0	0	0	0
LU	2	0	0	0	0	0
LU	3	0	0	0	0	0
LU	4	0	0	0	0	0
LU	5	0	0	0	0	0
HU	1	0	-2836 / -4051	0	0	0
HU	2	1922 / 2746	-885 / -1265	2111 / 3016	1552 / 2217	1922 / 2746
HU	3	0	-2836 / -4051	0	0	0
HU	4	0	-2836 / -4051	0	0	0
HU	5	4049 / 5785	1229 / 1756	4247 / 6067	4499 / 6426	4049 / 5785
MT	1	0	0	0	0	0

MS	Option	Cost of change in stocks (thousand EUR/tonne) 2014	2015	2016	2017	Average 2014-2017
MT	2	0	0	0	0	0
MT	3	0	0	0	0	0
MT	4	0	0	0	0	0
MT	5	0	0	0	0	0
NL	1	0	0	0	0	0
NL	2	0	1159 / 1656	0	0	0
NL	3	0	0	0	0	0
NL	4	0	0	0	0	0
NL	5	22160 / 31656	33249 / 47499	0	22683 / 32404	22160 / 31656
AT	1	0	0	0	0	0
AT	2	163 / 232	1052 / 1503	1077 / 1539	948 / 1354	163 / 232
AT	3	0	0	0	0	0
AT	4	0	0	0	0	0
AT	5	4218 / 6025	4968 / 7098	4827 / 6896	4922 / 7032	4218 / 6025
PL	1	0	-974 / -1391	-1837 / -2625	-1482 / -2117	0
PL	2	148 / 212	-974 / -1391	-1837 / -2625	-1482 / -2117	148 / 212
PL	3	1088 / 1555	-300 / -428	-299 / -428	182 / 260	1088 / 1555
PL	4	148 / 212	-974 / -1391	-1837 / -2625	-1482 / -2117	148 / 212
PL	5	4479 / 6398	4474 / 6392	4849 / 6927	4788 / 6839	4479 / 6398
PT	1	0	0	0	0	0
PT	2	0	0	0	0	0
PT	3	55 / 79	604 / 863	989 / 1412	1820 / 2600	55 / 79
PT	4	0	0	0	0	0
PT	5	5258 / 7512	5307 / 7581	5796 / 8279	5210 / 7444	5258 / 7512
RO	1	0	0	0	0	0
RO	2	0	0	0	0	0
RO	3	0	0	0	0	0
RO	4	0	0	0	0	0
RO	5	0	0	0	0	0
SI	1	0	0	0	0	0
SI	2	0	0	0	0	0
SI	3	0	0	0	0	0
SI	4	0	0	0	0	0
SI	5	0	0	0	0	0
SK	1	0	-739 / -1056	-561 / -802	-802 / -1146	0
SK	2	0	-739 / -1056	-509 / -727	-558 / -797	0
SK	3	175 / 250	-475 / -678	-561 / -802	-802 / -1146	175 / 250
SK	4	0	-739 / -1056	-561 / -802	-802 / -1146	0
SK	5	1998 / 2855	1016 / 1452	1144 / 1635	1123 / 1604	1998 / 2855
FI	1	0	0	0	0	0
FI	2	1241 / 1773	1233 / 1762	1268 / 1812	1973 / 2818	1241 / 1773
FI	3	534 / 763	270 / 386	67 / 95	1094 / 1563	534 / 763
FI	4	534 / 763	270 / 386	67 / 95	1094 / 1563	534 / 763
FI	5	2188 / 3126	2246 / 3209	1976 / 2823	2304 / 3292	2188 / 3126
SE	1	0	0	0	0	0
SE	2	3168 / 4526	3508 / 5012	3669 / 5241	3259 / 4656	3168 / 4526
SE	3	3168 / 4526	1864 / 2663	2452 / 3503	2399 / 3427	3168 / 4526
SE	4	3168 / 4526	1864 / 2663	2452 / 3503	2399 / 3427	3168 / 4526
SE	5	3168 / 4526	3508 / 5012	3669 / 5241	3624 / 5177	3168 / 4526
UK	1	0	0	0	0	0
UK	2	0	0	0	0	0
UK	3	0	0	0	0	0
UK	4	0	0	0	0	0
UK	5	0	0	0	0	0
EU	1	-9320 / -13315	-12112 / -17303	-30351 / -43359	-15436 / -22051	-9320 / -13315
EU	2	93389 / 133412	95442 / 136346	67893 / 96990	78932 / 112760	93389 / 133412
EU	3	9137 / 13054	5234 / 7477	-10778 / -15397	10558 / 15082	9137 / 13054

MS	Option	Cost of change in stocks (thousand EUR/tonne) 2014	2015	2016	2017	Average 2014-2017
EU	4	858 / 1226	-3623 / -5175	-20333 / -29048	-3178 / -4539	858 / 1226
EU	5	221139 / 315913	235188 / 335983	178877 / 255538	219789 / 313985	221139 / 315913

11. ANNEX D – SURVEY REPORT

Oil Stocks

Status:	**Closed**	**Partial completes:**	**22 (22,7%)**
Start date:	**11-08-2017**	**Screened out:**	**0 (0%)**
End date:	**11-09-2017**	**Reached end:**	**75 (77,3%)**
Live:	**32 days**	**Total responded:**	**97**
Questions:	**68**		
Panel			
Contact count	**265**	**Partial completes:**	**19 (21,1%)**
Bounced	**6 (2,3%)**	**Reached end:**	**71 (78,9%)**
Declined	**0 (0%)**	**Responses:**	**90 (34%)**
Non-contacts			
Responses:	**7**	**Partial completes:**	**3 (42,9%)**
Start page views:	**52**	**Screened out:**	**0**
		Reached end:	**4 (57,1%)**

Part 1: Information concerning the organisation you represent

1. Please indicate: (Limited to 255 characters per response)

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
The name of your organisation:	96		100
Your position in the organisation:	93		97
	Total respondents: 96	0% 20% 40% 60% 80%	
	Skipped question: 1		

2. Please indicate the type of organisation you represent (the questions you are asked will be tailored to your answer):

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
National Authority	32		33
Central Stockholding Entity (under Oil Stocks Directive)	21		22
Industry	29		30
Industry association	8		8
Other, please specify (Up to 255 characters)	7		7
Total respondents: 97		0% 20% 40% 60% 80%	
Skipped question: 0			

3. What is your main business activity?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Refiner	14		48
Trader (importer)	3		10
Distributor (retail)	7		24
Other, please specify (Up to 255 characters)	5		17
Total respondents: 29		0% 20% 40% 60% 80%	
Skipped question: 65			

4. Did your organisation receive an obligation to hold emergency oil stocks in 2016?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes	24		83
No	5		17
I don't know	0		0
Total respondents: 29		0% 20% 40% 60% 80%	
Skipped question: 65			

5. Do you fulfil the compulsory stockholding (partially) yourself, or do you delegate it to a CSE and/or industry players?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
We fulfil compulsory stockholding obligation fully ourselves	3		10
Fully delegated (to a CSE and/or industry players)	25		83
Fulfilling compulsory stockholding obligation partially ourselves. Please specify the percentage of your obligation fulfilled by yourselves (remainder delegated to CSE and/or industry).	2		7
Total respondents: 30 **Skipped question: 63**		0% 20% 40% 60% 80%	

Open answers

About 60%.

We analyse and submit the stockholding information from CSE.

6. Which EU Member State do you represent?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Austria	1		3
Belgium	1		3
Bulgaria	2		7
Croatia	1		3
Cyprus	1		3
Czech Republic	1		3
Denmark	1		3
Finland	2		7
France	1		3
Germany	2		7
Greece	1		3
Hungary	1		3
Ireland	1		3
Italy	1		3
Latvia	1		3
Lithuania	1		3
Luxembourg	1		3
Malta	1		3
Netherlands	2		7
Poland	1		3
Portugal	1		3
Slovakia	1		3
Slovenia	1		3
Spain	1		3
Sweden	1		3
United Kingdom	1		3
Total respondents: 30		0% 20% 40% 60% 80%	
Skipped question: 63			

7. Do you fulfil the compulsory stockholding (partially) yourself and/or do you delegate it to industry players?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Fulfilling obligation fully ourselves (we own all our emergency stocks)	10		48
Fully delegated to industry players and/or foreign CSEs (all our emergency stocks are in the form of tickets)	0		0
Fulfilling compulsory stockholding obligation partially ourselves. Please specify the percentage of your obligation fulfilled by yourselves (remainder delegated to industry).	11		52
Total respondents: 21		0% 20% 40% 60% 80%	
Skipped question: 72			

8. Which EU Member State do you represent?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Austria	1		5
Belgium	1		5
Bulgaria	2		10
Croatia	1		5
Cyprus	1		5
Czech Republic	1		5
Denmark	1		5
Estonia	1		5
France	1		5
Germany	2		10
Hungary	1		5
Ireland	1		5
Italy	1		5
Lithuania	1		5
Netherlands	1		5
Portugal	1		5
Slovakia	1		5
Slovenia	1		5
Spain	1		5
Total respondents: 21		0% 20% 40% 60% 80%	
Skipped question: 72			

9. From which EU Member State government do you receive the obligation to store emergency stocks? Only one answer possible. [Reminder: please fill out this survey from your experience of fulfilling the emergency oil stock obligation in this EU Member State]

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Austria	1		4
Belgium	1		4
Bulgaria	1		4
Finland	1		4
Greece	3		13
Italy	2		9
Lithuania	1		4
Luxembourg	2		9
Malta	1		4
Portugal	2		9
Romania	1		4
Sweden	1		4
United Kingdom	6		26
Total respondents: 23		0% 20% 40% 60% 80%	
Skipped question: 70			

10. In which EU Member State(s) are your operations (or members for industry associations) based? [Please fill out the survey with the situation for this/those EU Member State(s) in mind]

(Each respondent could choose MULTIPLE responses.)

Response	Total	% of responses	%
Austria	3		16
Bulgaria	1		5
Croatia	1		5
Czech Republic	1		5
Denmark	2		11
France	3		16
Germany	1		5
Greece	1		5
Hungary	2		11
Italy	3		16
Luxembourg	1		5
Poland	1		5
Romania	1		5
Slovakia	2		11
Slovenia	2		11
Spain	2		11
Sweden	2		11
United Kingdom	1		5
Total respondents: 19		0% 20% 40% 60% 80%	
Skipped question: 74			

11. Does your organisation have a Transparency Register Identification number?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
No	44		47
I don't know	39		42
Yes - Please enter the number here:	10		11
	Total respondents: 93	0% 20% 40% 60% 80%	
	Skipped question: 0		

Open answers:

Confidential

Part 2: Information concerning the costs of meeting the stockholding obligation and impact of a changed stockholding obligation

12. What were the approximate total costs for holding emergency stocks (both tickets and stocks in your possession, in € per tonne) for 2016 (or most recent year available)? Total costs include all recurring annual costs for holding emergency stocks, such as the annual financing costs related to the acquisition of stocks or tanks (so not the one-off costs for procurement of stocks or tanks), depreciation costs of tanks, refreshment costs, handling costs, etc. In case you are unable to answer the question but willing to share background information detailing the costs to meet your stockholding obligation, please send the information to oilstocks@trinomics.eu. The data will be treated confidentially and anonymously.

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
€ per tonne	24		96
Which year	24		96
	Total respondents: 25	0% 20% 40% 60% 80%	
	Skipped question: 65		

Open answers

Confidential

13. What were the approximate total ticketing costs for meeting your obligation (in € per tonne) in 2016 (or most recent year available)?In case you are unable to answer the question but willing to share background information detailing the costs to meet your stockholding obligation, please send the information to oilstocks@trinomics.eu. The data will be treated confidentially and anonymously.

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
€ per tonne	24		96
Which year	21		84
	Total respondents: 25	0% 20% 40% 60% 80%	
	Skipped question: 65		

Open answers

Confidential

14. What were the total costs for holding dedicated/proprietary stocks (including financing costs, storage costs, refreshment costs, etc.) for meeting your obligation (in € per tonne) in 2016 (or most recent year available)?In case you are unable to answer the question but willing to share background information detailing the costs to meet your stockholding obligation, please send the information to oilstocks@trinomics.eu. The data will be treated confidentially and anonymously.

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
€ per tonne	20		95
Which year	20		95
	Total respondents: 21	0% 20% 40% 60% 80%	
	Skipped question: 69		

Open answers

Confidential

15.1. Under the assumption that the IEA obligation would also change 10%, what type of impacts does a 10% change in the compulsory stockholding obligation at EU Member State level create, and what is the relative significance of these impacts?(the economic impacts should not concern any impact on security of supply, but rather the impact on the stakeholders [obligated players, storage companies], impact on ticket prices, impact on storage costs, employment effects, etc.)

- Economic impacts

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	32		39
2 Medium impact	35		43
3 Low impact	10		12
4 No impact	5		6
			Average: 1,85 — Median: 2
Total respondents: 82 **Skipped question: 8**		0% 20% 40% 60% 80%	

15.2. Under the assumption that the IEA obligation would also change 10%, what type of impacts does a 10% change in the compulsory stockholding obligation at EU Member State level create, and what is the relative significance of these impacts?(the economic impacts should not concern any impact on security of supply, but rather the impact on the stakeholders [obligated players, storage companies], impact on ticket prices, impact on storage costs, employment effects, etc.)

- Environmental impacts

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	1		1
2 Medium impact	8		10
3 Low impact	25		31
4 No impact	46		57
			Average: 3,45 — Median: 4
Total respondents: 80 **Skipped question: 10**		0% 20% 40% 60% 80%	

15.3. Under the assumption that the IEA obligation would also change 10%, what type of impacts does a 10% change in the compulsory stockholding obligation at EU Member State level create, and what is the relative significance of these impacts?(the economic impacts should not concern any impact on security of supply, but rather the impact on the stakeholders [obligated players, storage companies], impact on ticket prices, impact on storage costs, employment effects, etc.)

- Social impacts

(Each respondent could choose only ONE response per sub-question.)

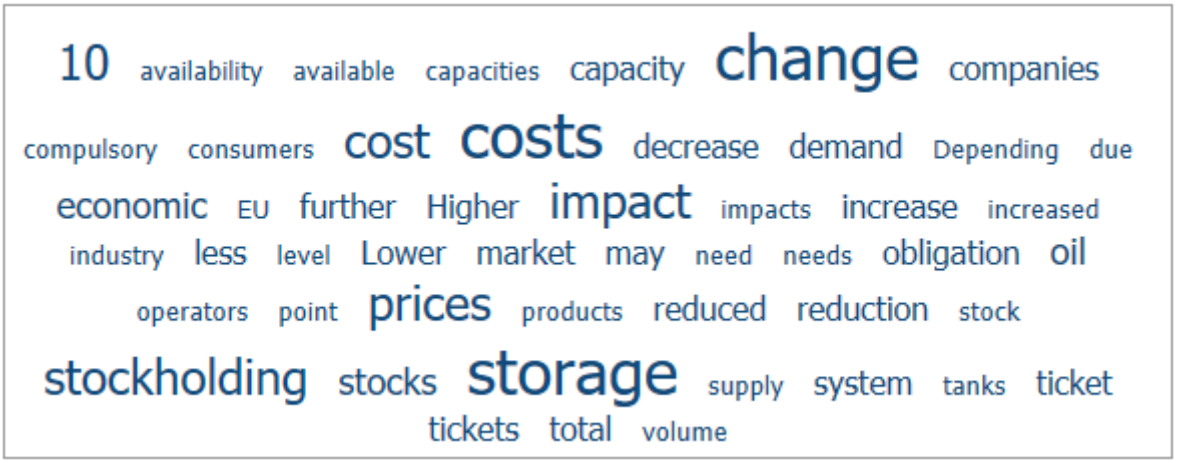
Response	Total	% of responses	%
1 High impact	5		6
2 Medium impact	10		12
3 Low impact	21		26
4 No impact	45		56
		Average: 3,31 — Median: 4	
Total respondents: 81 **Skipped question: 9**		0% 20% 40% 60% 80%	

16. You expect (some) economic impacts from a 10% change in the compulsory stockholding obligation. What economic impacts (other than a change in the total costs of meeting the compulsory stockholding obligation) does a 10% change in the compulsory stockholding obligation create (use examples if possible)?(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	56		58
Total respondents: 56 **Skipped question: 31**		0% 20% 40% 60% 80%	

Open answers



A change in the stockholding obligation causes changes in the annual budget of the [Company].

Depending of the direction of the 10% change, upward or downward, there will be more or less capacity in the tanks. That will change the perception of the market, the risks involved and the valuation of investments in stocks and new tankparks. Also the willingness to have owned tanks or hire tanks could be influenced by a 10% change in compulsory stockholding. The reasoning for the change will be point of discussion! Is there more or less risk in the market? Lower obligations could lower the need for bilateral stockholding, but if that wpuld happen will also depend of relative prices for stockholding and the other reactions of government and company policy. Also closures of tankparks could be a result in certain regions.

No major economic impact other than reduced costs arising from a reduced stockholding obligation, which in turn should result in reduced costs for consumers in oil pricing.

[Company] has sufficient funds for many years to come, and hence the change will have little impact.

We would need more or less storage capacity (or tickets), but in the whole storage/ticket market this 10% will not have a large impact.

I expect an impact on ticket prices and storage costs.

No other change envisaged other than a reduced storage cost or stock purchase cost.

As the stockholding is fully financed by the state, the increase will require change in the state budget

Higher storage costs.

An additional economic impact could be related to the higher demand for storage of stock, assuming that the supply of storage space remains unchanged. This could potentially lead to an indirect increase in the cost of storage due to its limited availability. Moreover, from a socio-economic point of view, a higher cost which is eventually passed onto final consumers will have a negative impact on other economic sectors as individuals would have less disposable income available.

