



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY AND TRANSPORT

ANNEX

**Results of the fact-finding analysis undertaken
in preparation of the consultation document
on the revision of the emergency oil stocks regime in the EU**

Table of contents

1.	Oil Supply Security in EU Member States.....	2
1.1.	Historical background	2
1.2.	Characteristics of the EU stockholding system	3
1.3.	Other measures to cope with a supply disruption	4
2.	Reasons to review and revise the current legislation	5
2.1.	Increasing risk of oil supply disruptions	5
2.2.	Current policy tools are not adequate for disruption response	8
2.3.	Other shortcomings	15
2.4.	Other issues to be addressed.....	16
2.5.	Justification of action at EU level.....	19
3.	The objectives of the revision of the emergency oil stock legislation	21
3.1.	General objectives	21
3.2.	Specific objectives	22
3.3.	Operational objectives	23

1. OIL SUPPLY SECURITY IN EU MEMBER STATES

1.1. Historical background

The origins of emergency oil stockholding lie in early 20th century Europe. Already in 1917 the United Kingdom introduced specific requirements on the stockpiling of energy fuels. France introduced similar provisions in 1925. At that time, this obligation was justified by the needs of the army. Coal and oil stocks helped to maintain the war effort.

In the second half of the 20th century, oil became the most important fuel in the European energy mix, making the economy crucially dependent on its continuous, reliable and affordable supply. Moreover, most of the oil was imported from other regions. After Egypt's blockade of the Suez Canal in the 1950s, European politicians became aware of the necessity to maintain oil reserves in order to mitigate the economy's exposure to a disruption of oil supply. Oil emergency stocks emerged as the best protection to cope with supply disruption as they can swiftly and effectively replace missing barrels.

Consequently, in 1968 (well before the oil price shocks of 1973-74 and 1979-80) the European Communities adopted legislation obliging Member States to maintain minimum oil and/or oil product stocks.¹ Originally, the obligation was equivalent to 65 days of domestic consumption of three distinct product categories (gasoline, middle distillates² and fuel oil). In 1972 this was raised to 90 days.

The oil price shock of 1973 seriously damaged the world economy and created a period of high inflation and stagnation. Against this background and with a mission to protect oil consuming countries, the International Energy Agency (IEA) was created in 1974. It assembled the most developed economies of the world. The IEA took over the 90-day stockholding obligation from the European Communities, but changed the base from consumption to net imports of oil and oil products in order to make allowance for the oil production of some of its member countries, particularly the United States. Accordingly, the IEA obligation is not related to specific product categories and member countries are free to determine the composition of stocks.

EU Member States with IEA membership thus have to ensure that their stocks comply with two different obligations, one set by the EU, another by the IEA. The IEA system is geared toward an effective response to disruptions having a global effect. While the EU legislation merely foresees a consultation between Member States in case of a supply disruption, the International Energy Program, the founding document of the IEA, establishes specific tasks for member countries and the Secretariat in an actual oil emergency.

¹ Council Directive 68/414/EEC of 20 December 1968 imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and/or petroleum products, OJ L 308, 23.12.1968, p. 14

² Middle distillates include gas oil, diesel oil, kerosene and jet fuel.

1.2. Characteristics of the EU stockholding system

The EU legislation puts the stockholding obligation on the Member States, who are free to choose their specific stockholding arrangements.³ As a result, the transposition of the stock directive in different Member States has brought about very diverse stockholding systems across the EU. Some Member States have set up government-owned stocks, others have established government-supervised agencies responsible for holding the emergency stocks, in a number of Member States stocks are entirely kept by the oil companies while yet others have opted for a mixed system (with an agency plus an obligation of a different extent on the industry). Today, 8 EU Member States rely entirely on mandatory industry stocks while in the other Member States all or part of the emergency stocks are held directly by the government or an agency. Management and ownership of stocks may be separated. For example, stocks held by agencies are often owned by the oil companies.

Although the stock directive allows holding stocks in the form of crude oil or intermediate products, on average, 56% of European emergency stocks are held in the form of finished products. The share of product stocks in individual Member States ranges from 20% to 100%.