None from our point of view.

No other change. But it is relevant at Company level.

The economic impact came from the change in the total costs. No other effects.

ECONOMIC IMPACT WILL BE A 10% CHANGE IN COSTS

We believe that this value of 10% may/should be reduced, in face of what is nowadays the real expectation for tank bottoms settlings or sludges. Possibly a reduction to 5% or even further till 3%.

The cost of storage per m3 should be lower due to a greater competion following the lower demand

In addition to the direct economic impacts of a lower cost of meeting the obligation, it will also indirectly lower other economic factors on operators as they are able to reduce overall stockholdings that change asset bases and liabilities. While the impact from this aspect will be marginal for most (and may not be exercised) it is a further potential benefit.

In case of a decrease : Decrease of demand of storage capacities-->pressure to lower prices-->decrease of revenues of TSO--> possible closures of storage facilities. Symetric impacts in case of increase.

It reduces an unexplained inefficiency in the system and recognises (depending on the size of the change) that today's infrastructure does not hold inefficiencies of this magnitude. Moreover, such a change has the potential to even the playing field between the different stock holding systems in Europe and end the disadvantaged status of industry held stockholding systems in the current directive. Raising the efficiency of the stockholding system would lower the obligated companies' capital binding. The business cost (or opportunity cost) of large amounts of capital bound in obligated stocks is a growing challenge for fuel companies as the de-fossilisation process in transport fuels accelerates. It is therefore especially important to keep it at a reasonable and justified level going forward, not least for the sake of market stability and energy security of supply in a period of radical shifts. The fact that [Country] companies are not being put at a disadvantage economically by having to hold a larger volume could furthermore only benefit the EU ticket market. Obligated companies would have a somewhat stronger economic situation and some additional storage capacity would be freed up , likely to the benefit of the overall ticket market. Lastly, the rules being percieved as just is a social gain in itself, which would restore the legitimacy of the system. In [Country] acceptance of the need and utility of holding 90 days of stock is solid throughout industry. That industry de facto needs to hold 99 days for it to be counted as 90 undermines this solid acceptance of the compulsory storage system.

none

The price of oil products will decrease. But, certain depots or refineries might have less tickets, and so less earnings this may increase theirs costs.

- higher revenue from storage - higher revenue from CSO sales

See CSE and/or industry operators comments

If the 10% tankbottom rule is abolished the total need for tankcapacity in the EU will diminish and it cannot be excluded that closings of existing tankcapacity at EU level might occur

Due to the increase in stocks available in the EU, I personally expect a small drop in the ticketing prices as well.

It is expected that the availability of the oil stocks in Europe will be increased, so the storage and ticketing prices will be decreased.

The economic and administrative burden will decrease.

It might create a need to build or refurbish storage capacity at a time when oil products demand is expected to start to decrease. life time of such facilities would therefore be short, and hence costly.

For our CSE , it is not always easy to find tickets available. So, with this 10% change in the compulsory stockholding obligation, there is a risk that the ticket prices will increase. And, if [CSE] decides to buy more stocks in property, there is a risk that the storage costs increase because [CSE] needs more storage capacity to store its extra stocks in property.

The economic and administrative burden will decrease.

Given low average margins in the industry, an increase in working capital may force some suppliers to leave the market. This could potentially tighten supply, increasing prices of refined products.

Economic impact will be the increased cost of stockholding, purchase of tickets and finance costs.

No.

As long as the capacity is available and imported volume can be easly adjusted we see no other impact.

Cash-flow burden proportional to crude oil prices. Increased tanks maintenance flexibility.

In case of a 10% rising stockholding obligation further storage capacities would be neccessary, as all CSO capacities are currently used and cross-border tickets are not allowed. Therefore high initial investment costs would be neccessary, eg. for adjusting old and partly unused storage facilities.

I was thinking about the impact for the stockholding party. Cost would be reduced or increased depending on which way the 10% goes. Actual cost for actual stocks and for tickets. Some impact on prices for consumers could possibly be expected - depending on competition on the market. Higher stocks will mean higher costs for some party in the society. Stockholders or consumers, could effect GDP marginally.

Approving this change would allow us to reduce the oil stockpiling fee by 10%.

For raising for 10%: - difficulties in finding more spare storage capacities - possible rise of storage fees per tonne; - equal on cost of tickets;

A reduction of stockholding obligation by modifying the 10% value can mainly let a physical reduction of crude oil, feedstock and oil products level and a consequent great reduction of financial costs for Economic Operators

No other impacts apart from the reduction of stocks in itself.

Impact of ticket prices and storage costs.

- Facilitates calculation of the level of emergency stocks held, avoiding therefore involuntary unfulfilments of the obligation. - Allow to harmonize calculation of commercial and emergency stocks. - Reduces storage demand, promoting therefore reductions in storage prices and optimization of supply chains. - Releases fixed assets

Further erosion of low margin fuel business

Opportunity costs due to market structure (contango or backwardation), cash flow impact.

Total costs of emergency stockholding are covered by collection of fee paid by oil companies and subsequently by the end consumers. So the 10 % change could allow to decrease the fee slightly what would project to prices of petroleum products - thus slightly affecting general prices.

A 10% decrease in the compulsory stockholding obligation is believed to increase the availability of storage capacity, leading to reduction in the costs of storage and ticket prices.

Total cost of oil stocks maintaining

Long term effects in the oil market, as the potential leverage of oil importing countries in those markets wil diminish, giving the exporting countries a more realistic chance to influence prices. One-off effect when releasing the reserves.

Economic impact will be the increased cost of stockholding, and the increase of the volume of tickets and finance costs (tickets price).

The total costs for the stakeholders to meet the compulsory obligations should decrease and may be impacts on storage costs and tickets price once the demand decrease

10% change in the the country stockholding obligation would have impact on availability of storage services -at present all intervention stocks are held on the territory of the country and [Country] does not have significant

surplaces of storage capacities and we register further increase of consumption. 10% change in the country stockholding obligation may influence investment plans of the companies.

The deduction of unavailable stocks under the EU system is not in line with the IEA system and has reduced cost effectiveness.

Stockholding capacity across member states needs to be available for no further impact.

Only change in the total costs for our company.

50 Euro/mt

17. You expect (some) environmental impacts from a 10% change in the compulsory stockholding obligation. What environmental impacts does a 10% change in the compulsory stockholding obligation create (use examples if possible)?(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	19		20
	Total respondents: 19	0% 20% 40% 60% 80%	
	Skipped question: 67		

A change in the obligated level of stocks will have a relative change in the level of related emissions in the process of stockholding (vaporisation, leakages, etc.) in the tankparks and during the transportation.

Lower impacts on the environment (transport, tank farms, energy input, ...)

ENVIRONMENTAL IMPACT WILL CHANGE BY 10%

We expect a miniscule, albeit positive, impact. A somewat lower storage obligation means somewhat lower stocks and and commensurately lower risk and smaller impct at accidents etc. as stocks are handled and stored.

- expansion of current storage capacity - increase in total quantity of stocks that have to be refreshed each year

See CSE and/or industry operators comments

Idle stocks have (minor) evaporation losses. These losses will be decreased if the 10% is changed.

VOCs and losses will be decreased

see previous answer: potential need to build new storage and therefore use land (provided it is authorised by environmental and safety régulations).

Storage capacities have been built for [CSE]. [CSE] needs more storage capacities to store enough stocks to comply with its increased compulsory stockholding obligation. So, it means more tanks and a higher risk of soil and air pollution in case of incidents.

Increased holding of stock increases the risk of holding this material. This could potentially increase the risk of an environmental release of product, although this risk will be small.

No.

On mid term more tank maintenace is expected with higher environmental impact.

Reduced transportation, reduced oil movements utilities consumption, reduced environmental risks in emergency situations.

The developement/adjustment of old and partly unused storage facilities which would otherwise probably being shut down.

The impact would be indirect

- environmental impact because of building of new storage capacities; - environmental impact because of more logistical activities;

Additional storage facility maintenance

Need to build more tankage which under urgency will not be safe nor secure

18. You expect (some) social impacts from a 10% change in the compulsory stockholding obligation. What social impacts does a 10% change in the compulsory stockholding obligation create (use examples if possible)?(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	26		27
	Total respondents: 26	0% 20% 40% 60% 80%	
	Skipped question: 59		

The only social impact expected is the reduced cost of oil prices arising from the reduced costs of carrying lower oil stocks obligation.

If our obligation would go down and we were to leave a storage facility that can't find another client to replace us.

Higher storage costs would reflect in the selling price of the fuel to the end consumer.

the possibility of lowering oil product prices for end consumers

No impact relevant at State level.

In case of decrease, leading to closures of storage facilities : possible employees layoffs.

Like in the above answer, there will Always be some impact, even if very low. Companies with slightly lower capital levels bound up in storage are companies with a slightly more flexible balance sheet and hence stronger to withstand change. In an industry facing change (de-fossilisation for instance) this can mean a lot for its ability to keep employees etc. The fact that [Country] compaies are not at disadvantage within the EU further enforces this.

If certain depots or refineries have less tickets, and so less earnings this may increase theirs costs, they might need to decrease the number of their employees.

See CSE and/or industry operators comments

The potential closing of existing tankcapacity at EU level might (as outlined in the question concerning the economic impact) will induce redundancies at EU level.

Minor impact as personnel training and probable new personnel involved; the use of deadstocks in a real time crisis scenario will be introduced in the regular training of personnel- now due to the 10% (deadstock) deduction the deadstocks are not considered as CSE stocks, thus no enforcement to release them exists

Since the total cost of maintaining oil stocks will be decreased, the levy imposed by the CSE to the final consumers will be decreased respectively.

Companies leaving the refining sector due to increased working capital costs may lead to fewer jobs, especially in deprived areas.

No.

In storage depots and in the connected industry the human resource can be slightly increased.

The final customer surcharge for obligatory stockholding will be reduced.

The impact would be indirect

- more Jobs; - probably rise of stockholding fee for end consumers;

Total costs of emergency stockholding are covered by collection of fee paid by oil companies and subsequently by the end consumers. So the 10 % change could allow to decrease the fee slightly what would project to prices of petroleum products - thus slightly affecting general prices.

increase prices for fuel on the internal market, as a result increase prices for food and services.

Optimization and costs reduction thus higher competitiveness for the last benefit of consumers.

No

Price for end consumers may drop due to lower costs for the industries and agencies.

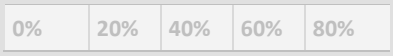
Increased human resource at storage locations and increased pump prices, resulting in impacted travel considerations.

Higher Oil Prices will affect low cost consumers

Part 3: Questions on the methodology for calculating the crude oil equivalent of petroleum product imports (naphtha yield rule)

19. Do you think accounting for naphtha one way or the other in the calculation of the compulsory stockholding obligation (Annex I) and the (level and type of) eligible emergency stocks held (Annex III) is a good thing in the first place?(The alternative would be that no deduction would be required in both the calculation of the CSO and the calculation of the eligible emergency stocks; emergency stocks would then be held not only for energy use, but for all sectors using oil as input for their production processes, most notably the petrochemical sector) (Up to 255 characters per response)

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
Yes, because	47		55
No, because	46		54
	Total respondents: 85		
	Skipped question: 0		

it has proven to be the right approach.

From our point of view there should be a deduction for Naphtha, corresponding to the overall Naphtha-yield in the specific countries.

nfm

the composition of the feedstock in the petrochemical sector is still very different in the different parts of the world. Obligating the naphtha based industry would bring those companies on a much more unleveld playing field compared to the gasbased competitors.

No, because of the levels of fluctuation that can arise from year to year that result in a significant change in the oil stocks obligation, either up, or down.

[Country] has no chemical industry, so we are little exposed to the nafta yield

not deducting them would mean holding stocks for non-energy use and this is a political decision, which would mean an increase of the obligations and a tax on naphtha.

no significant effect for oil security. Naphta yield rule is applied on compulsory stockholding obligation and simultaneously on eligible emergency stocks held.

[Country] has no difficulties with the current calculation methods

x

Because, as [Company] covers only fuel for transport and electricity generation, it would not be negatively impacted by the inclusion of the amount of oil used by all sectors.

Not applicable in the case of [Country]

Not applicable in the case of [Country]

the current system have proven one's worth

The question is not clear ... sorry ... we support the modification of the actual calculation following the proposal of Belgian Government.

in the present EU Directive Naphtha is not treated consistently. Naphtha used for gasoline production has to be considered as well

in the present EU Directive Naphtha is not treated consistently. Naphtha used for gasoline produkction has to be considered as well

No - Increased cost to establish and holding stock capacity for naphtha

YES, BECAUSE IT CREATES A LEVEL PLAYING FIELD

a

The current solution seems to us correct

could be problematic for countries with an important naphtha consumption

naphtha yield/consumption corresponds to the average naphtha volumes used as feedstocks for petrochemical industry, but the treshold 7 % has to be abolished, because it can cause big annual changes in the obligation in the countries where the yield is flirting around the 7 %, such in Hungary.

x

the Directive's objectives are firmly aimed at improving energy security and this delineates between product for energy use and that for others

it adds administrative burden and for those countries where napththa yields are variable (or on the cusp of the cut offs) considerable uncertainty. Other products are not discounted in the same way. Naphtha for use in energy should be available to count for CSO

the major impacts of a disruption in oil supply is on automotive fuels

Yes, because it provides a way to compensate countries holding larger amounts of fuels with a crisis management benefit to society, providing them with a way to compensate for petrochemical and industrial feedstock consumption and the way those push net imports upward.

it helps limiting the obligation for companies but could be between 3 and 4%

A

no, because it has no impact on import

yes, because it's a more realistic strategic stock, considering its dedication to energy

no, because it makes things complicated, and there are other product which are not necessarily used for energy.

yes

not concern in [Country]

not relevant for us but we support

not taking into account Naptha would result in an administrative simplification and is therefore the preferred option for us. Nevertheless, we understand that for some countries the Naptha rule might pose a problem and needs to be amended anyway.

We are final users and we don't have the right to maintain C.S. in products other than those we actually use (fuel and diesel oil)

Naphtha is mainly used as a feedstock for Gasolines, so by accounting Naphtha we are accounting Gasolines.

naphtha is mainly used for the production of petrol

level of stocks could have significant oscilation from year to year

No, because when calculating the compulsory stockholding obligation as well when calculating already stored stocks, they will increase. Furthermore, having in mind the maintained stocks in the form of naphtha, the emergency stocks will be used in a wider range.

?

?

it is not final product for consumers.

without accounting for naphta in the calculation of the compulsory stockholding obligation, the compulsory stockholding obligation would be higher for all the EU Member States. And, there is currently no contribution on non-energy used nafta in any EU Member State. It is important to have a stable and predictable stock obligation with a correlation as close as possible between the volume of obligated stocks and the volume on which a contribution is to be paid.

Nothing found.

do not know - no answer

when calculating the compulsory stockholding obligation as well when calculating already stored stocks, they will increase. Furthermore, having in mind the maintained stocks in the form of naphtha, the emergency stocks will be used in a wider range.

We do not hold information about naphta in [Country]

Naphtha can be easily blended into gasoline, and so this seems to create an uneccesary penalty

Total's view is that all naphtha stocks should count towards compulsory stock obligation.

[Country] has petrochemical industries near refineries.

We need reserve not just for energy.

a percentage of naphtha will always be used as petrochemicals feed. Only the naphtha used for gasoline production should be included in the calculation of eligible emergency stocks.

No, because when calculating the compulsory stockholding obligation as well when calculating already stored stocks, they will increase.

inconsistent regulations concerning Naphtha in EU directive

I have no knowledge of this subject and therefore can not answer your question.

No

Sorry, not my area of expertis. General view, if we want CSO for energy use only, the Pet Chem use should not increase the national CSO.

Increased cost to establish and holding stock capacity for naphtha

It would simplify the system

it makes calculations more complicated

it doesn't concerne our CSO ([Country] doesn't have refining activities)

provides guidance on what can be included for CSO purposes and how.

The method used in Annex I it’s correct and have not to be modified. In eligible emergency stocks held have to be excluded only light naphtha for petrochemical usage; instead it’s not correct to exclude light naphtha for gasoline production.

All products not leading to energy use should be excluded from CSO obligations and not eligible to contribute for emergency stocks. That is the case of naphtha for petrochemical purposes. But Heavy Naphtha leading to gasolines should be considered eligible for emergency stocks.

YES

emergency stocks should be held for energy use.

Naphtha plays a minor role in Oil Security

[Country] has not any refineries therefore it not important for [Country]

No, because: Naphtha is a feedstock for the petrochemichal industry.

no comment

no comment

it would decrease the cost of CSO

emergency stocks should be held for energy use

this issue requires an analysis about the role of naphta may have as emergency stock

of the estimated economical impact

most of the naphtha produced goes to the petrochemical industry. On the other hand naphtha apart from being used in the petrochemical industry, is also a gasoline component through the naphtha reforming units. The exception of naphtha from the calculation of eligible emergency stocks renders unaccounted its use in the production of gasoline. Thus, refinery naphtha stocks held for conversion into gasoline are not counted as compulsory stocks.

Not relevant for us

calculation is not clear

For a refinery Naphta is an itermediate product with high volatility of stocks

ase

consumers would pay costs of increasing security of supply of petrochemical industry

the supply of the petrochemical industry is crucial in our economy and society, so emergency stocks should guarantee a continous supply for it.

Naphtha can be recognised for its application to road fuels vs chemical industry

naphta is a true gasoline component, and can also be a charge for gasoline makers units in refinery

if we keep the same calculation method, the stockholding obligation of some Member States might change quite significantly up or down due to the naphtha calculation method and threshold values which exposes Member States to sharp increases or decreases in obligation which are hard to manage. This issue shall be addressed in the review remaining aligned with IEA requirements, but has little impact for [Country].

Although we understanding the interest of the stakeholders in change the methodology for calculating the obligations and quantifying quantities of crude oil or finished products, we consider that the 4% factor applied in actual methodology for the crude oil is very dependent of the functioning of the refineries. We believe that current methodology is acceptable.

present methodology of stockholding calculation does not take into account chanhe of structure of oil product consumption.

not soley used for energy

In the case of the company I represent, it does not really make any significant diffrence except for additional administrative burden less flexibility in accumulation of stocks.

Naphtha is used for the production of gasolines

20. What would be the positive and negative impacts of not accounting for naphtha anymore in the calculation of the compulsory stockholding obligation [Annex I] and the (level and type of) emergency stocks held [Annex III] [Basically removing the deduction for naphtha in both calculation methods]? Please describe as precisely as possible(Up to 255 characters per response)

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
Positive:	42		79
Negative:	38		72
	Total respondents: 53	0% 20% 40% 60% 80%	
	Skipped question: 32		

There would be created additional oil-security.

The change of the calculation method would lead to a deviation from the IEA-system. This would mean stockholding for the chemical industry without being financed by them. Building stocks for Naphtha would cause considerable additional costs and maybe new built naphtha-storage in a shrinking mineraloil market.

It opens the debate on 'How much obligated stocks do we really need to hold?' There is room for arguments to go to a Base Pariod Final Consumption based system.

This change would result in a very costly, almost 50% higher national obligation, and could have a destroying impact on the naphtha based companies in Europe. There is absolutely no reason to raise the total obligations.

It would provide a more stable and accurate calculating method which would more accurately reflect real oil consumption trends.

For [Country] the impact will be small

Current obligation with meth2: 3.429.590 tcoe; meth3: 4.343.490. Impact: obligation will be 5.405.660 tcoe. More stocks need to be bought, subsidies, no correlation between income and stocks to be held (unless fee on naphtha).

There would be a simpler procedure to calculate the stockholding obligation. Moreover not relevant positions for stockholding (e.g. refinery output of naphta, refinery intake of feedstocks) have not to be taken into account.

Crude oil would be more favourable for stockholding entities in comparison to oil products because no deduction would come into effect.

x

Not applicable. No refining is carried out in [Country].

Not applicable in the case of [Country].

Not applicable in the case of [Country].

The directive should distinguish between Naphtha used for Petchem and Naphtha used for gasoline production

The directive should distinguish between Naphtha used for Petchem and Naphtha used for gasoline production

no increase in cost

none to our knowledge

MUCH HIGHER COSTS WITH NAPHTHA YIELD OF 16%

Nevertheless, if that change would be made it has a positive consequence- The non-deduction of 4% in crude oil would allow for financial savings, since the actual amount required to meet reserve requirements would be lower.

Obligation would be higher which would be hardly managable. [Country] doesn't hold naphtha as strategic stock.

simplification

increase in vulnerability (see rmk. 1)

No positive effect

Although at first glance more fair, with all oil consuming actors carrying their share of the compulsory stockholding, the result would be that the favourable conversion rate [Country] currently can apply in the calculation of the crude oil equivalents, could not be used. The result is that a larger number of actors would have to hold more, including today's obligated parties. At the same time, [Country] would end up with parts of its emergency stockholding in products with no use in a crisis, which defeats the objective. The emergency stockholding is not there to protect particular industries, but to protect society and make sure it can function in a large-scale disruption. That is why [Country] only has obligations in petrol/gasoline, diesel, jet fuel and fuel oil (and only allows refiners to hold equivalent volumes, according to yield, of crude, up to a 2/3rd of obligation limit). Having to also include all oil-based feedstock, would grow the total obligation, but render parts of it useless to in an emergency. Moreover, the administrative burden of adding new sectors and widening the number of obligated parties, would be considerable.

Naphtha stocks as feedstocks for gasoline production will be included in the compulsory stocks

The exemption of naphtha from the calculation of the obligation will lead to higher obligation

there is no risk in quick change of the annual level of emergency stocks

Make calculation easier

It will create a bias regarding the destination of all strategics stocks

N/A

administrative simplification

The misinterpretation of Gasolines production

as naphtha is mainly used for the production of petrol, in case of excluding naphtha the real inland consumption will non not be calculated

The levels of calculated stocks (Annex 1) and the quantities of maintained stocks (Annex 3) will be increased and the scope of usage will be expanded not only for energy but for petrochemical industry.

?

?

Less fluctuation of the stockholding obligation.

The compulsory stockholding obligation would be higher for all the EU Member States. And, this increase of the stockholding obligation would result in an increase in financing costs and possibly also in contributions and subsidies. There is no social acceptance for such increases.

The levels of calculated stocks (Annex 1) and the quantities of maintained stocks (Annex 3) will be increased and the scope of usage will be expanded not only for energy but for petrochemical industry.

n/a

This would mean that a greater obligation can be met for the same tonne of oil held.

Given the reponse to the previous question, no negatives

It would allow obligated parties to count stocks that are actually used in fuels production. Other naphtha stocks would help to protect the petrochemicals industry in the event of supply problems.

We do not have detailed information on this.

Secured supply of petchem industry

Another product to be stored in flooting roof tank

Higher stockholding obligation, no reason for holding high stocks of intermediate products that require upgrade to be transformed to final products.

The levels of calculated stocks (Annex 1) and the quantities of maintained stocks (Annex 3) will be increased and the scope of usage will be expanded not only for energy but for petrochemical industry.

better correspondence to national regulations; consistent and clear regulation

rise of stockholding obligation

no increase in cost

none to our knowledge

It would simplify the system

NA

Simpler calculation

Decrease in accuracy

it doesn't concerne our CSO ([Country] doesn't have refining activities)

it doesn't concerne our CSO ([Country]doesn't have refining activities)

CSO obligation influenced by net imports would be bigger than the emergency stocks benefits applied to crude oil average stocks

simplicity of calculation.

higher stockholding obligation

The calculation of the stockholdingsobligations would become more simple

Crude oil would become more favourable for stockholding entities in comparison to oil products because no deduction would come into effect.

Costs reduction and fairness. At present, accounting for naphtha when calculating the crude oil equivalent of the petroleum product imports in Annex I of the Directive is not fair for all countries. Excluding naphtha according to arbitrary and standard percentages creates distortions of competition between MS as obligation is not reduced in all cases according to the real net import of naphtha.

no comment

no comment

Not applicable, as there is no naphtha deduction in [Country]

Not applicable, as there is no naphtha deduction in [Country]

simplicity of calculation

higher stockholding obligation

The exemption of naphtha from the calculation of the obligation will lead to higher obligation.

asf

Easier calculation

Distortion of real stockholding obligation and contabilisation of stocks

It should avoid up and down in obligation level. Naphta can be eligible as an emergency stocks

if not removed from the obligation calculation, it should increase obligation level, so emergency stocks level to be maintained,and it can’t be counted as eligible for emergency stock which is not true

The Naphtha used as feedstock for producing gasoline or used as a component in the gasoline blending cannot be used for compulsory coverage, according with with Annex III and Section 3.1 of Annex C to Regulation (EC) No1099/2008 (EU Energy Statistics Regulation)

It can create conditions to distortions between EU MS because the use of naphtha in refineries is dependent on its operating conditions. In addition, statistically point of view, there will be an increase in data collection work with the required breakdown according with its use, which we think is not justified.

Though miniscule, but still positive - less administrative burden, slight increase in flexibility of stock accumulation.

Higher obligation for other products will lead to higher Oil prices

21. Do you expect the naphtha yield in your country to be between 6 and 8 percent in one or more years the coming 5-10 years?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Very likely	11		13
Likely	5		6
Unlikely	8		9
Very unlikely	21		25
I don't know	40		47
	Total respondents: 85	0% 20% 40% 60% 80%	
	Skipped question: 0		

The options that are considered in the impact assessment for addressing the naphtha yield deduction in Annex I of the Directive are: [Baseline] The calculation for correcting for naphtha yield in the current calculation method remains as it is. [Option 1] The calculation for correcting for naphtha yield in the current calculation method is changed to replace the 7% threshold by a 4% threshold so that countries below 4% apply a 4% deduction and countries above the 4% threshold deduct either actual naphtha consumption or the actual naphtha yield percentage (whichever is smaller). [Option 2] No threshold would be applied (neither 4% nor 7%), but the actual naphtha yield would be deducted from the calculated crude oil equivalent. [Option 3] No threshold would be applied (neither 4% nor 7%), but the actual naphtha consumption would be deducted from the calculated crude oil equivalent. [Option 4] No threshold would be applied (neither 4% nor 7%), but the actual naphtha yield or the actual naphtha consumption would be deducted, whichever smaller, from the calculated crude oil equivalent. [Option 5] No naphtha yield correction would be applied: When calculating the crude oil equivalent of imports of petroleum products, EU Member States would calculate the sum of the net imports of crude oil, NGL, refinery feedstocks and other hydrocarbons, and calculate the 90-day-obligation on this basis.

22. Do you agree that these are relevant options to further improve the functioning of the Directive?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes	54		78
No, because (Up to 255 characters)	15		22
	Total respondents: 69	0% 20% 40% 60% 80%	
	Skipped question: 14		

From [CSE] point of view, 1. Baseline is sub-optimal. 2. Option 1 is acceptable. 3. Option 2 is most favourable. 4. Corresponding to the [CSE]-law, Naphtha consumption cannot be deducted. So we prefer deduction of a certain percentage. 5. see answer to '4.'. 6. Option 5 is a political question if there should be emergency stockholding for Naphtha.

Baseline is no change, no improvement. Option 1 does generate a solution for some countries waving arond the 4-7% range against a big movement in their obligations. Option 2. and 3. lead to an improvement, but not clear why the base for deduction is separated. Option 4. with both deduction options does have our preference, and would give more room for marketdevelopments. Option 5. is a very nasty raise in the obligations for many countries!, and not an improvement at all.

Option1 would only create a different threshold with other MS having a 'jumping' obligation. option2, but especially 5 would create a much higher cost (--> taxes or subsidies) even though consumption would not change

Not clear how the wording of Annex III will look like? Stocks of Naphtha for Gasoline production should be included for caclulating the level of stocks held. Petchem Naptha / Gasoline Naptha handling has to be explicitely splitted.

The current calculation method is sufficient

A change to this methodology can be analysed. (…but we agree with the defined methodology.)

With option 1, the problem is moved from 7% to 4%, but it is not resolved. With option 5, the compulsory stockholding obligation would be much higher for all the EU Member States. Among the proposed options, only options 2, 3 and 4 would improve the functioning of the Directive.

n/a

The baseline covers our needs, since a % of naphtha will always be used as feed for petrochemicals.

No

The current calculation method is sufficient

it doesn't concerne our CSO (Slovenia doesn't have refining activities)

The calculation for correcting naphtha yield have not to be changed.

There should be distinction between stocks of naphtha for petrochemical use and the naphtha for gasoline production. The deduction should emphasize only the naphtha for petrochemical use.

23. Are there additional options (beyond those mentioned above) that you would suggest to improve the way in which the Directive accounts for naphtha?(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	18		19
	Total respondents: 18	0% 20% 40% 60% 80%	
	Skipped question: 65		

Dividing the current total obligations between the IEA countries within a system looking at the BPFCs (including naphtha)shares would make much more sense, and would also lead to a real level playing field in terms of availability in all the countries and to a level playing field in terms of the financial burden between the countries. In times of an emergency the ICRP-shares of the countries are also based on their BPFC's shares!!

If the idea behind the naphtha deduction was to exclude non-energy use of oil: expand the deduction equally to LPG of use for non-energy purposes. Return to the old system with the 3 obligations: highest possible convergence with the qualtities on which the tax is payable.

no

OPTION 4 IS PREFERRED

No.

No

no

/

- Yes, the following option already presented to the Oil Coordination Group in 2015 by our country. The actual naphta consumption or the actual naphta yield (whereby if below 4%, a 4% deduction is applied) would be deducted, whichever smaller, from the calculated crude oil equivalent. All Member States have access to these 2 calculations every year. - An other solution could be to calculate a rolling average on 3 years in order to increase the stability of the stockholding obligation.

Total view is that naphtha not used for petrochemical purposes should be counted towards meeting compulsory stock obligations.

No.

No

/

In Annex III must be specified that only petrochemical naphtha can't be used for emergency stocks

No

No

Our view is that naphtha not used for petrochemical purposes should be counted towards meeting compulsory stock obligations.

No

Part 4: Questions on changing the 10% deduction applicable when calculating the level of emergency stocks held (Annex III) The options that are considered in the impact assessment regarding changing the 10% deduction applicable when calculating the level of emergency stocks held (Annex III of the Directive) are: [Baseline] When calculating the level of emergency oil stocks actually held, the EU Member State would apply to the quantities of stocks a correction factor of 10%, to take account of the amount of stocks that might not be accessible (e.g. tank bottoms). [Option 1] The 10% deduction rule would not be applicable for emergency stocks owned by Central Stockholding Entities, because there would be no doubt about the availability of these emergency stocks. [Option 2] The 10% deduction rule would not be applicable for those EU Member States that commit to make sure that, in addition to the emergency stocks, at least 10 days of commercial stocks (or 6.8 days for Member States under 61-day-obligation) will be held. [Option 3] The 10% would be replaced by a 5% reduction (or any other percentage figure that can be justified based on existing literature or practices) . [Option 4] No deduction percentage would be introduced (the last two paragraphs of Annex III would be deleted).

24.1. Options

- Do you agree that these are relevant options to further improve the functioning of the Directive?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 Yes	66		81
2 No	15		19
			Average: 1,19 — Median: 1
Why not? (max 2000 characters)	**Total**	**% of total respondents**	**%**
Open answer	18		19
	Total respondents: 81	0% 20% 40% 60% 80%	
	Skipped question: 0		

From [CSE]'s point of view: Baseline is not a valid option, as this meant to hold 100 days ([CSE] stocks are completely available at any time). Option 1: most favourable option. Option 2: Compulsory commercial stocks are not possible in [Country] due to constitutional restrictions. Option 3: better than nothing. Option 4: Okay for countries with CSE, but for countries with industry-stocks this would mean an aggravation of oil-security in that country.

Only reducing the 10% without extra quality conditions for the remaing stocks would result in less accessible and available stocks! Also some agencies are covering obligations with working stocks.

It is the view of [CSE] that the directive can have two different percentages: one for CSE´s and one for others. The number for CSE´s should be lower than for others. The number for others should follow option 3.

Option2 is a 'strange' option: MS can't commit to obligations concerning commercial stocks. Option3 would only change the %, not tackle the issue. [CSE] covers itself with owned stocks under storage contracts that demand a 100% recovery of the stocks at the end of the contract or in a crisis. Our tickets are for a given quantity that needs to be available in crisis. We inspect the availability of all our stocks continuously. Option1 and 4 treat our stocks as it should. With the option4 the Commission would miss out on the opportunity to promote agencies and ageny owned stocks and to 'reward' MS with invest(ed) in the most credible emergency stocks.

The 10% deduction rule should still be valid for countries with compulsory commercial stocks.

there is a risk not to fulfill the IEA obligation

The 10 % reduction is far above the actual accesissible amount of stocks held - not only stocks owned by CSE but also from tanks operated by commercial Companies.

No. Option 1 is unfair on countries that do not run a CSE and there is not any more certainty that a CSE would be any more accessible than those held by industry (unless proven otherwise - the [Country] view is that stocks held by industry are more readily available than those of a CSE for a stock release). Option 4 would appear to go too far in the wrong direction – we should acknowledge progression in technology (our preference is for option 3), not get rid completely of the measure.

Option 4 would increase vulnerability

Not all options are acceptable for us. Especially option 2 is replacing one threshold (10% Naptha) by another one (10 days of commercial stocks). This is not solving the problem but only shifting the problem to other Member states.

All the [Country] emergency stocks are 100% available by contract.

Option 1.

I just do not know

The 10 % reduction is far above the actual accesissible amount of stocks held - not only stocks owned by CSE but also from tanks operated by commercial Companies.

We support option 3 review the 10% deduction but keeping a deduction in the range 7-5%

Baseline is no Option for [Country] as we are in the situation to fullfill 24-7 and to 100% our stockholding obligations duties ,

Only option 2 can be considered, which is more or less same as baseline. Of course it is important to assess precisely the % of unavailable products in case of crisis but on top of that it could be more important to be sure that all eligible products for emergency stocks are really useful for energy use . Today Sulphur, petcoke and other “any oil” can be eligible as emergency stocks, but might not be very useful for energy use ...

None of the proposed options seem to add any susbtantial value to the current effectiveness of the baseline situation. We view this rule from the point of competitiveness - as long as all market (fuel supply and stockholding/ticketing markets) participants in domestic and EU markets are bound by the same rules (e.g., no prioritetization of CSEs as in

option 1), there is no real difference whether this deduction rule remains, or not. However, administrative burden would reduce without such rule.

25. Are there additional options (beyond those mentioned above) that you could suggest for changing the 10% deduction rule as described in Annex III of the Directive?(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	23		24
	Total respondents: 23	0% 20% 40% 60% 80%	
	Skipped question: 58		

It would be a real improvement if the obligated stocks for an emergency would be real held additional to the regular operating stocks of the companies, including all the tankbottoms, unavailables, Miminum Operating stocks, etc. which would also be necessary to be held by the companies without any obligations. The current system is not transparent for these stock distinctions. Changing the current 10% is therefor only changing the level of obligated held stocks, but not improving the system. Therefor it would make sense to reduce the 10% forall countries with an agency not covering obligations with company working stocks!