Emergency oil stocks can be held on the territory of another Member State, provided a bilateral intergovernmental agreement exists between the Member States. At present, there are about 40 bilateral agreements in force and another 10 or so are under consideration or in the process of being agreed. Several Member States, especially in Northwest Europe, have a number of such agreements in force. However, seven Member States have refrained from concluding bilateral agreements and some of them expressly prescribe that all their stocks are located on the national territory.

Most of the stocks are owned by the entity which has the stockholding obligation. However, 11% of the emergency stocks are held through so-called "ticket" arrangements. Such stocks are owned and physically stored by another, typically commercial entity for a pre-determined fee. The holder of the "ticket" has an option to buy the stock in a crisis situation at the price set out in the agreement. "Ticket" agreements are usually concluded for a short (typically 3 months) period. This form of stockholding is used in several Member States, primarily for cost reasons. It may also give a certain flexibility to exchange oil products for reasons of aging/degradation or changing specifications.

Member States have to report their stock levels to the Commission (DG TREN) on a monthly basis. The tables showing stock levels at the end of each month have to be submitted at the latest by the 25th day of the second month after the month to be reported. According to the data reported, emergency stocks held by EU Member States amounted in late 2007 to 143 million tons which is equivalent to 114 days of internal consumption. For Member States with a 90-day obligation (EU-15 plus Hungary, the Czech Republic, Slovenia, Cyprus and Malta) the coverage was 116 days while for countries with a transitional period⁴ it was 90 days.

³ The directive mentions that Member States may recourse to the creation of a "stockholding body or entity" to hold all or part of their oil stocks.

⁴ Some of the new Member States are still benefiting from a transitional period for building up their emergency stocks before having to comply with the full 90-day obligation.

1.3. Other measures to cope with a supply disruption

Although oil stocks are seen as the most efficient tool to cope with an oil supply disruption, possible measures to mitigate economic harm include the replacement of oil by other fuels (fuel switching), the increase of indigenous production and the reduction of oil demand.

In the transport sector, where oil is the dominant fuel, it is very difficult or almost impossible to replace significant amounts of oil in the short term. The same holds for the petrochemical sector. However, when oil is used for electricity generation or for heating purposes, it may be easily replaced by other fuels, provided that technical systems are in place to allow the switch to the alternative fuel (e.g. natural gas). Nevertheless, since oil is no longer extensively used in the electricity sector in Europe, and since transportation and the petrochemical industry are now the major consumers of oil, the ability to use fuel switching for oil crisis management has been much reduced. It is indicative that none of the IEA member countries used this measure to deal with the supply disruption following hurricane Katrina in 2005.

Similarly to stockdraw, a temporary increase of indigenous oil production can make additional oil available to the market. However, for technical, economic and business reasons, it is difficult to increase oil production quickly. Furthermore, only a limited number of oil producing countries such as the United Kingdom, Denmark and Romania would be able to resort to this instrument in the EU and most of them have little or no spare capacity. However, refinery output can be raised more easily in an oil crisis by incentives from the market (i.e. higher prices) promising supplementary benefits. During the Katrina supply disruption, some countries (e.g. Germany) reported that this had occurred.

In the transport sector, which absorbs the major proportion of oil demand, the passenger car sector offers significant potential for saving oil and could thereby free up oil in an undersupplied market. Experience shows that reduction in fuel demand will occur immediately in response to emergency-induced oil price increases. However, the extent of this effect is limited because high taxes on fuels in Europe act as a “shock absorber” by damping the impact of oil price hikes. In the medium term, consumers will tend to use their cars as they did before, as the price elasticity of motor fuel demand is rather low. In the longer run, price elasticities are somewhat higher allowing for a switch to more efficient and smaller vehicles.

Nevertheless, there are policy measures which can effectively decrease oil consumption in the road transport sector. Demand restraint measures have increasingly been applied in cities to quickly reduce air pollution levels. A similar approach may be useful in case of a supply disruption. Measures such as car-pooling, speed limits, driving bans, ecodriving, bus prioritising, telecommuting or compression of the working week can offer substantial additional savings. Most of these measures can be introduced at relatively low cost but do require public acceptance, which may sometimes be difficult to obtain. In addition, extensive demand restraint in the transport sector may hamper business and industry activities and would then be counterproductive.