10% reduction for emergency stocks managed by CSE/Ministry, i.e. also tickets IF the CSE/Ministry inspects the stocks and contractually stipulates that all stocks under ticket need to be restituted in case of a crisis.

I would propose no deduction percentage only for CSEs.

no

OPTION 1 IS PREFERRED

We believe that this value of 10% may/should be reduced, in face of what is nowadays the real expectation for tank bottoms settlings or sludges. Possibly a reduction to 5% or even further till 3%.

No.

we support the option 1

Why is the simple option of using/moving close to the IEA methodology not included? The IEA methodology calls for the 10% deduction to be made on the total (commercial and emergency stocks). This methodology could be adopted albeit with a reduced deduction like 5%, or any other percentage figure that can be justified based on existing literature or practices.

no

The kind of storages facility could be consider : in certain kind of facility, there could be no deduction and in other, a percentage. In any case, 10 % may be to much.

/

No

No.

Further technical investigation and analysis would be advantageous to clarify this.

No.

No

10% deduction is an overestimated and out of date value; it have to be significantly reduced to actual industry data (not more than 3%). In any case it’s important to keep alignment between Annex III and IEA methodology (let's remember that this was one of the objective of 2009/119/EC Directive)

No deduction percentage only for CSEs

The 10% deduction does not make sense any more. Currently, in [Country], private contracts with [Company], (main logistic company with more than half of the market) do guarantee to oil companies that 100% of the product is available without any deduction. If this is technically possible in the private field, this rule could be applied as well in the CSO field. It should then be confirmed by the Commission that this contractual practice is widespread all over the EU and if so, proceed to eliminate the 10% deduction applicable to the level of emergency stocks.

No

All amount of the emergency stocks should be accessible

No

26. Which percentage of the emergency stocks owned by the national authorities and/or the Central Stockholding Entity would not be fully available and accessible at all times?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
<1%	39		68
between 1-3%	9		16
between 3-5%	5		9
between 5-10%	3		5
>10%	1		2
	Total respondents: 57	0% 20% 40% 60% 80%	
	Skipped question: 23		

27. Please explain why emergency stocks owned by the national authorities and/or the Central Stockholding Entity would not be fully available and accessible at all times.(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	18		19
	Total respondents: 18	0% 20% 40% 60% 80%	
	Skipped question: 60		

Due to the need to refresh stocks.

Small amount of unavailability due to tank bottom issues.

Depending on the various tank technologies the availability is between 90 and 100 %. The weighted average in [Country] is approx. 95 %.

[Country] takes the view that some hydrocarbons will indeed be accessible due to technical constraints i.e. that the original logic of the 10% was to a degree sound, however, industry feedback indicates that this is now less than 10% due to technological advances, that while not completely removing the problem will have reduced its impact.

In case of presence in a given depot of a specified product owned by the CSE, and no other customer for this product (ie. gasoline). Tank bottoms not fully/ immediately available.

The facilities under CSE and national authoritity ownership or control operate under the same physical rules as the rest of the industry. They too have tank bottoms, line fill etc. If that is what we are subtracting for, then it needs to be evenly and fairly applied. The upshot of placing obligations on industry is that one can force them to “carry” tank bottoms etc. in their commercial storage, by placing strict legal demands on constant and total accessibility to the

obligatory volumes. A CSE/national authority, especially one operating its own facilities, will have to make “room” for any inaccessible volumes itself, in its own storage.

It may occurs for the bottom of tanks and because of the necessity to keep some product inside pipelines. But in case of emergency, bottom of tanks may be make accessible and, pipeline should be emptied.

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It is unclear to us if the question is aiming at the availability of emergency stocks after deduction of the 10% for tankbottom, or if it is aiming at determining the real % of tankbottom. If the question is aiming at determining the real % of tankbottom, and as obligation is fully delegated to industry, we would need to consult with industry in order to determine the %. In between we estimate that the % might be between 3-5%. If the question is aiming at determining the availability of emergency stocks after deduction of the 10% for tankbottom, we would like to stress that it is guaranteed that 100% of the emergency stocks are fully available at the time of declaration. Nevertheless it seems generally questionable to us if in cases of a severe supply crisis all the delegated stocks would be really available within a reasonable timeframe (MOR, working stocks,...).

The stocks are fully available, however it will take further time to take the 1-3% stocks held in the pipelines and tank bottoms.

Due to the experience that we had in [Country] during emptying the old oil terminal, a 2.7% remained as unpumpable and this amount was removed at the final decommissioning of the terminal. New terminals is expected to have less unpumpable quantities.

Tank bottoms or salt cavern storage trapped oil

The answer to the former question about percentage was based on one estimate and the general assumption that modern technology allows more stocks to be pumped out of storage + based on the IEA methodology for response situations. In general it seems to be beneficial to have a clear definition of the Diretive's 'fully available and physical accessibility at all times' with reference to Article 2 (m) in relation to the IEA methodology (to commence implementation of measures within 15 days).

Due to technological reasons: tubes for retrieval of oil products from tanks are slightly higher bottom level.

no reason

About 1-2% of the emergency stocks in storage tank bottoms are not accessible at the moment (technological reason). It would be took some time for access that amount.

The current quality assurance of movement, maintenance and control of these products point to the need to maintained some deduction on calculating the level of emergency stocks.

CSO tickets are not fully accessible at any time

28.1. Are the emergency stocks owned by economic operators of your EU Member State fully available and accessible at all times?

- Are the emergency stocks owned by the economic operators of your EU Member State fully available and accessible at all times?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	18		25
2 Yes	53		75
		Average: 1,75 — Median: 2	

Please explain why (max 2000 characters)	Total	% of total respondents	%
Open answer	35		36

Total respondents: 71
Skipped question: 7

0% 20% 40% 60% 80%

Corresponding to the concluded framework agreements, any stocks need to be available at any time.

That condition is legally obligated in our stockholding Law.

It is a function of how the economic operators operate their oil terminals. There is always a small percentage unavailable in tank bottoms, but normally, no more than 1% to 2%

This issue has not been explored in [Country]

We do not know, but have doubts on some. Availibility of tickets sold abroad is not checked by Ministry.

According to [Country] legislation any stocks need to be available for consumption within 90 days (products) or 150 days (crude oil).

N/A all stock uwned by state

Stocks are held as tickets in neighbouring countries. Stocks would be available for loading within 10 days from receipt of notice from [Company].

We are not aware of cases that stocks were not available and accessible at all times.

Under full operations of refinery assets not all of the 10% deadstock is available. We see a deadstock below 5% as feasible to run at full operations.

CONTROLLED BY THE MINISTRY

In [Country] CSE hold the emergency stock separately from the commercial stock (dedicated tanks), bottom stock is also withdrawable.

no experience

Assuming this refers to everything except tank bottoms this must be the case to be eligible to be counted towards the obligation

Yes, [Country] places strong demands on the full obligated volume being accessible at all times, so the tank bottoms, line fill and other inaccessible volumes is something the economic operator will have to sort out on its own and calibrate its commercial stock accordingly. There are very hefty penalties for obligated actors not holding enough emergency stocks and as [Country] emergency stocks are held comingled there are no physical tank bottoms associated with particular emergency stock tanks, for instance. In theory, a [Country] obligated economic operator could make poor business decisions and completely run down all its commercial stock, without being allowed to draw on the emergency stock part of its total stocks. It would then have to seize operations. In such a case perhaps it would turn out that a small percentage in the end was unavailable when the emergency stocks was pumped out, but the company, whether in receivership or not, would still be fined for not living up to its obligation. This is an extreme example, which shows to what length one has to go in a scenario to get to a point where a company places the emergency stocks in a situation where unavailable stocks could become an issue. It is not allowed to count line fill as emergency stocks and tank bottoms have to be part of the obligated party's commercial stocks, in a comingled stockholding system.

all emergency stocks are owned by state

They should be but, part of them may be in bottom of tanks.

all stocks owned by CSE

As concerns emergency stock owned by us, definitely yes.

The economic operators report on monthly basis the maintained stocks; at the same time CSE carries out periodical inspections by documents and on-the-spot on the physical accessibility and availability of stocks.

An authorized company checks for [CSE] the availability of its stocks under tickets. And on the other hand, on the basis of complete reporting, national authorities monitor the presence of emergency stocks held in [Country] for the benefit of the stockholding obligations of other EU Member States. And, technically, the petroleum products of the tanks bottom are almost 100% recoverable.

It is assumed that a deduction will still be relevant to some extent

The economic operators monthly report the maintained stocks, at the same time CSE carries out periodical inspections by documents and on-the-spot checks on the physical accessibility and availability of stocks.

The stocks are held in our tanks and are always available.

most of the emergency stocks are in commingled storage with permanent turnaround. Only a small share is stored in form of crude oil in segregated storage, where a deadstock of max. 3% may occur

All CSO obligation is on CSE

In [Country] economic operators have to communicate in advance by an informatics system the exact location of oil products, crude oils and feedstock used to cover their obligations. [Country] Authorities thanks to this system have the daily picture concerning emergency stocks owned by economic operators. These stocks must be available and

accessible at all times. Authorities can do inspections at any time to verify the situation (and can assign very heavy fine in case of missed respect of obligation)

Stocks held in tank farms near to market and ready to be mobilized if necessary

no obligation on economic operators.

According to [Country] legislation any stocks need to be available for consumption within 90 days (products) or 150 days (crude oil)

no obligation on economic operators

For legal reason [Country] legislation obliges to economic operators to have the stocks fully avaible and accesible at all times)

not fully available due to tank heels

[Regulation] establishes stocks of CSE and industry will be available and accessible at all times.

That is a requirement of the national law for the stocks held in the territory of [Country]. 20 day period is set for cross-border stocks.

29. Which percentage of the emergency stocks owned by industry players would not be fully available and accessible at all times?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
<1%	3		17
between 1-3%	3		17
between 3-5%	8		44
between 5-10%	2		11
>10%	2		11
	Total respondents: 18	0% 20% 40% 60% 80%	
	Skipped question: 60		

30. Please explain why emergency stocks owned by industry players would not be fully available and accessible at all times (potentially because of the need to fulfil the minimum operating requirements (MORs) or to hold sufficient working stocks).(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	16		16
	Total respondents: 16	0% 20% 40% 60% 80%	
	Skipped question: 62		

nfm

Unavailable stocks would only be those held in tank bottoms which would not normally be accessible without special operational arrangements.

This issue has not been explored in [Country] so the answer cannot be given.

This is not up to us as an agency to judge

Stocks are held as tickets and would require around 10 days to be shipped to [Country].

MORs and sufficient stocks are necessary in order to run the refinery on high utilisation. Depending on the crisis scenario the MORs can be reduced sharply down. One reason why we can not use our technical deadstock (around 2%) is the contanimation in the tankbottoms. Realistically we can Access max 95 - 97% of the tank capacity.

Because of the need to fulfil MOR.

.

It is unclear to us if the question is aiming at the availability of emergency stocks after deduction of the 10% for tankbottom, or if it is aiming at determining the real % of tankbottom. If the question is aiming at determining the real % of tankbottom, and as obligation is fully delegated to industry, we would need to consult with industry in order to determine the %. In between we estimate that the % might be between 3-5%. If the question is aiming at determining the availability of emergency stocks after deduction of the 10% for tankbottom, we would like to stress that it is guaranteed that 100% of the emergency stocks are fully available at the time of declaration. Nevertheless it seems generally questionable to us if in cases of a severe supply crisis all the delegated stocks would be really available within a reasonable timeframe (MOR, working stocks,...).

Becouse of the need to hold sufficient working stokcs.

The answer to the former question about percentage is based on one estimate, and it is assumed that this percentage will be higher for the industry than for the Central stockholding Entity for the reasons mentioned above (MOR + working stocks).

There are some physical constraints that not allow to remove the totality of the product in storage.

industry stocks are less transparent, they are commingled with commercial stocks and part of the industry stocks would be covered by the MORs.

Industry stocks are less transparent. They are commingled with commercial stocks and part of the industry stocks would be covered by the MORs.

Technological reason

In order to properly handle products in refinery/depot tanks a minimum quantity (i.e. 'heel') is required to be maintained always in tank, such volume constitutes 'MOR'

31. An option to improve the functioning of the Directive is to replace the 10% deduction by a 5% reduction, or any other percentage figure that can be justified based on existing literature or practices. If this route would be followed, how high should the reduction be and on which calculation should this be based?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
There is no need for any deduction, we can ascertain that all emergency stocks are available and accessible at all times (please submit any technical information underpinning this answer to oilstocks@trinomics.eu).	30		49
Please mention the level of the deduction (which %) along with your reasoning and technical information (limited to 255 characters):	31		51
Total respondents: 61		0% 20% 40% 60% 80%	
Skipped question: 17			

1% . While [CSE], as thew CSE is confident that all its stocks are available, (contractual obligations apply for this), a small allowance of 1% would not be unreasonable, froma practical perspective.

[CSE] does not have this information but suggests that it is investigated

3%, on the basis that there is a small amount of unavailability due to recognised tank bottom issues.

5% would be more realistic when taking into consideration the actual physical characteristics of {company] storages.

[Country] agrees with a reduction however has to date not conducted a study to justify a specific percentage.

max. 5%. Should be possible with our tank farm structure

A level between 3 - 5 % is justified by experience/litterature.

We believe that this value of 10% may/should be reduced, in face of what is nowadays the real expectation for tank bottoms settlings or sludges. Possibly a reduction to 5% or even further till 3%.

We recommend that this be further researched with industry who are best placed to advise on this technical issue (or approach technical Government bodies who may also have the relevant expertise to advise for example competent authorities on oil storage regulations and the like. Independent surveyors may also be a potential source of such information and we can provide details if helpful) but we understand it is lower than 10%

A 5% reduction seems in line with the statistical data on hand

There are studies indicating reduction factors of less than 3%.

3-5%

We would recommend 5%, as it most closely represents the non retrievable fuel in our storage tanks.

A roughly 3%. We have estimated exactly this percentage in the 2015 relocation

max 3%

less then 1% , In case of supply dissruption CSO in [Country] can technicaaly put on market 99.99% of emergency stocks, at the top of button there is only very little amount of off-spec goods (mostly becouse of water)

should be based on typical sludge in tank bottom as compared to full tank capacity

Total is not opposed to changing the 10% deduction but it needs to be properly studied before any change is made. Also the IEA rules would have to be changed.

5%

According to our available technical data, if a 10% non pumpable stock is assumed for each tank, 87% of it can be recovered in case of emergency. This means that the 10% deduction of the Directive should be decreased to 3-5%.

It is lower than 10%. For products like gasoline, high througput, modern tanks - say 3%. For say Fuel Oil it might be above 5% - hard to estimate, say 7%. So for a very large part of the consumption in [Country] the level is below 5%.

A level between 3 - 5 % is justified by experience/litterature.

Calculation should be based on average industry tank bottoms (needs updating). Our perspective is that reduction of the deduction should be in the range 3-5%, which means that the final deduction would be in the range 7-5%

only between 3/5 pct. of the products stocked is actually not accessible using the normally operating circuits

There are studies indicating reduction factors of less than 3%.

1-2%

Reducing the deduction percentage would be more realistic. However, we have not information to facilitate a concrete level of deduction. 5% may be appropiate.

Not opposed to changing the 10% deduction but it needs to be properly studied before any change is made. Also the IEA rules would have to be changed. Today 10 % seems to be fully relevant.

ab. 5% deduction would be sufficient to meet concerns on availability of stocks

<5%

32. Is your EU Member State a member country of the IEA?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes	18		72
No	7		28
	Total respondents: 25	0% 20% 40% 60% 80%	
	Skipped question: 53		

33. If the 10% deduction in the EU system would no longer apply, but the 10% deduction would still apply in the IEA system, which choice would most probably be made in your EU Member State?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
The total stockholding obligation laid upon the CSE and/or industry would effectively sum up to 90 days (or 61 days, whatever is applicable) rather than to 100 days (or 68 days) which is the case today because of the 10% deduction. For meeting the IEA obligation, I would rely on the existence of sufficient commercial stocks.	8		42
The total stockholding obligation laid upon the CSE and/or industry would effectively not change and would still sum up to 100 days (or 68 days, whatever is appropriate). For also meeting the IEA obligation, we would not rely on the existence of sufficient commercial stocks, but we would like to have guarantees in the form of a (legal) obligation.	3		16
At the moment, I would not be able to make a choice between the previous two answers.	6		32
Another choice would most probably be made, namely	2		11
Total respondents: 19 **Skipped question: 59**		0% 20% 40% 60% 80%	

It is likely that the Government Energy Ministry might favour opting for a compromise between the two, so as to err on the side of caution. AS the CSE, we would not find this unreasonable, as the advantage would be increased oil energy security.

We are binded to follow the EU legislation

Part 5: Questions on moving the start date of the stockholding obligation from 1st April to 1st July: According to the Directive, the calculation of the compulsory stockholding obligation occurs monthly using the data from the Monthly Oil and Gas Survey. For the calculation of the compulsory stockholding obligation, data on annual average for energy deliveries last year are used. However for the months of January, February and March of each year the annual averages for the energy deliveries is based on the data from two years ago as the data from the previous year are not yet fully complete by that time. The reference month of April is the first month of each year for which countries therefore face a new compulsory stockholding obligation. According to the Directive, emergency oil stocks should also be physically available and accessible at all times and therefore emergency stocks based on the 'new' annual obligation should therefore theoretically be available as per the 1st of April.

34.1. Does the fact that April is the first month in which the stockholding obligation is based on last year's data constitute a problem?

- Does the fact that April is the first month in which the stockholding obligation is based on last year's data constitute a problem?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	39		50
2 Yes	39		50
			Average: 1,50 — Median: 1

Please specify why (max 2000 characters)	Total	% of total respondents	%
Open answer	39		40

Total respondents: 78
Skipped question: 0

0% 20% 40% 60% 80%

New obligation is valid as of 1st April and new obligation is submitted to [CSE] by Ministry (Statistical Office) not before the last days of March. So in case the obligation increases (e.g. because of the Naphtha-rule), reaction time is too short resp. it might not be possible to fulfill the new obligation from the beginning.

In most years it is just in March that the relevant yearly national data for the last calender year become available. The time for handling the necessary mutations is than too short for the agency.

The Data for the full year's Net Imports/Consumption only becomes available in late March. Agency's cannot increase (or decrease) their stocks by 1st April. It is totally impractical and absurd to expect them to do so. At least 3 months notice should be provided.

We only receive our stockholding obligation end March-beginning April. The administration receives oil statistics from the oil companies for December earliest 15/2 and then still has to process them. Especially given the unpredictability of our obligation this causes us to speculate. More in general and for every operator, an obligation starting so soon after the end of the year calls unnecessarily for caution (selling less tickets to others and, thus, lowering the ticket offer; buying more tickets for your own obligation then needed in the end, et cetera)

Because the data basis for calculating stockholding obligation sometimes is still preliminary at the end of March.

The obligation is delegated to [Company] from the CSE towards the end of February leaving very little chance to secure a deal and have it approved by the authority of the stock holding country.

The present system requires Member States to finalise the data in a short period of time. This proves to be difficult and thus [Country] would welcome an extension of the start date of the stockholding obligation.

It is difficult (not possible) to ensure the correct amount of stocks available 1st of April - based on data from previously year.

THERE IS NOT ENOUGH TIME BETWEEN THE DATE THE OBLIGATION IS GIVEN AND THE FULFILLMENT DATE

the compliance date is too soon in the year to be able to make necessary stock adjustments in a cost-efficient manner

Data are available at the end of February for the stockholding obligation calculation. There is no time enough when stock has to be bought.

July is already the rule in [Country]

When there is a situation whereby consumption is higher in, for example, Q4 2016 than Q4 2015 the obligation we set companies for Q2 2016 is based on lower figures than the obligation we have for the EU or IEA, leading to potential non-compliance for a quarter. This is more to do with the way we choose to obligate companies though.

Yes. Firstly, the very short time period between completion of the statistics for the preceding reference year (the calendar year ending December 31) and the commencement of the new stockholding obligation means that the civil service is put under immense strain and has to use preliminary data in order to complete the process in time. This produces sub-optimal results and potential quality problems, as well as making the process vulnerable by creating an unhealthy over-dependence on key personnel/competencies. Secondly, this narrow time frame gives the market, particularly obligated parties, too short a window for adjusting their stock levels and things like renting or disposing of contracted storage capacity. To put it concise, it forces companies out to buy or sell on the market under a severe time constraint, which other parties can take advantage of. It makes obligated companies price takers and puts them at a serious disadvantage vis-à-vis other market actors.

There is a very little time to fix the level of stocks.

to prepare govermental decision

Due to different reasons (easy access to ticket market, easy access to group internal storage capacity, industry does not need to comply with public procurement rules,...) it seems to us that industry is much more flexible than a member state , or an ECS, in handling variations in CSO. As in our country obligation is on industry it seems to us that we are not concerned by this problem, but we understand that some MS/ECS might be.

There is not enough time provided to accurately determine the obligation and proceed with necessary arrangements

The technological period for creating the stock's levels in compliance with the calculations for the new period (April of the current year to April of the next year) is very short. It gives rise to the burden for both the economic operators and CSE. In result the cost is increasing, the stress also.

too short notice after previous year end statistics are known

On a year-to-year basis, the stockholding obligation increases or decreases enormously because of the 7% threshold used to determine the method of calculation. Our CSE needs more time to comply with the new stockholding obligation of [Country]. It takes time to organize a tender for new tickets. It also takes time to organize a tender for new storage capacities and for new volumes of petroleum products.

[Country] has a surplus app. 20 percent to our obligation

Under the new calculation deadlines (April of the current year to April of the next year), the technological time for creating emergency stocks will be very short, which will create a burden for the industry and CSE.

[Country] obligation is updated each quarter.

The technological period for creating the stock's levels in compliance with the calculations for the new period (April of the current year to April of the next year) is very short. It gives rise to the burden for both the economic operators and CSE.

Here it's a stressful time between last years data is ready and the Authority publish the CSO from 1 April. The CSO holing companies have very short time to arrange for stocks and tickets. Also the Authority have problems to making good calculations and publish the CSO to the stockholders.

is difficult (not possible) to ensure the correct amount of stocks available 1st of April - based on data from previously year.

There is not enough time for adjustments to meet new stockholding obligation (issuing tenders, getting funding, etc.)

Exact data is not available at right time

To start new yearly obligation from 1st April on is a problem as you have a too short time to adequate new firm targets for stocks of oil products, crude oil and feedstock or to optimizing CSO purchases or sells. To postpone the beginning to 1st July has a positive economic impact without any contraindication on any aspects.

April is a good month to be the base for new numbers since the full numbers of previous year are fully known at that time.

We know the last year's data in February, but usualy that 4-6 weeks until 1st April is not enough time in case additional stocks need to be transparently purchased and delivered.

In some cases, we got the relevant data's not before end of March

We know the last year's data in February, but usualy 4-6 weeks until 1st April is not enough time in case additional stocks need to be transparently purchased and delivered.

The stockholding obligation from July will increase efficiency of CSE and obligated economic operators, they will have more time for adjustments including public procurement procedures.

we are seller of CSO no need to buy tickets

Data from the previous year are complete by 1st April.

Neither if it was July ... As long as the obligation level doesn’t jump up and down !

In addition to the problems with absence of statistical data, April is also ussually a month for intensive maintenance work at our refinery, which makes meeting stockholding obligations more of a challenge than working at full capacity. In cases than the obligation increases, April is usually the worst month for increasing the levels of stocks.

35. In your EU Member State, do industry players have an obligation to hold emergency stocks?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes	19		76
No	6		24
	Total respondents: 25	0% 20% 40% 60% 80%	
	Skipped question: 53		

36. How do you calculate the annual obligation per industry player?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
It is directly linked to the total compulsory stockholding obligation (meaning that the CSO should be known before the obligation per industry player can be calculated)	1		5
It is linked to the performance/activities of the industry player in question in the previous period/year (meaning that once the performance/activities of the industry player is known, the obligation for that industry player can be calculated – irrespective of the new CSO)	16		84
Other, please explain (up to 255 characters)	2		11
	Total respondents: 19	0% 20% 40% 60% 80%	
	Skipped question: 59		

It is linked to the performance/activities of the industry player in question in the previous period/year (meaning that once the performance/activities of the industry player is known, the obligation for that industry player can be calculated – after the calculation of the new CSO)

The [CSE] calculates the annual obligation per industry player

37. Are you aware of your annual oil imports / consumption (and subsequent obligation) in advance of the official notification of your company's new stockholding obligation? If so when?Response limited to 255 characters

(Each respondent could write a single open-ended response of maximum 255 characters.)

Response	Total	% of total respondents	%
Open answer	17		18
	Total respondents: 17	0% 20% 40% 60% 80%	
	Skipped question: 61		

We would be aware of the amounts imported / consumed towards the end of January.

Industry has to report figures to authorities. We know our imports around 15th February of the following year

yes, to 15 february

We may be aware prior to April 1st, however employing majior efforts and at the risk of erroneours results.

No, we can estimate but final figures are available only after official notification

Yes, about 5 weeks before the start of each quarter but can predict quite accurately some months in advance

Yes. In January.

Yes, end of January-early February

By Jan/Feb we have data for our sales last year, in Nov/Dec (year-1) the Authority give a non-binding prel percentage of last years sale to be CSO. For this CSO-year we received the binding percentage including actual quantities by 23 Feb.

In Italy in the last two years, economic operators were aware of their new obligation (starting 1st April) on emergency oil stocks only from 17th February

CSO's for market operators are based in market sales. During February we have definitive data to assess our obligations taking previous year activity. The official notification usually arrives in the middle of March.

No. Our imports are based on a spot sale basis, this is impossible to predict precisely.

2 months before validity

All the necessary data for the calculation of the company's new stockholding obligation are available until the 1st quarter.

Good estimation of consumption, with [Country] rolling obligation based on import known

Estimate is available 2months prior to obligation ommencing

The Ministry is usually cooperative and informally indicate the dynamics of obligation (increase/reduction) whenever they receive the statistical data themselves (~2-3 weeks before official notification).

38. In what month do you start to make adjustments to your actual stockholding (in relation to the new obligation) for the coming year?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
January	5		10
February	8		15
March	13		25
April	13		25
May	0		0
June	0		0
July	5		10
August	0		0
September	0		0
October	4		8
November	2		4
December	2		4
Total respondents: 52		0% 20% 40% 60% 80%	
Skipped question: 26			

39. What would be a reasonable time for adjusting your stockholding in an efficient, cost-effective manner? (The process of gaining approval from the national authorities, issuing tenders, notifying stock holders, etc.)(Response limited to 255 characters)

(Each respondent could write a single open-ended response of maximum 255 characters.)

Response	Total	% of total respondents	%
Open answer	47		48
Total respondents: 47		0% 20% 40% 60% 80%	
Skipped question: 31			

It depends on the extent of the increase. Smaller volumes might be covered easily, higher volumes require a tendering process for 1. storage and after that following for oil. So the whole process might take up to six months.

That is depending very much from the height of the necessary mutations and the related transactions to be made. Sometimes is is to be done within a month, sometime 33 months are necessary.

The length of time it takes varies, but is at least 3 months for stock increases. Any increase is fully dependent on the availabilty of additional storage. If the global trend in net imports is upwards, then all agencies are looking for additional storage at short notice at the same time which creates difficulties in the oil storage market in terms of competitiveness and availability.

It takes very little time (a few days) as [CSE] balances with tickets

Tickets (if succesful): prep/launch/award: 3 weeks; approval (bilat. ticket): min 1 month before start quarter/Own stocks: MUCH MORE. We need to ask for subsidies in case of an increase in obligation. If we have money: call for tenders for storage, then tenders for purchase of products, physical delivery of the products in the terminal, ...

This is a continuious process, net imports are monitored on a monthly basis and anticipated increases in stock holding obligations are adressed as anticipated.

N/A

4 weeks

On average a minimum of two weeks is required. This includes the calculation of the new stockholding obligation and the notification to the industry operators. The operators would then be required to make the necessary arrangements to honour their obligation.

we need to update the primary legislation /legislative Decree and then the secondary (Ministerial Decre). The timing can be not prefixed. But all the new approach will be used in the next year after the changs.

1 - 2 months

3 MONTHS

4/5 months

About 3 months

half a year

3 months

Giving obligated companies three months to adjust their stockholding to their new obligations, would allow them time to enter into, or exit from, stockholding capacity renting agreements, adjust term supply contracts and buy or sell without duress. More time is however also needed for the state to calculate the new obligations, to improve on the currently forced process.

One to two months.

four months

July

See statistical office comments

At least 4 months prior to the start date of the new obligation.

3 month

60 days after the last day of March

Extra stock purchases cost time, money and available storage capacity. [CSE] business plan of last year provided for the establishment of stocks over three years.

60 days after the last day of March

February

One month.

1-2 months

60 days after the last of March

3 months

Support to move to 1 July as start date!

First quarter of the relevant calendar year

At least three month.

1st of July

two / three months

One or two months are sufficient to take the necessary measures.

1st of June

1st of July

n/a

2 months before validity. In [Country] the new obligation starts on July 1st.

Three months

One to three months.

For national authority reasonable time for adjusting total stockholding obligation would be 1-2 monthes. One more month is required for public procurement procedures. All in all 3 monthes (April-May-June).

There is enough time according to the current national regulation.

At least more 1 or 2 month

The longer - the better. We start adjusting our operations the moment we are aware of the planned changes in the obligation.

40.1. What type of impacts does the 1st of April 'compliance date' create and what is their significance? [Note that 'economic impacts' include any inefficient, non-cost-effective adjustment of the actual emergency stockholding].

- Economic impacts

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	8		12
2 Medium impact	15		22
3 Low impact	14		21
4 No impact	30		45
			Average: 2,99 — Median: 3
	Total respondents: 67 **Skipped question: 11**	0% 20% 40% 60% 80%	

40.2. What type of impacts does the 1st of April 'compliance date' create and what is their significance? [Note that 'economic impacts' include any inefficient, non-cost-effective adjustment of the actual emergency stockholding].

- Environmental impacts

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	0		0
2 Medium impact	0		0
3 Low impact	6		9
4 No impact	60		91
		Average: 3,91 — Median: 4	
Total respondents: 66		0% 20% 40% 60% 80%	
Skipped question: 12			

40.3. What type of impacts does the 1st of April 'compliance date' create and what is their significance? [Note that 'economic impacts' include any inefficient, non-cost-effective adjustment of the actual emergency stockholding].

- Social impacts

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	3		5
2 Medium impact	4		6
3 Low impact	6		9
4 No impact	53		80
		Average: 3,65 — Median: 4	
Total respondents: 66		0% 20% 40% 60% 80%	
Skipped question: 12			

41.1. Which of the following impacts / costs have applied to you in the years since the transposition of the Directive in your legislation (2013) due to the current situation regarding the 1st of April compliance date?

- Had to make rapid stock purchases to meet higher stock levels (which may not have been the most cost-effective)

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	38		60
2 Yes	25		40
			Average: 1,40 — Median: 1
Number of years it has applied (max 2000 characters)	**Total**	**% of total respondents**	**%**
Open answer	12		12
	Total respondents: 63	0% 20% 40% 60% 80%	
	Skipped question: 15		

In 7 out of the 10 years 2008 - 2017 [Country] had increases in its annual oil stocks obligation

2

Stock purchases are not conducted by the Regulator for Energy and Water Services.

Start date on stock obligation in [Country] is already 1st July

4

As obligation is with industry, we don't know for sure if industry had to make this type of adjustments. As obligation is quite predictable, and as industry does not need to follow public procurement rules, we nevertheless suppose that the need for rapid stock purchase is quite limited.

1

2

Since 2016, 1 year

Every 2-3 years

On the first two months of 2014, when the legislation was approved in [Country].

Compliance 1 July in [Country]

41.2. Which of the following impacts / costs have applied to you in the years since the transposition of the Directive in your legislation (2013) due to the current situation regarding the 1st of April compliance date?

- Had to make ticket purchases to meet higher stock levels (rather than acquiring dedicated stocks)

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	35		61
2 Yes	22		39
			Average: 1,39 — Median: 1

Number of years it has applied (max 2000 characters)	Total	% of total respondents	%
Open answer	12		12

Total respondents: 57
Skipped question: 21

0% 20% 40% 60% 80%

2

Stock purchases are not conducted by the Regulator for Energy and Water Services.

Start date on stock obligation in [Country] is already 1st July

4

As industry covers a big part of his obligation by tickets this seems to be the usual way to handle variations in the CSO.

Increase of ticketing prices!

1

2

Happens every month

4

2013 , 2014

Compliance 1 July in [Country]

41.3. Which of the following impacts / costs have applied to you in the years since the transposition of the Directive in your legislation (2013) due to the current situation regarding the 1st of April compliance date?

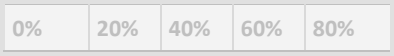
- Missed the deadline and been below stock requirement for one month or more

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	46		78
2 Yes	13		22
			Average: 1,22 — Median: 1

Number of years it has applied (max 2000 characters)	Total	% of total respondents	%
Open answer	7		7

Total respondents: 59
Skipped question: 19



1

This has applied for three years.

Start date on stock obligation in [Country] is already 1st July

1

1

Very rare

Compliance 1 July in [Country]

41.4. Which of the following impacts / costs have applied to you in the years since the transposition of the Directive in your legislation (2013) due to the current situation regarding the 1st of April compliance date?

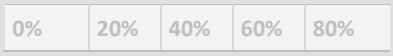
- Held surplus stocks (due to decreased obligation, which was known in advance of April 1st) for one month or more

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	35		65
2 Yes	18		33
			Average: 1,34 — Median: 1

Number of years it has applied (max 2000 characters)	Total	% of total respondents	%
Open answer	15		15

Total respondents: 54
Skipped question: 24



[CSE] uses to hold a certain amount of surplus stocks just in case the obligation increases.

3

[Country] legislation allows to hold surplus stocks.

This has been the case of one of the operators for four years, however the Regulator for Energy and Water Services does not have information about the reason why.

Start date on stock obligation in [Country] is already 1st July

2

As obligation is with industry, we don't know for sure if industry had to make this type of adjustments. As obligation is quite predictable, and the market efficient, we do not expect industry to held surplus more than strictly necessary. In any case, whenever stock levels are aligned to a changing obligation, there will be an adaptation period with surplus stocks.

2

3

Happens every month

4

2

[Country] legislation allows to hold Surplus stocks

2016

Compliance 1 July in [Country]

The options that are considered in the impact assessment for addressing moving the date of start of the stockholding obligation are: [Baseline] EU Member States would remain obliged to comply with the stockholding obligation as from the 1st of April each year. [Option 1] EU Member States would be obliged to comply with the stockholding obligation as from the 1st of July each year.