These measures are of different effectiveness in a crisis. A non-producing country obviously cannot increase production, fuel switching may be limited to sectors where this is technically feasible (e.g. power plants which are able to switch to gas) while demand restraint measures often have a limited impact (e.g. speed limit reductions) and/or take some time to have an impact on consumption (e.g. encouraging public transport). Experience has shown that emergency stockholding and the ability to draw down such stocks are the easiest and fastest

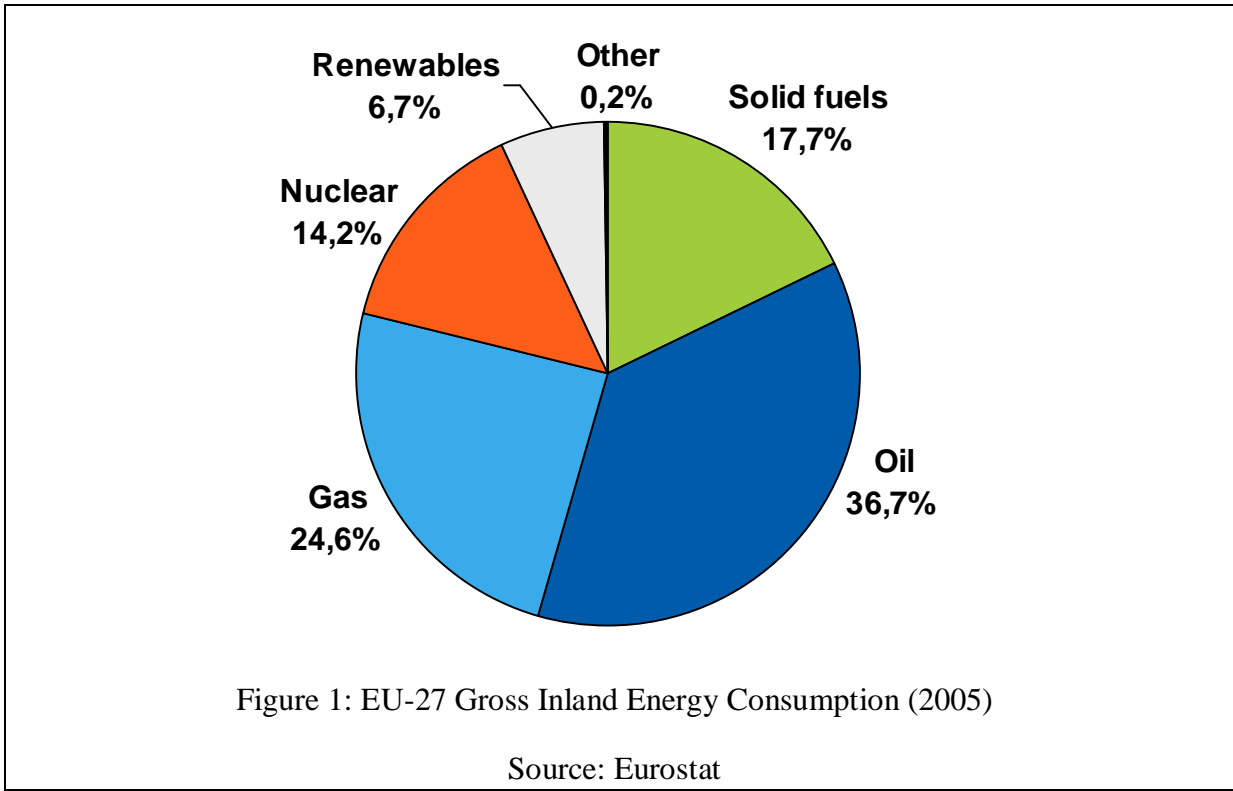
way of making large volumes of additional oil and/or oil product available to the market, thereby alleviating market shortage.

2. REASONS TO REVIEW AND REVISE THE CURRENT LEGISLATION

2.1. Increasing risk of oil supply disruptions

Oil supply disruptions continue to pose a threat to the EU economy and in recent years the risk of disruptions has grown for a number of reasons. These include the strong global demand growth, the concentration of supply and the diminishing spare capacities.

Oil is the most important energy source globally and its demand continues to rise in all regions of the world. The IEA World Energy Outlook 2007 foresees in its reference scenario that total world oil consumption in 2030 would be 37% higher than it was in 2006. The EU also relies heavily on oil. The share of this fuel in the energy mix amounts to approximately 37% (see Figure 1).