42.1. Option 1

- Do you agree that this is a relevant option to further improve the functioning of the Directive in this area?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 Yes	61		78
2 No	17		22
			Average: 1,22 — Median: 1
Why not? (max 2000 characters)	**Total**	**% of total respondents**	**%**
Open answer	14		14
	Total respondents: 78	0% 20% 40% 60% 80%	
	Skipped question: 0		

better market conformity of emergency stocks between April and July

1st April is in practise not applicable

For countries where emergency stock are held by the member state or the CSE moving the start date might be interesting.

The time for adjusting the stock levels according to the calculations for the new period will be longer. The resuls is decrease of the economic and administrative burden for both the economic operators and CSE.

Baseline is better in our case.

It will be increased time for creation of emergency stocks, which will lead to decrease of administrative and economic burden for economic operators and CSE.

No impact.

We believe that there is enough time to adjust

No real improvement, only low impact;

1st April is in practise not applicable

July is too late to be defined by previous year activity. Also April 1st is suited to accommodate CSO changes

not really affecting the functioning of our compliance system

Already in July in [Country].

In addition to the problems with absence of statistical data, April is also ussually a month for intensive maintenance work at our refinery, which makes meeting stockholding obligations more of a challenge than when working at full capacity. In cases than the obligation increases, April is usually the worst month for increasing the levels of stocks.

43. Are there additional options (beyond the one mentioned above) that you could suggest? (Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	16		16
	Total respondents: 16	0% 20% 40% 60% 80%	
	Skipped question: 62		

Introducing a rolling 4-Quarter obligation, with a delay of a half year. That would probably mitigate the year to year shocks for some countries.

The impact assessment should take account of the fact that there is a significant unnecessary cost in Agencies and economic operators 'rushing' to secure additional stocks to ensure compliance quickly and inevitably, this increases costs for all concerned, including, ultimately, consumers.

Just to explain the answer: [CSE] has July 1st as current cut-off date allready today

no

No

OPTION 1 IS BY FAR PREFERRED

We agree that this measure could be positive and would allow a more peaceful adjustment of the stocks to meet up with the annual obligation.

no

/

No.

Use the [Country] system for economic operators where the obligation is calculated on a quarterly rolling basis

No.

The time for adjusting the stock levels according to the calculations for the new period will be longer. The resuls is decrease of the economic and administrative burden for both the economic operators and CSE.

If changed to 1st of July only together with the IEA regulations.

No

No

Part 6: Questions on clarifying the Directive's rules on holding cross-border stocks: Currently, the Directive allows obligated economic operators and CSEs to delegate at least a part of their obligation to CSEs or economic operators in other EU Member States, subject to the prior authorisation of both EU Member State governments involved, but without the need for a bilateral agreement between both EU Member States. The Directive however also allows EU Member State governments to place limits and restrictions on holding stocks abroad. As a result, EU Member States across the EU apply different type of rules, restrictions and procedures with respect to cross-border stocks. The following questions concern: (1) The restrictions that are applied to obligated parties in your EU Member State for delegating a stockholding obligation or holding emergency stocks cross border (2) The rules and procedures required to obtain authorisation from the national authority for holding stocks cross border (both tickets and proprietary stocks)

44. Is cross-border stockholding allowed in your country?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes, for dedicated stocks only	11		14
Yes, for tickets only	8		10
Yes, for both	56		72
Neither for dedicated stocks nor for tickets	3		4
Total respondents: 78		0% 20% 40% 60% 80%	
Skipped question: 0			

45.1. Regarding point (1) above, are there restrictions to the volume of holding emergency stocks cross-border for CSEs and economic operators?

- For CSE - proprietary stocks

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	13		52
2 Yes	12		48
			Average: 1,48 — Median: 1

If yes, please specify the % of their obligation that is allowed to be held cross-border (max 2000 characters)	Total	% of total respondents	%
Open answer	14		14

Total respondents: 25
Skipped question: 53

0% 20% 40% 60% 80%

cross-border stockholding is not allowed

100%

not relevant in [Country]

N/A

there is no CSE

No percentage, only agreement of the administration needed and depending on the reason of having cross-border stocks instead of stocks in our country.

n.a.

Max. 30% abroad

For CSE (proprietary stocks and tickets), it is limited to 30% of the finished products.

up to 30 percent of individually specified stock levels for the respective oil and petroleum categories

max 75% abroad

0

40% of obligation for CSE. Moreover, if 15% of all emergency stocks are cross-border stocks, a report of CSE will be ensure that security of supply is not jeopardised

5%

45.2. Regarding point (1) above, are there restrictions to the volume of holding emergency stocks cross-border for CSEs and economic operators?

- For CSE - tickets

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	13		52
2 Yes	12		48
			Average: 1,48 — Median: 1

If yes, please specify the % of their obligation that is allowed to be held cross-border (max 2000 characters)	Total	% of total respondents	%
Open answer	15		15
Total respondents: 25 **Skipped question: 53**		0% 20% 40% 60% 80%	

10%

n/a

cross-border stockholding is not allowed

100%

not relevant in [Country]

N/A

there is no CSE

No percentage, only agreement of the administration needed and depending on the reason of having cross-border stocks instead of stocks in our country.

n.a.

Max. 30% abroad

For CSE (proprietary stocks and tickets), it is limited to 30% of the finished products.

10%

75

40% of obligation for CSE. Moreover, if 15% of all emergency stocks are cross-border stocks, a report of CSE will be ensure that security of supply is not jeopardised

5%

45.3. Regarding point (1) above, are there restrictions to the volume of holding emergency stocks cross-border for CSEs and economic operators?

- For industry - proprietary stocks

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	13		52
2 Yes	12		48
			Average: 1,48 — Median: 1

If yes, please specify the % of their obligation that is allowed to be held cross-border (max 2000 characters)	Total	% of total respondents	%
Open answer	12		12

Total respondents: 25
Skipped question: 53

0% 20% 40% 60% 80%

n/a

cross-border stockholding is not allowed

Maximum 30% of obligation can be held abroad (no matter whether tickets or proprietary stocks)

not valid

No percentage, only agreement of the administration needed and depending on the reason of having cross-border stocks instead of stocks in our country.

Every importer has to maintain a minimum of 8 days of stock on national territory and of 35 days on regional territory (230 km around [Country])

Max. 30% abroad

If an obligation is put on the industry, it is not allowed to hold these stocks abroad.

up to 30 percent of individually specified stock levels for the respective oil and petroleum categories

30

40% of obligation for each oil undertaking. Moreover, if 15% of all emergency stocks are cross-border stocks, a report of CSE will be ensure that security of supply is not jeopardised

5%

45.4. Regarding point (1) above, are there restrictions to the volume of holding emergency stocks cross-border for CSEs and economic operators?

- For industry - tickets

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	13		52
2 Yes	12		48
			Average: 1,48 — Median: 1

If yes, please specify the % of their obligation that is allowed to be held cross-border (max 2000 characters)	Total	% of total respondents	%
Open answer	10		10
Total respondents: 25		0% 20% 40% 60% 80%	
Skipped question: 53			

n/a

cross-border stockholding is not allowed

Maximum 30% of obligation can be held abroad (no matter whether tickets or proprietary stocks)

No percentage, only agreement of the administration needed and depending on the reason of having cross-border stocks instead of stocks in our country.

Every importer has to maintain a minimum of 8 days of stock on national territory and of 35 days on regional territory (230 km around Luxembourg)

Max. 30% abroad

If an obligation is put on the industry, it is not allowed to hold these stocks by tickets.

30

40% of obligation for each oil undertaking. Moreover, if 15% of all emergency stocks are cross-border stocks, a report of CSE will be ensure that security of supply is not jeopardised

5%

46. Next to potential restrictions on the amount of stocks held cross-border, do you apply other type of restrictions on holding emergency stocks cross-border?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes, for obligated industry players only	1		5
Yes, for CSE only	2		9
Yes, for both	4		18
No other restrictions applied	15		68
Total respondents: 22		0% 20% 40% 60% 80%	
Skipped question: 56			

47. Could you specify which other type of restrictions you apply to holding emergency stocks cross-border (either for tickets or proprietary stocks)?(Limited to 255 characters per response)

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
Restriction 1 (e.g. location)	6		100
Restriction 2 (e.g. type of stock)	0		0
Restriction 3 (...)	0		0
Restriction 4 (...)	0		0
Restriction 5 (...)	0		0
Total respondents: 6		0% 20% 40% 60% 80%	
Skipped question: 72			

Emergency stocks have to be held close to consumption.

We consider each demand regarding type of product and location, and agree only if there are no easier solution in our country.

type of stock : a part of the stocks on national and regional territory has to be in finished product (representative of the product mis of the importer)

Bilateral Agreement or Memorandum of Understanding

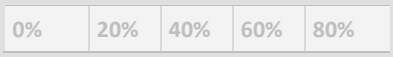
Emergency stocks have to be held close to consumption

necessity of having intergovernmental agreement with the contry where stocks are to be held

48. Other than potential restrictions placed on holding emergency stocks cross-border, could you please specify the details of the procedure(s) that is connected to authorising the request of CSEs and obligated economic operators to hold (a part of) their emergency stocks cross-border:(Limited to 255 characters per response)You may also send supportive documentation to oilstocks@trinomcis.eu on this topic of procedures, requirements and restrictions related to providing authorisation for cross-border stocks.

(Each respondent could write multiple open-ended responses of maximum 255 characters.)

Response	Total	% of responses	%
a. Who is responsible for issuing the authorisation?	20		100
b.Is there an automated/dedicated system for the authorisation procedure?	17		85
c.What is the deadline for the obligated party to request authorisation (how many days/months before)?	17		85
d.What is the maximum time frame for the authority to reply to the application (in days/months)?	16		80
e.Do you impose a requirement on auditing and inspections of cross-border stocks? If yes, who is responsible for these and what information do you require and how often?	15		75
f. What other requirements or information is required for giving the necessary approval from the EU Member State where the stocks will be located?	13		65



Total respondents: 20

Skipped question: 58

The Ministry of Economic Affairs

[Country] have an automated system

4 weeks

utterly 1 week before the date of transition to new period

In [Country] both national and cross border stocks data are to be put in the automated system on stockholding from the Ministry. That's for the administrative control. The control on location is done by the Fiscal Service of the Ministry of Finance. The auditing and inspections are controling the data in our stockholding system with the company situation on location and on other information sources. The administrative control is every month, the fiscal control is periodically done by the Ministry of Finance.

Regular (more years) activity in [Country], and data supplier for [Country] Statistics.

Ministry for Economic Affairs and Energy

The Govt Dept.

Paper Based via email

3 months

No deadline

Yes, The CSE reports verification of stock type, location and volume monthly.

No other information required

government

no

n/a

n/a

CSE

contract

The Regulator for Energy and Water Services

Via email.

Operators are informed that requests that need bilateral approvals can take up to one month to be processed by both parties.

No formal deadline is set however it is usually less than five working days.

No requirements.

Apart from the basic information and the notice of lifting which must not be longer than five working days, a signed copy of the contract initialised on each page by both parties is required.

The Ministry

Yes

It depend on the MoU foresee.

10 days in average

Yes. The MS that have phisically the oil stocks is responsible for the control. Sometome we request the control.

The exact location of the stocks, quantity and type of products.

The Department

No

at least one month

not mandated (though typically within hours / days)

this is included in the [Country] wider audit and enforcement procedures for CSO

only those clearly set out in our guidance

The [Country] Energy Agency issues the authorisation for a company to be allowed to hold part of its obligation abroad.

There is not. Because the verification of the cross-border deal requires verbal or email contact with the competent government authority in the country proposed by the obligated party, automation is hard. As part of a project to automate the verification and clearing of domestic tickets, the [Country] Energy Agency is developing an IT-system digitalising the document handling process, including allowing companies to apply and attach supporting documentation online. This system will likely be able to assist {country] obligated companies with their applications for cross-border storage too, however, the international verification process will naturally not be part of this. Some EU-initiative here, to standardise verification communications between EU MS, would be of use.

Obligated companies have to submit their application one month before the storage contract's commencement date, to qualify for verification.

There is no codified time frame for the authority, as in some cases the authority needs to look deeper into a particular deal, request further documentation, etc. In practice, there has always been dialogue with companies if the authority's scrutinisation of a particular application extends two weeks. Often the dialogue is in any case initiated around the application date.

The [Country] Energy Agency approves a cross-border emergency stocks application only after having received an assurance from the competent authority in the other country that they are satisfied with the contract, the company fulfilling it and the location. The authority in question is then responsible for updating the [Country] Energy Agency about any changes to the stocks during the contract period.

We ask for the other EU MS' competent authority to approve the deal as based on the actual contract between the companies involved. That contract should be the full contract of the deal, disclosing location, volume, pricing mechanism and prise, as well as duration. The contract also needs to point to the relevant laws and regulations, as well as not contain any unorthodox force majeure paragraphs, for instance. The contract, in other words, needs to be deemed to structure the totality of the deal in question.

the minister

no

40 days

20 days

no

Administration

Not automated but dedicated

1 month

no limit

the contract is demanded

Ministry

no

one month

one week

no

N/A

Ministry of Economy

paper/excel based

30/60 days before the beginning of the period

30 days

No

Minister on Energy, Commerce, Industry and Tourism

no

min 30 days before the date that the delegation enter into force

20 days

yes, CSE is responsible

location, quantity, full addresses of the involved parties, payment terms, delivery terms in case of emergency

[CSE]

30 days

The Directorate-General Energy (Unit Security of Supply) of the Federal Public Service Economy

No

One month before the beginning of the ticket period

unlimited

- Yes, regarding belgian security stocks (the Act imposes control program to the CSE) - No, on other cross-border stocks

1) Name of the owner 2) name of the Covered Entity 3) Start date of the ticket period 4) End date of the ticket period 5) quantity 6) type of product 7) Location of the stocks

CSE issue authotisation to industry players, and [Minsitry] issue authorisation if the CSE is involved in a ticket

yes, Oildata.dk

not specified

not specified

CSE and [Ministry] - running

[Country] Ministry for Economic Affairs and Energy

No, it's ruled by legislation

National authority - Ministry of Energy

-

Economic operators for requesting authorisation have 10 days

All procedure takes 15 work days, including issuing the authorisation

-

-

National Authority

Yes.

3 months before except specific deadline established within the bilateral agreement

No specific time frame

[Country] National Authority shall request the competent authority of the Member State of the European Union on the territory of which the minimum security stocks are constituted, under the relevant Intergovernmental Agreement, as many inspections as necessary

Amount, time, warranties for disposal of stocks.

CSE is the Government Member; Economic operators is CSE

49. Does a lack of answer by the authority before the set deadline imply an automatic approval or refusal of the authorisation?You may also send supportive documentation to oilstocks@trinomcis.eu on this topic of procedures, requirements and restrictions related to providing authorisation for cross-border stocks.

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Automatic approval	2		12
Automatic refusal	7		41
Other, please specify (up to 255 characters)	8		47
	Total respondents: 17	0% 20% 40% 60% 80%	
	Skipped question: 61		

We will always have contact with the related companies and come to an agreed procedure,

n/a

No, there always needs to be communication by email between the authorities.

This has not occurred in the [Country] to our knowledge. Operators would take it as a refusal for the purposes of compliance certainty

a delay in the start date of the contract

A formal approval from the authority is needed to validate the request.

Authorisation from Lithuanian side is necessary

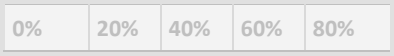
50. Is the pre-existence of a bilateral agreement required?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes	6		29
No	15		71

Total respondents: 21

Skipped question: 57



51. Please indicate with which countries your country has signed bilateral agreements to date

(Each respondent could choose MULTIPLE responses.)

Response	Total	% of responses	%
Belgium	4		21
Bulgaria	1		5
Croatia	1		5
Cyprus	2		11
Czech Republic	1		5
Denmark	5		26
Estonia	3		16
Finland	3		16
France	6		32
Germany	8		42
Greece	1		5
Hungary	2		11
Ireland	5		26
Italy	7		37
Latvia	3		16
Lithuania	1		5
Luxembourg	3		16
Malta	3		16
Netherlands	7		37
Portugal	3		16
Slovenia	2		11
Spain	3		16
Sweden	4		21
United Kingdom	7		37
No agreements signed	3		16

Total respondents: 19
Skipped question: 59

0% 20% 40% 60% 80%

52. Have the requirements, conditions and procedures with respect to the possibility of holding stocks cross-border hampered you to hold stocks cross-border in the past?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes, holding stocks cross-border is not allowed in my country	0		0
Yes, buying cross-border tickets is not allowed in my country	1		2
Yes, the conditions or requirements are too difficult to meet and discourage me from holding stocks abroad	3		7
Yes, the procedures involved in getting authorisation for cross-border stocks are too cumbersome and discourage me from holding stocks abroad	3		7
No, I have not considered to hold stocks cross-border / it is not favourable for me to hold stocks cross-border	9		22
No, I have not experienced difficulties with requirements, conditions and procedures in relation to holding stocks cross-border	15		37
Other, please specify (up to 255 characters)	10		24
Total respondents: 41		0% 20% 40% 60% 80%	
Skipped question: 37			

The only hurdle experienced: we wanted to sell tickets to a [Country] company, but the [Country]authorities wanted an MoU with [Country]for that, which the [Country]administration found unnecessary.

buying tickets for stocks held abroad are not allowed in [Country]

No, We didn´t have any problem on holding cross-border stocks within the legal limits defined.

Holding specific stocks cross-border is not allowed for CSE

Some difficulties in preserving tickets in EU still remain, according to each countries legislation

holding and buying tickest abroad is restricted by the national legislation

[CSE] has never needed to hold stocks abroad

[Country]have a limited distance for holding cross boarder, [Country]and [Country]require certain % of stock is help in the country which increases prices

We have noticed no problems with [Country]regulation, but some other EU contries still require bilateral agreements.

53. What is the economic impact of not being able to store stocks or hold tickets cross-border?(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	8		8
	Total respondents: 8	0% 20% 40% 60% 80%	
	Skipped question: 70		

The impact for [CSE] would be quite substantial. We store all our crude oil (2 million tons) in the caverns in [Country]. This is a safe, logistically sound and cost-efficient way. Finding this storage capacity in [Country]is impossible, would require new terminals and thus high costs. Cross-border calls for tenders are also a very efficient means to create more competition and lower prices.

less comptetion in storage facilities

The possibilities for fulfilling the obligations were limited as well as the cost were higher.

The possibilities for fulfilling obligations for creation and storage of emergency stocks will be limited as well as the cost were higher.

CSE local tickets are more expensive than cross-border tickets.

Allowing cross-border tickets would increase flexibility in case of rising stockholding obligation (unlikely scenario). As there are only limited storage capacities within our country, a significant rise of the stockholding obligation would make more expensive (eg. build new) options necessary.

Domestic stockholding is more expensive.

Higher costs to the industry and as a result to the end consumers

54.1. Would you like to have the opportunity to meet a larger share of your obligation using cross-border stocks (either tickets or proprietary stocks held in another EU Member State)?

- Would you like to have the opportunity to meet a larger share of your obligation using cross-border stocks (either tickets or proprietary stocks held in another EU Member State)?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	23		61
2 Yes	15		39
			Average: 1,39 — Median: 1

Please specify why (max 2000 characters)	Total	% of total respondents	%
Open answer	14		14

Total respondents: 38
Skipped question: 40

0% 20% 40% 60% 80%

[Country]prefers that emergency stocks are kept close to consumption. This includes stocks abroad as long as there is an appropriate logistical link to [Country]consumption centers.

If it was possible to meet a larger proportion of the obligation using cross border stocks, it would provide greater flexibility in meeting the oil stockholding obligation, and inevitably, increase competitiveness and thus reduce costs for all concerned.

It will give more flexibility.

We are happy with our current situation and believe that in any case the 'first line of defense' (tickets + finished products) should be kept close to home in case of national problems. Hence our 3 day sailing zone.

In order to have broader access to the entire European stocks market, thus improving our chances to secure our stocks at a lower price.

According to [Country]legislation the permitted % for crosso-border is 30% which is well enough.

We currently are not restricted in this regard.

In order to safeguard the security of supply the obligation for stocks held across Europe should become stricter in comparison to the ones that currently apply.

Currently up to 30% of our obligation we can meet by using cross-border stocks. Due to complicated geopolitical situation it is more safe to hold the bigger part of stocks in the national territory in order to be able immediately to react to the emergency situation

We already have a large share of stocks in other EU MS

The opportunity is already very high

It would allow better management of company's funds (e.g. decreasing storage capacity binded for compulsory stocks.

For Luxembourg, Sweden and Denmark

Our company has sufficient capacity to meet the obligation with internal resources.

55.1. If CSEs and/or economic operators meet the set requirements and procedures in your country for holding cross-border stocks, do you feel comfortable about the physical accessibility and availability of their emergency oil stocks held cross-border?

- Are stocks delegated cross-border by obligated economic operators - cross-border tickets?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	2		14
2 Yes	12		86
		Average: 1,86 — Median: 2	

Please specify why (max 2000 characters)	Total	% of total respondents	%
Open answer	6		6

Total respondents: 14
Skipped question: 64

0% 20% 40% 60% 80%

generally only big companies with enough 'free floating' stocks within the company are involved in bilateral deals.

To provide for flexibility in the industry and to spread the risks by not having all the volumes located in the country at all times. Also, given [Country] geography and the nature of logistics, some cross-border stocks can be located closer to [Country] main demand centres without raising the storage costs notably, than if more remote storage in loosely populated parts of the country had to be used.

N/A

We feel comfortable that the tickets declared by industry are fully available at the time of declaration. Nevertheless it seems generally questionable to us if in cases of a severe supply crisis all the delegated stocks would be really available within a reasonable timeframe (MOR, working stocks,...).

We suppose that other Member States are compliant with the Directive (including Article 5) and therefore organize their own quality and availability control program.

another MS to another MS and stores in territoria of [Country]

55.2. If CSEs and/or economic operators meet the set requirements and procedures in your country for holding cross-border stocks, do you feel comfortable about the physical accessibility and availability of their emergency oil stocks held cross-border?

- Are stocks delegated cross-border by obligated economic operators - cross-border proprietary stocks?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	3		21
2 Yes	10		71
			Average: 1,77 — Median: 2
Please specify why (max 2000 characters)	**Total**	**% of total respondents**	**%**
Open answer	6		6
	Total respondents: 14	0% 20% 40% 60% 80%	
	Skipped question: 64		

See above

Not applicable.

To provide for flexibility in the industry and to spread the risks by not having all the volumes located in the country at all times. Also, given [Country] geography and the nature of logistics, some cross-border stocks can be located closer to [Country] main demand centres without raising the storage costs notably, than if more remote storage in loosely populated parts of the country had to be used.

N/A

We feel comfortable that the proprietary stocks declared by industry are fully available at the time of declaration. Nevertheless it seems generally questionable to us if in cases of a severe supply crisis all the proprietary stocks would be really available within a reasonable timeframe (MOR, working stocks,...).

We suppose that other Member States are compliant with the Directive (including Article 5) and therefore organize their own quality and availability control program.

55.3. If CSEs and/or economic operators meet the set requirements and procedures in your country for holding cross-border stocks, do you feel comfortable about the physical accessibility and availability of their emergency oil stocks held cross-border?

- Are stocks delegated cross-border by obligated CSEs - cross-border tickets?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	4		27
2 Yes	10		67
			Average: 1,71 — Median: 2

Please specify why (max 2000 characters)	Total	% of total respondents	%
Open answer	5		5

Total respondents: 15
Skipped question: 63

0% 20% 40% 60% 80%

The CSE 'ticket-stocks' are not part of the working MOR stocks of companies.

Not applicable.

N/A

Depending on the tender conditions, and potential controls, CSE tickets might face similar issues as industry tickets.

We suppose that other Member States are compliant with the Directive (including Article 5) and therefore organize their own quality and availability control program.

55.4. If CSEs and/or economic operators meet the set requirements and procedures in your country for holding cross-border stocks, do you feel comfortable about the physical accessibility and availability of their emergency oil stocks held cross-border?

- Are stocks delegated cross-border by obligated CSEs - cross-border proprietary stocks?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	2		12
2 Yes	13		81
			Average: 1,87 — Median: 2

Please specify why (max 2000 characters)	Total	% of total respondents	%
Open answer	6		6

Total respondents: 16
Skipped question: 62

0% 20% 40% 60% 80%

See above. Also stocks in cavernes.

Not applicable.

N/A

We are convinced that proprietary CSE stocks would be available even in the case of a severe physical supply disruption.

We suppose that other Member States are compliant with the Directive (including Article 5) and therefore organize their own quality and availability control program.

for [Country]

56.1. Do you think the Directive should do more to increase the transparency surrounding cross-border stocks?

- Do you think the Directive should do more to increase the transparency surrounding cross-border stocks?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	31		40
2 Yes	47		60
			Average: 1,60 — Median: 2

Please specify why (max 2000 characters)	Total	% of total respondents	%
Open answer	33		34

Total respondents: 78
Skipped question: 0

0% 20% 40% 60% 80%

From [CSE] point of view, there are no real checks and balances that ticketed cross-border-stocks are not double-counted.

There is need for Mutual use of the same categories of products (in terms of GN codes). Now to often there is a statistical difference between countries caused by difference in definition.

Current levels of transparency is sufficient, if administered effectively

Many EU countries have different rules which makes it less efficient

The Directive could oblige Member States to carry out verification inspections to verify the availability and accessibility of the stocks held on behalf of other Member States.

availibility in the case of crisis should be granted

Present rules is sufficient to ensure transparancy

STANDARD PRODUCT DEFINITIONS AND CODES

requirements on MSs to ensure compliance should be uniform therefore the agreement between Governments (when signing off tickets) is adequate. However, as previously put forward by some MSs a common platform to enable trades could have advantages for transparency and tracking of stocks and tickets. This can be done without change to the Directive.

Good as it is

Yes, it would be good with some standardisation to ease the MS-to-MS communication, perhaps though some union-wide IT-solution making the administration less ad hoc. Perhaps a better clarification of the supervisory responsibilities of the MS authority where cross-border stocks are held and the issue of some best practice level, would be beneficial too. That would likely make it possible to ease some MS concerns over oversight and security enough to make them drop the insistence on separate MoUs.

I think it's business of each country to decide wether they want to have cross borders stocks or not, how much and to communicate or not about them.

In our opinion this question is to general and it is difficult to give a simple yes/no answer

To secure actual availability of stocks.

An integrated register of the cross-border emergency stocks should be created as well as an integrated register for stockholders, who have the possibility to hold emergency stocks.

Each quarter, the Commission should be obliged to make an assessment and a table of all the cross-border stocks reported.

to avoid double counting

An integrated register of the emergency stocks, held cross-border, should be created as well as an integrated register for stockholders, who have possibility to hold emergency stocks.

It is important to encourage a free and liquid market in order to allow compliance with obligations at the lowest cost to industry and to the end consumer.

there should be one common rules

Currently cross-border tickets are not clearly regulated and monitored, which is a risk for supply security in an event of crisis. Any-Oil-Ticket should be forbidden, a central database for cross-border tickets is essential

The CSO is a national issue which should be possible to have good controle over for the national Authorities.

Present rules is sufficient to ensure transparancy

Present mechanism is sufficient

Stricter obligation to MS to authorise and to report

Clear rules for all EU Members and players guaranties provided on product availability and readiness and quality compliance.

Criteria Harmonization

Directive could make procedures easier and smoother

Harmonisation of requirements established by each MS, taking into account current national regulation

consistency in product naming terminology

To be sure stock hold abroad might be accessible when needed

There do not seem to be any legislative problems in this area.

To ensure that in case of emergency stocks are made available immediately

57.1. Do you think the Directive should further encourage the possibility for obligated parties to hold stocks cross-border?

- Do you think the Directive should further encourage the possibility for obligated parties to hold stocks cross-border?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	47		60
2 Yes	31		40
			Average: 1,40 — Median: 1
Please specify why (max 2000 characters)	**Total**	**% of total respondents**	**%**
Open answer	27		28
	Total respondents: 78	0% 20% 40% 60% 80%	
	Skipped question: 0		

The existing possibilities given by the current directive should be adequate.

Encouraging sounds to much for making more use of working (MOR) stocks, and would raise more questions on availability and accessibility of the stocks. The Directive should improve the emergency quality of the stocks in all the countries. Now there is probably (too) much difference in that to be seen. But the Directive should take away blocking elements in national legislations, and leave it to the parties in the markets to optimize the business.

It would improve flexibility and competitiveness and reduce costs for all concerned.

[CSE] would like the directive to state that bilateral agreements should be standardised so it is easier to hold stock in other countries

Strategic oil stocks are a matter of economic defense of a country. It is difficult to match this with internal market rules.

In the case that a Member State has access to storage infrastructure, it would be considered more advantageous for stocks to be located on national territory due to the immediate availability during a supply crisis.

Present rules is sufficient to encurage to hold stocks cross-border

There is no need to further encourage this as these arrangements currently work well

Subsidiarity principle. Let the National authorities determine the authorized levels on a case by case basis

It is an important provider of flexibility as such stocks could relatively easily be traded/swapped in a crisis situation for some other stock, should there for instance be a shortage in a particular product. If they are held in crude, they could for instance quicker be refined in another location and brought home as something more suitable etc.

It will enable countries to make available their surplus storage capacity to countries facing a shortage of storage capacity.

I think it's business of each country to decide wether they want to have cross borders stocks or not and how much.

The cross-border stock market is already quite active, and further encouraging cross-border stocks would raise issues of control, and also of security of supply (stocks located far from the national territory might be difficult to put on the market)

To support competition and European market integration.

On our opinion every MS has to store the main part of its emergency oil stocks on its territory in order to have the possibility for effective, quick and adequate reaction in case of emergency.

Before doing this, you first need to increase the transparency surrounding cross-border stocks.

On our opinion every MS has to sore the main part of its emergency stocks on its territory in order to have the possibility for effective, quick and adequate reaction in case of emergency.

It is important to encourage a free and liquid market in order to allow compliance with obligations at the lowest cost to industry and to the end consumer.

Since the stocks are kept to ensure availability in case of emergency / supply disruption, they should be held as close to the final consumer as possible

As local legislation does not allow cross-border stocks, it is hard to achieve in our country

Present rules is sufficient to encurage to hold stocks cross-border (

It does not support supply security

Cross-border stocks reinforce cooperation and are necessary for a real EU mechanism. Moreover, opportunities for MS with underused storage facilities may emerge. Consequently, overall costs may drop

Create opportunities

as long as rules are not the same on list of products authorized, it is not safe for a member state to hold stocks abroad .

Higher levels of cross-border stocks seems to negate the goal of the directive itself. Problems with fuel supply would most likely be regional, not local, therefore transport of stocks from one country with problems of fuel supply to another might not work very well in practice.

To minimise the economical impact

As part of this impact assessment, a number of options to improve the functioning of the Directive in the area of transparency and use of cross-border stocks are considered: [Status Quo] EU Member States keep applying their own national procedures concerning cross-border stocks, including their own authorisation procedure and some would require the existence of a bilateral agreement. [Option 1] Fully harmonising the rules on authorisation of

cross-border stocks in all EU Member States, and in particular the following: Harmonised procedural steps and deadlines Harmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement) Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

58.1. From the options considered above:

- Do you agree that these are relevant options to further improve the functioning of the Directive?

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	13		17
2 Yes	65		83
			Average: 1,83 — Median: 2

Please specify why (max 2000 characters)	Total	% of total respondents	%
Open answer	23		24

Total respondents: 78
Skipped question: 0

0% 20% 40% 60% 80%

The main problem is not the procedures, but the difference in emergency quality that countries are looking for.

The current arrangements are not sufficiently harmonised. Some countries accept MOU's, but some still require Bilaterals. Bilaterals (and in some cases, MOU's) can take a very long time to put in place, particularly in some member states that wish to 'discourage' other member states from holding stocks in their country.

Administratively easier.

Both options 1 and 2 offer a more coordinated approach when compared to the present system.

We prefer option 2

Shared competence is appropriate in this case so option 1 should not be considered. Option 2 does offer clear benefits without impinging the powers of MSs.

Yes, please see preceding two responses

Harmonizing the rules on the authorization of cross-border stocks in all EU Member States, particularly with regard to procedural steps and deadlines, will make the directive more effective. For example, the [Country] regulation provides for a 40-day period for checking and approval of bilateral agreements with economic operators or CSE's. We believe that this period is quite extended and creates difficulties in keeping stocks abroad.

Status quo and option 2 could potentially be considered. Concenring option 1, we believe that for reasons of security of supply every country needs to be able to limit its cross border stocks.

Option 1 shall provide equal opportunities and access to stocks for all European market players. Option 2 may lead to market distortion at European level.

Option 1 is the best one to increase the transparency surrounding cross-border stocks.

But should be supplemented with a common platform/database where it would be possible to double check cross border tickets (a full overview) in order to avoid double counting

Option 2.

Only Option 1 would be applicable

Full harmonization is needed

A fully harmonization of procedural steps, deadlines and requirements increases transparency and make easier and cheaper CSO transfer between Member States

We support option 2

Having the same standard of stockholding in between the member states it makes the cross-border work much easier

EU MS keep applying their own national procedures concerning cross-border stocks

Harmonizing the rules on the authorization of cross-border stocks in all EU Member States, particularly with regard to procedural steps and deadlines, will make the directive more effective. For example, the [Country] regulation provides for a 40-day period for checking and approval of bilateral agreements with economic operators or CSE's. We believe that this period is quite extended, creates difficulties in keeping stocks abroad and could be reduced to 10 days maximum. Many documents such as topographical plans or property titles are also required, which are not always available in time.

it would be more clear and easy complying with requirements

Partial or full harmonisation is necessary taking into account existing national regulation and best practices

Requirement of rre-existance of bilateral agreements in some MSs makes it impossible for commercial entities to act on their own and requires involvement of governmental authorities for conlcusion of such agreements.

59. Are there additional options (beyond those mentioned above) that should be considered to improve the functioning of the Directive in the area of cross-border stocks? If yes, please specify which(Response limited to 2000 characters)

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	19		20
	Total respondents: 19	0% 20% 40% 60% 80%	
	Skipped question: 59		

Separate the point for improving the statistical improvements to overcome the statistical differences out of option 1, and present it as animprovement of its own value apart from the procedures. Leave the procedures to the national governments. That 'administrative culture' will differ per country.

The procedure could be improved by implementing IT-based cross-border checks.

no

OPTION 2 IS PREFERRED

no

/

No

In our opinion the type of stocks that are permitted in order the obligations to be in compliance have to be determined as in the old Directeve.

No.

It could be considered to assess the possibilities for a common auditing system (information sharing online) regarding cross-border stocks to ensure full transparency and to avoid double counting.

The type of stocks that are permitted in order the obligations to be in compliance have to be determined as in the previous Directive.

No.

No

/

Possibility of keeping emergency stocks in another Member State should be aided and regulated between the stock owner and keeper with agreements / contract without the authorization required in advance by Member States. Since control is the key factor, each country should publish a list of installations where stockholding can be controlled. These installations should qualify without authorisation in advance. The only requirement would be for the obligated parties to notify their respective authorities that emergency stocks are being kept in another MS.