Not only is oil a key energy source both globally and in the EU, but the demand for it is expected to increase further in the coming decades. A growing part of additional demand comes from non-OECD countries, in particular from China, India and Middle East countries. If future oil supplies are not sufficient to meet the rising demand in the next couple of years – as suggested by a recent IEA study⁵ – this is likely to tighten the supply-demand balance, forcing spare production capacities down.

⁵ Medium-Term Oil Market Report, July 2007

Spare production capacity provides flexibility to the international oil market when it faces a supply disruption. If such capacities are low, as can be seen today, they may not be enough to make up for a larger disruption. As a result of the tightening market, the EU is more vulnerable to oil supply disruptions. Also, any future supply disruption may have a bigger impact than in the past and even smaller disruptions may have serious consequences.

These risks are aggravated by underinvestment. It is often questioned whether investment in capacity expansion will be sufficient and timely. Such fears are exacerbated by the resurgence of "resource nationalism" in several producing countries. In addition, exploration and development costs have increased sharply in recent years, driven by higher steel and cement prices, the increasing demand for equipment and manpower and the growing complexity of projects. Increased exploration and development activity and the ageing of industry personnel lead to a shortage of qualified manpower.

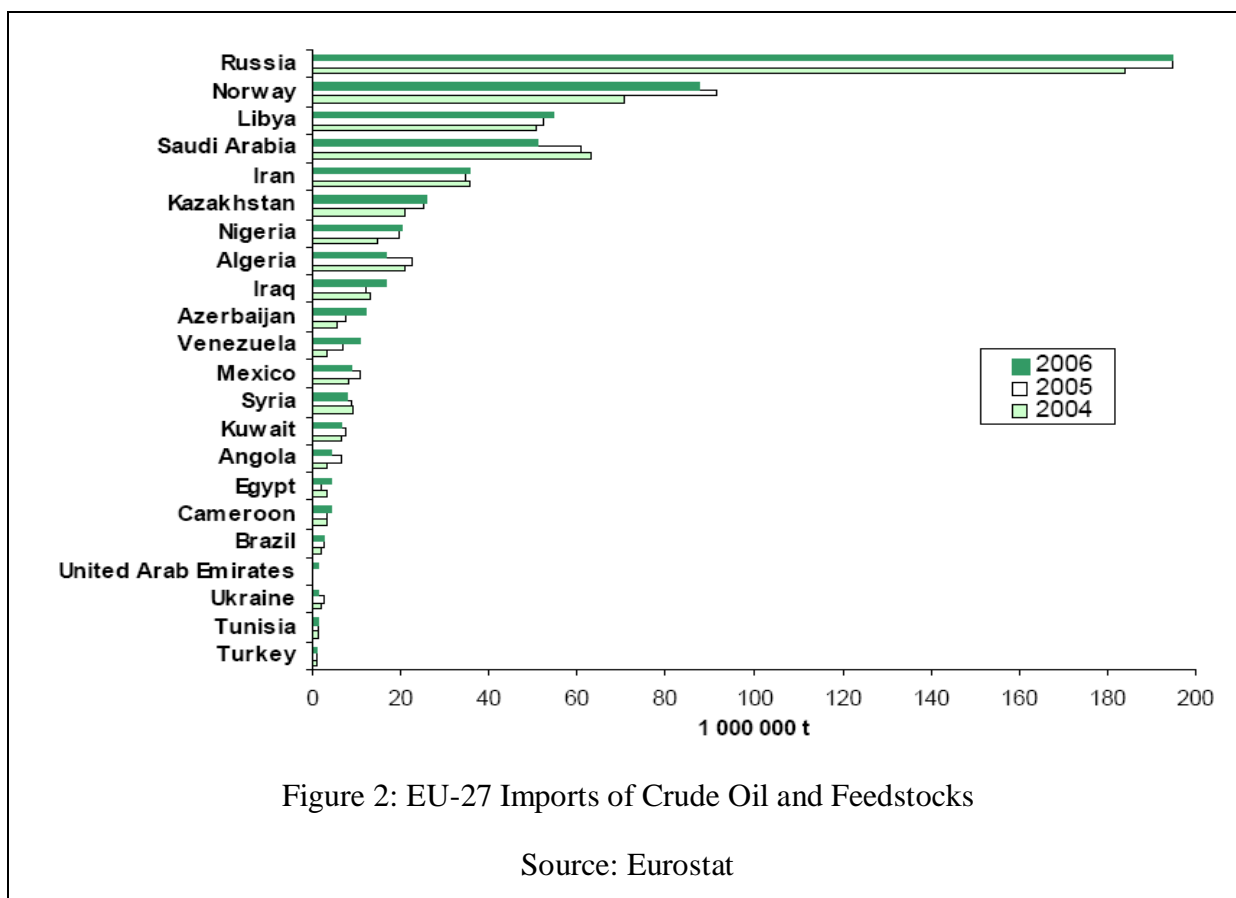
While oil consumption is increasing worldwide, supply is more and more concentrated in a handful of countries, many of which are exposed to high geopolitical risks. In addition to the risk that these countries could use their market dominance to influence prices, the concentration also increases the risk of supply disruptions. Supply from these countries can be threatened by wars, internal conflicts, export or import embargos and terrorism. In addition, oil movements from these countries often involve transport along long and vulnerable maritime and pipeline routes, susceptible to wars and other conflicts, terrorism, piracy and accidents.