Dedicated and confirmed CIF Purchases as stock on water , Primorsk ULSD for example

No

The list of eligible products is missing on the option 1.

Quick harmonisation of legislation between EU members

60.1. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Total costs to meet obligation

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	8		12
2 Medium impact	23		35
3 Low impact	28		43
4 No impact	6		9
			Average: 2,49 — Median: 3
Total respondents: 65		0% 20% 40% 60% 80%	
Skipped question: 13			

60.2. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Public administration management costs

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	4		6
2 Medium impact	19		30
3 Low impact	33		52
4 No impact	8		12
			Average: 2,70 — Median: 3
Total respondents: 64 **Skipped question: 14**		0% 20% 40% 60% 80%	

60.3. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Obligated party management costs

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	3		5
2 Medium impact	15		25
3 Low impact	36		60
4 No impact	6		10
			Average: 2,75 — Median: 3
	Total respondents: 60	0% 20% 40% 60% 80%	
	Skipped question: 18		

60.4. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Certainty about the availability and physical accessibility of emergency stocks

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	16		25
2 Medium impact	18		28
3 Low impact	19		30
4 No impact	11		17
			Average: 2,39 — Median: 2
	Total respondents: 64 **Skipped question: 14**	0% 20% 40% 60% 80%	

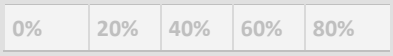
60.5. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Auditing and monitoring costs (in your country)

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	3		5
2 Medium impact	14		22
3 Low impact	39		61
4 No impact	8		12
			Average: 2,81 — Median: 3

Total respondents: 64
Skipped question: 14



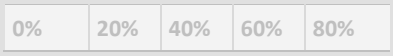
60.6. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Auditing and monitoring costs (abroad)

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	7		12
2 Medium impact	16		27
3 Low impact	29		48
4 No impact	8		13
			Average: 2,63 — Median: 3

Total respondents: 60
Skipped question: 18



60.7. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Security of oil supply in times of emergency

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	18		29
2 Medium impact	20		32
3 Low impact	16		25
4 No impact	9		14
			Average: 2,25 — Median: 2
Total respondents: 63 **Skipped question: 15**		0% 20% 40% 60% 80%	

60.8. What economic impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket). [Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Other, please specify (up to 255 characters)

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	3		30
2 Medium impact	0		0
3 Low impact	1		10
4 No impact	4		40
			Average: 2,75 — Median: 3
	Total respondents: 10 **Skipped question: 68**	0% 20% 40% 60% 80%	

Cost optimisation and lowering ticketprices could lead in short term to less stocks and less tanks to be held by industry.

Availability in case of national crisis

No.

Removing administrative and language barriers

61.1. What enviromental impacts do you expect from adopting either of one of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket).[Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Overall environmental impact

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	1		2
2 Medium impact	5		8
3 Low impact	11		18
4 No impact	43		72
			Average: 3,60 — Median: 4

Please specify which precise impacts (max 2000 characters)	Total	% of total respondents	%
Open answer	6		6

Total respondents: 60
Skipped question: 18

0% 20% 40% 60% 80%

The volume of stocks to be held will almost be the same.

Less activities and burdens to achieve the same results

Environment control/regulations in some countries?

Contingent upon local storage costs as to where the stocks might concentrate.

It will help to better manage inventory capacity overall in the European Union countries and perhaps prevent the need for building new tanks.

Existing storage facilities in some MS may be used instead of new infrastructure

62.1. What social impacts do you expect from adopting either of the two options (compared to keeping the situation the same) and how significant would they be?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following:Harmonised procedural steps and deadlinesHarmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement)Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket).[Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

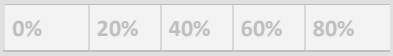
- Overall social impact

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 High impact	3		5
2 Medium impact	4		7
3 Low impact	15		25
4 No impact	38		63
			Average: 3,47 — Median: 4

Please specify which precise impacts (max 2000 characters) 	Total	% of total respondents	%
Open answer	5		5

Total respondents: 60
Skipped question: 18



Relative very small part of the stocks has to do with cross border.

Greater flexibility on stockholding arrangements should result in lower costs for all concerned.

Possible closures of storage depots

Mutual (between MS) respect and trust

If relevant CSO's held abroad, local population can be affected in case of an emergency.

63.1. Do you think the share of cross-border stocks will increase if one of the proposed options would be adopted? [Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following: Harmonised procedural steps and deadlines Harmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement) Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket).[Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Option 1 - Fully harmonising

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	20		32
2 Yes	43		68
			Average: 1,68 — Median: 2

Please specify why (max 2000 characters) 	Total	% of total respondents	%
Open answer	22		23

Total respondents: 63
Skipped question: 15

0% 20% 40% 60% 80%

More time consuming red tape will not promote cross border. But maybe for some companies in some countries it will open the possibility to optimise business. Also prohibiting the requirement of pre-existing bilateral agreements without improving the control mechanism in the Directive is not really an improvement.

Greater flexibility will apply

Member States may feel more confident to have cross-border stocks as the level of transparency would increase and the procedures would be standardised, resulting in reduced administrative burden.

Controlling measures are necessary to safeguard that any tickets issued are actually covered with appropriate quantities

Easy access to cross-border stocks - lower cost

Decrease in control of the MS on national stocks

Yes, as some MS drop the requirement for bilateral agreements

We believe that the share of cross-border stocks not only depends of the harmonisation degree, but also on latitude the member state have to limit cross border stocks.

Due to European market integration.

The rules are going to be clear for all MS.

Option 1 will increase the opportunities to buy cross-border stocks.

The rules are going to be clear for all MS.

Not limiting in the [Country] but a fully harmonized system is preferred.

Full or partial harmonization may reduce the costs of stocks held but will jeopardize the countries security of supply.

controlling measures have to be strictly in place and executed

Would give lower cost for the stock holders.

Easy access to cross-border stocks - lower cost

Due to reduced administrative procedures it would be more attractive to consider option of cross-border stocks

Depends on level of stocks and available budget

Statuss quo

More liquid ticket marktet

Undoubtedly different procedures and administrative burdens are obstacles to store cross-border stocks

63.2. Do you think the share of cross-border stocks will increase if one of the proposed options would be adopted? [Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following: Harmonised procedural steps and deadlines Harmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement) Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket).[Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Option 2 - Partially harmonising

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	28		47
2 Yes	31		53
			Average: 1,53 — Median: 2

Please specify why (max 2000 characters) 	Total	% of total respondents	%
Open answer	15		15

Total respondents: 59
Skipped question: 19

0% 20% 40% 60% 80%

More transparency could make cross border more attractive

Greater flexibility will apply

Member States may feel more confident to have cross-border stocks as the level of transparency would increase and the procedures would be standardised, resulting in reduced administrative burden.

Easy access to cross-border stocks - lower cost

Yes, as some MS drop the requirement for bilateral agreement amid greater standardisation, but key differences, like geography and logistics still can be accounted for, raising overall faith in the cross-border stockholding system.

Potential obstacles imposed by Member States' legislation

Option 2 will not increase the opportunities to buy cross-border stocks.

Not currently limiting in the [Country]

yes but with the risk of double counting and loopholes for individual countries

Easy access to cross-border stocks - lower cost

Due to reduced administrative procedures it would be more attractive to consider option of cross-border stocks

Statuss quo

More liquid ticket marktet

Because of the freadom for members state to define other requirements

Undoubtedly different procedures and administrative burdens are obstacles to store cross-border stocks

64.1. Do you think the transparency of cross-border stocks will increase if one of the proposed options would be adopted?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following: Harmonised procedural steps and deadlines Harmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement) Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket).[Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

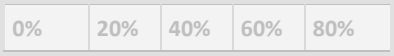
- Option 1 - Fully harmonising

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	19		30
2 Yes	44		70
			Average: 1,70 — Median: 2

Please specify why (max 2000 characters) 	Total	% of total respondents	%
Open answer	14		14

Total respondents: 63
Skipped question: 15



Also other improvements are necessary, not only extra red tape.

The extent to which the level of transparency will increase will depend entirely on the quality of the administration in each member state.

Transparency will increase due to a higher level of standardisation.

absolute need to find a transparent tool (european wide database?) to track all tickets

Already full transparency

this option would still have restrictions for commercial reasons on stockholdings so no greater transparency

Both options would raise the transparency, but option two more, as it would not risk losing some geographical and logistical realities in the streamlining process

Option 1 would provide for improved transparency across the EU, securing level playing field for all market players and thus maximizing security of supply throughout Europe in a cost-effiecient manner.

The rules are going to be clear for all MS.

The comparison between countries will be much easier.

The rules are going to be clear for all MS.

Pan-european solution/database necessary

More difficulties to check availibilty of physical oil. Less legal possibilities for Authorities.

Already full transparency

64.2. Do you think the transparency of cross-border stocks will increase if one of the proposed options would be adopted?[Option 1] Fully harmonising the rules on authorisation of cross-border stocks in all EU Member States, and in particular the following: Harmonised procedural steps and deadlines Harmonised requirements (e.g. prohibiting the requirement of pre-existing bilateral agreement) Harmonised requirements on the use of tickets (including the type of stocks that can be covered by a ticket).[Option 2] Partially harmonising, limited to the procedural steps and deadlines for authorising cross-border stocks in all EU Member States, but leaving freedom to the Member States to define other requirements.

- Option 2 - Partially harmonising

(Each respondent could choose only ONE response per sub-question.)

Response	Total	% of responses	%
1 No	26		44
2 Yes	33		56
			Average: 1,56 — Median: 2

Please specify why (max 2000 characters) 	Total	% of total respondents	%
Open answer	8		8

Total respondents: 59
Skipped question: 19

0% 20% 40% 60% 80%

See above: Also other improvements are necessary, not only extra red tape.

The extent to which the level of transparency will increase will depend entirely on the quality of the administration in each member state.

Transparency will increase due to a higher level of standardisation.

Already full transparency

Both options would raise the transparency, but option two more, as it would not risk losing some geographical and logistical realities in the streamlining process

Potential market distortion; no level playing field.

The comparison between countries will be easier.

Already full transparency

Part 7: Other potential measures to be included in the impact assessment

65. In addition to the four potential measures (naphtha rule, 10% deduction, compliance date, cross-border stocks), is there another potential measure that in your view should be included in the impact assessment?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
No	49		72
Yes, please indicate what measure should be included and what is the justification for its inclusion (up to 255 characters).	19		28
	Total respondents: 68	0% 20% 40% 60% 80%	
	Skipped question: 7		

Improvement of controlls of ticketed stocks abroad; abolishment of 'any oil' as accepted grade for tickets; exclusion of heavy fuel oil of the group of the 'preferred products' (factor 1.2)

It is not clear what changes are coming on the table. Some of the mentioned measures will lead to a huge increase of the obligations. Others will decrease the obligations. It's totally unclear what mix of proposals is coming on the table, and what should be added as other potential measure to improve that proposed mix. At least the same changes should be realised together with the IEA.

Eligible stocks should only involve major products according to Annex III (b) of the Directive. The term subdelegated task (Article 8 Directive) should be eloberated more closely.

reports referred to Art. 9 (5) should not be annual but in 5 years-intervals

BETTER DEFINITION OF THE TYPE OF STOCKS, SO NO 'ANY OIL`

According to the current situation 100 t crude oil are replaced by 100 t petroleum products /PP/, although even in the best refineries maximum 85 t PP – fuels are produced / production or the so called “yield” depending on the processed feed and the technological capabilities, expressed in % / out of 100 t crude oil.

Petcoke exclusion

we strongly suggest that pet-coke should be excluded from the stock holding obligation (exclusion from the calculation of annual net oil imports) since the pet-coke will be replaced by coal and/or solid biomass (non oil products) in case of emergency

We estimate positively the accent of the Member States to the review of legislation on crude oil and petroleum products as regards the composition of emergency stocks maintained and consider that their type should be clearly defined. For calculation of consumption-based levels precise petroleum products are used, but on the basis of net import the spectrum of petroleum products is wider, including ethane, mineral turpentine, bitumen, paraffin waxes, petroleum coke, because of this it is better the products

Total propose that the list of “any oil” should be defined and should exclude products (for example petroleum coke and sulphur) which cannot be used in the event of a crisis. Obligations should be equal for refiners and importers.

We estimate positively the accent of the Member States to the review of legislation on crude oil and petroleum products as regards the composition of emergency stocks maintained and consider that their type should be clearly defined. For calculation of consumption-based levels precise petroleum products are used, but on the basis of net import the spectrum of petroleum products is wider, including ethane, mineral turpentine, bitumen, paraffin waxes, petroleum coke, because of this it is better the products

Review the list of products eligible for emergency stocks. Petroleum coke, sulphur, parafins and waxes, bitumen should be excluded. Naphtha for gasoline should be included

refer to the answers of [Other respondents]

Reduce the number of petroleum products which be included in the calculation of emergency stocks (Annex I) s.a.lubricants, bitumen, paraffin vaxes, petroleum coke, other products.

Competition issue is still not addressed and this is fundamental to an internal market. Security of supply should not be to the detriment of effective competition.

As mentioned dedicated CIF purchases within a certain time frame on the water.

Cost-benefit analysis of level of stockholding obligation, hand-in-hand with IEA, to check if 90/61 days is the optimal choice

The list of “any oil” should be defined and should exclude products (for example petroleum coke and sulphur) which cannot be used in the event of a crisis.

Review of lists in Annex II. In our view there are no problems to access oil/products held in: 1. closed system of pipelines, connecting terminal and refinery of the same company (in different locations). 2.Oil products held in idle RTCs (rail tank cars) in territories of refineries/terminals.

Part 8: Follow up

66. Are there any other comments you would like to make or clarify?Response limited to 2000 characters

(Each respondent could write a single open-ended response of maximum 2000 characters.)

Response	Total	% of total respondents	%
Open answer	15		15
	Total respondents: 15	0% 20% 40% 60% 80%	
	Skipped question: 60		

Make it possible to hold biofuels on different locations and in other countries. Make clear how biofuels are part of the current system (effect on obligations and coverage).

no

No changes in a perfect runnig system should be applied. If changes are necessary, please ONLY IN ACCORDANCE WITH the IEA methodology. There isn't any interest of the [Country] administration neighter for renegotiating the oil stock direvtice in the Energy Working Group of the Council nor for negotiating a completely new directive.

no

/

No.

As regards the composition of emergency stocks maintained and consider that their type should be clearly defined. For calculation of consumption-based levels precise petroleum products are used, but on the basis of net import the spectrum of petroleum products is wider, including ethane, mineral turpentine, bitumen, paraffin waxes, petroleum coke, because of this it is better the products to be precisely defined. I addition we consider that the products ethane, mineral turpentine, bitumen, paraffin waxes, petroleum coke are not suitable for creation and maintenance of emergency stocks, because the most consumable final petroleum products (motor gasoline, diesel oil/ gasoil, jet fuel) and crude oil are crucial for energy security in a case of crisis.

no

Total propose that the list of “any oil” should be defined and should exclude products (for example petroleum coke and sulphur) which cannot be used in the event of a crisis. Obligations should be equal for refiners and importers. That is not currently the case in the [Country]. Such a differential cannot be justified and it provides importers with a significant competitive advantage.

No.

No

There are also costs and distortions in how the Directive has been implemented. Some countries have levied stock fees for products not included in the old Directive (bitumen etc) while others have just increased the costs to the sellers of liquid fuels. Most countries levy fees for 100% of jet fuel sales while others apply a reduction for national exports and charge the balance to liquid fuel sellers. Implementation of Directive 2009/119 in [Country] is a clear example. The new EU obligation for Member States, which is now based on net imports of crude oil and oil products, is being achieved in [Country] by means of an obligation for companies which is determined by internal consumption of the main categories of products (gasolines and kerosenes, gasoils and heavy fuel). This implementation choice means that the additional obligation which is now coming from products only traded by refiners -i.e. asphalt, lubes, coke- is being supported by all operators regardless of their commercial activity with these products. The [Country] system produces in this way a competitive advantage for refiners to the detriment of non-integrated companies. Additionally, only 50% of kerosene sales is considered as internal consumption but according to the Directive, the whole of kerosene sales qualify for calculating the country obligation, which makes that in [Country], all operators are supporting half of this additional obligation regardless of their commercial activity with kerosenes. This situation is getting worse by the fact that refiners are leasing their coke as emergency stocks to obligated parties of other MS.

We would consider the real supply security when allowing cross-border stocks. When and how is the oil really available in an emergency situation?

The competent ministry considers that the existence of tickets must be accompanied by the corresponding existence of a natural stock. This may be the case for a commercial company where the transport of a cargo takes some time. A refinery, however, has the potential to produce significant quantities of products, covering the term of a ticket contract. That is why we believe that the existence of tickets should not be linked to the existence of a natural stock of oil product but it can be covered by crude oil stock.

The [Company] response in this survey is for the relevant [Company] entities in Europe and not just the [Country]

67. Would you be willing to take part in a telephone interview to discuss your answers and opinions on the Oil Stocks Directive and its potential revision?

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
No	34		52
Yes. Please provide us with your email address (up to 255 characters):	32		48
	Total respondents: 66	0% 20% 40% 60% 80%	
	Skipped question: 9		

[Confidential]

68. You have reached the end of the survey. Your answers are automatically saved. Click here to view your responses. Do you want to finish and submit the survey? (You can still go back to your questions now and edit them. Editing questions afterwards is only possible by sending the revisions you would like to apply to oilstocks@trinomics.eu)

(Each respondent could choose only ONE of the following responses.)

Response	Total	% of responses	%
Yes	62		97
No, stay here and allow me to go back.	2		3
	Total respondents: 64	0% 20% 40% 60% 80%	
	Skipped question: 11		