As a result of the uneven distribution of oil reserves across the world, it is expected that a growing share of global production (and of EU oil imports) will come from the Middle East. This raises concern about the risk of major oil supply disruptions because of the instability in many countries of the region and past experience of disruptions from some countries in the last few decades.⁶

Today, oil supply is subjected to a number of critical regional conflicts, threatening with smaller or bigger disruptions. For example, in case of an escalation of the conflict on Iran's nuclear programme, there might be an increasing risk that Iran's oil exports would be paralysed. The production of Iraq and Nigeria is also exposed to the possible deterioration of the ongoing conflicts in these countries. The threats of terrorist attacks against oil facilities in Saudi Arabia or in the Straits of Hormuz also constitute a significant supply security risk.

The EU is particularly dependent on oil imports. In 2006, nearly 85% of the oil used in the EU was imported from third countries. Total EU oil production stood at 2.4 million barrels per day (mbpd) in 2006, down from a peak of 3.7 mbpd in 1999. The most important sources of import were OPEC countries (37% of extra-EU imports), Russia (33%) and Norway (15%). With the decreasing indigenous production, the EU's dependence is expected to reach 93% by 2030, and – due to the uneven distribution of reserves – a growing part of imports is expected to come from traditionally unstable regions.

⁶ From the 17 serious oil supply disruptions involving a loss of at least 0.5mbpd crude oil, listed by the IEA World Energy Outlook 2005, 12 was related to events in the Middle East (see Table 2).



Not only it is difficult to diversify oil supplies due to the uneven distribution of oil reserves, but it is also hard to substitute it with other fuels. While oil has been mostly phased out from European electricity production and its role is decreasing in heating, it still dominates transport, where it has limited viable alternatives.⁷ Without a technological breakthrough, oil may continue to have a dominant role in this sector in the next decades. Oil is also replaceable with difficulty as the feedstock for the chemical industry. Furthermore, for the lack of alternatives, oil demand appears to be increasingly unresponsive to oil price, at least in the short run⁸, aggravating the potential impact of a disruption on oil prices.

A disruption can certainly occur not only in producing countries or intercontinental transport routes but also within Europe. Many of the inland refineries, supplied by pipeline, have no or limited possibility to switch to another supply route if the pipeline is blocked for whatever (political, technical, etc.) reason. In January 2007, the Druzhba pipeline carrying oil from

7 In 2005, the market share of biofuels, the most credible alternative to oil in the transport sector reached an estimated 1% in EU-25.

8 A recent study by Jonathan Hughes, Christopher R. Knittel and Dan Sperling, Evidence of a Shift in the Short-Run Price Elasticity of Gasoline Demand (NBER Working Paper No. 12530, September 2006, <http://www.nber.org/papers/w12530.pdf>; The Energy Journal, vol. 29, no. 1), found that US demand for gasoline is much less sensitive to price increases than it was in the 1970s. The study found that the price elasticity of demand for gasoline ranged from -0.034 to -0.077 during the period 2001-2006, compared to -0.21 to -0.34 for 1975-1980 – a decrease of a factor of almost 10. John C. B. Cooper's study entitled Price elasticity of demand for crude oil: estimates for 23 countries (OPEC Review, 2003, Volume 27, Issue 1, <http://www.blackwell-synergy.com/doi/pdf/10.1111/1468-0076.00121>) found short-run price elasticity for examined EU Member States ranging from -0.016 to -0.087.

Russia to Europe was halted due to a conflict between Russia and Belarus, cutting oil supplies to many refineries in the EU. Refineries, inland waterways and ports receiving oil tankers may also be vulnerable to accidents, terrorist attacks or strikes. In March 2007, an 18-day strike at France's Fos-Lavera oil hub threatened to shut down a number of refineries in France, Germany and Switzerland and cause a regional fuel shortage.

The above factors and examples imply that the threat of oil supply disruptions is real and the risks are growing, as is the EU's vulnerability. In order to cope with such a disruption, the European Union has to have a robust and reliable system in place which is able to react coherently and credibly in the event of a supply crisis. However, analysis of the current system presented below reveals flaws which might prevent it from functioning suitably in case of an actual supply disruption.

2.2. Current policy tools are not adequate for disruption response

The current system developed in the EU over the last four decades has served Europe well so far but is certainly not ideal and fully up to date. Although the legislation underwent an overhaul in 1998⁹ and a codification exercise in 2006¹⁰, it suffers from some shortcomings which might prevent the system built on it from functioning suitably in case the EU or the global oil sector comes to face a real supply difficulty.

Below is a brief description of the aspects of the current system which seem most in need of addressing. At present, they limit either the EU's ability to react to an emergency with the highest efficiency and to the desired effect, or the EU's capacity to participate most efficiently in collective global efforts to minimize impacts of a supply crisis. The limitations and shortcomings of the current European system of emergency oil stocks also jeopardize the much needed trust that, in case of a disruption, the reported stocks are indeed available and sufficient to fill in the gap and ensure consistent supply. Finally, it is questioned whether the current structure of emergency stocks suits the need of the economy in a crisis.

2.2.1. Lack of rules for common action

Current EU legislation does not provide for a special decision making process at EU level to respond to oil emergencies. In case of a supply disruption, the Commission's role is confined to consultation. It convenes the Oil Supply Group, on its own initiative or at the request of any Member State, to "carry out the necessary consultations in order to ensure coordination of the measures". However, the emergency measures including the drawing on emergency stocks are decided and executed by the individual Member States. The only restriction is that, prior to the consultation in the Oil Supply Group, they should refrain from drawing stocks to below the compulsory minimum level.

The founding document of the International Energy Agency (IEA), the International Energy Program, in turn foresees well defined tasks of member countries and the Secretariat in an actual oil emergency. The same holds for emergency response based on voluntary agreements

⁹ Council Directive 98/93/EC of 14 December 1998 amending Directive 68/414/EEC imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and/or petroleum products, OJ L 358, 31.12.1998, p. 100

¹⁰ Resulting in Council Directive 2006/67/EC of 24 July 2006 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products, OJ L 217, 8.8.2006, p. 8;

such as the IEA collective action in response to the oil supply disruptions in 2005 caused by hurricanes Katrina and Rita.

Furthermore, in the EU legislation there is no reference to the IEA and to what should happen if the Agency proposes a collective action. Nine of the EU Member States (Bulgaria, Cyprus, Estonia, Latvia, Lithuania, Malta, Poland, Romania and Slovenia)¹¹ are not members of the IEA. These countries are obliged to hold stocks under the EU system but are not seen as participants in broader crisis management in the IEA framework and have no experience or training in how to handle emergency issues. If, in the spirit of solidarity, the EU wants these countries to participate in an IEA-led action to cope with a severe global supply disruption, this calls for an enhanced role for the Commission and improved coordination with the IEA.

An adequate crisis management in future supply disruptions is possible in Europe with difficulty unless the EU and the European Commission clarify their roles and relationship to the IEA and its emergency policy. The lack of clear rules indeed caused some confusion during the implementation of the 2005 collective action of the IEA, when, although the Commission publicly supported the action, some Member States were uncertain whether they were allowed to draw stocks below their 90-day obligation. This certainly was the case, but it took the Commission some time to announce a formal derogation.

2.2.2. *Doubts about stock availability/reliability*

One of the problems of the current system is that not all Member States may be implementing all the provisions of the existing legislation as required. If Member States report insufficient stock levels or report systematically late, the Commission does not hesitate to pursue infringement procedure against such countries. For example, in 2005 Commission services examined 5 infringement cases, of which 4 resulted (at least) in the issuance of a letter of formal notice as the first formal step of the procedure, while in 2006, 7 cases were examined, 5 of which resulted in issuing a letter of formal notice. The Commission also decided to issue a reasoned opinion in a number of these files and to refer one case to the Court of Justice, although most procedures have since been closed. However, some practices not in compliance with the existing legislation are relatively difficult to recognize and prove. The situation is exacerbated by the fact that some provisions of the current directive (notably Article 3) give rise to different interpretations, resulting in different compliance practices across Member States. Meeting the stockholding obligation by the use of "tickets" also gives rise to concerns with respect to both the availability of such stocks and the correct reporting of stock levels. These issues are further elaborated below.

The diversity of Member States' stockholding systems makes it very difficult to assess the correct application of the directive. At present the Commission can only check the figures reported by Member States. In addition, the IEA emergency response reviews – if available – can help to understand the specific stockholding structure used in the given country. Infringement procedures can give the Commission further insights as to where Member States are at fault. Another insight to an emergency system can be provided by an actual supply disruption in which Member States have to show how robust their stockholding systems are. The emergency response action of IEA and EU Member States in 2005 to cope with the damages caused by Hurricane Katrina in the Gulf of Mexico was such a test. The outcome of

¹¹ Poland is likely to become a member country in 2008.

this action which used, on an average, less than three days of emergency stocks indicated some problems, in particular related to stock availability and stock release management.¹²

A stockholding system for emergency oil stocks has to ensure that such stocks are actually held and are available for release in the event of an emergency. Doubts about the availability of stocks in the context of an actual or potential crisis may lead to market speculation and increased price volatility. An effective stockholding system thus acts as a deterrent to speculation. Doubts may also deteriorate the expected positive effects of an emergency response.

In this context, the main question is not the extent of the obligation but the volume of stocks which is really available in a crisis. The answer to this question is related to the stockholding system which has been chosen by individual Member States. In three countries, all stocks are held by the government or an agency. In eight countries, all stocks are held by the oil companies, while the majority of Member States have a mixed system. The breakdown of emergency stock volumes currently held in the EU is shown in Figure 3.

¹² IEA document "Emergency Preparedness: Lessons from the Hurricanes" (IEA/GB(2006)4/REV1) emphasized the lacking accountability of industry stocks "taken up" by the market. Some countries using industry stocks to fulfil their participation in the concerted action failed to demonstrate how additional oil was made available to the market by their actions.

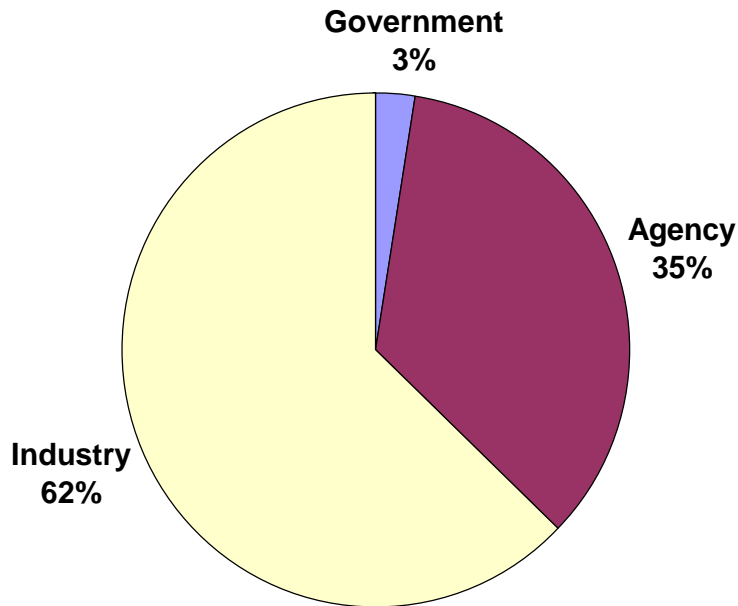


Figure 3: Share of Stock Volumes Held by Governments, Agencies and the Industry

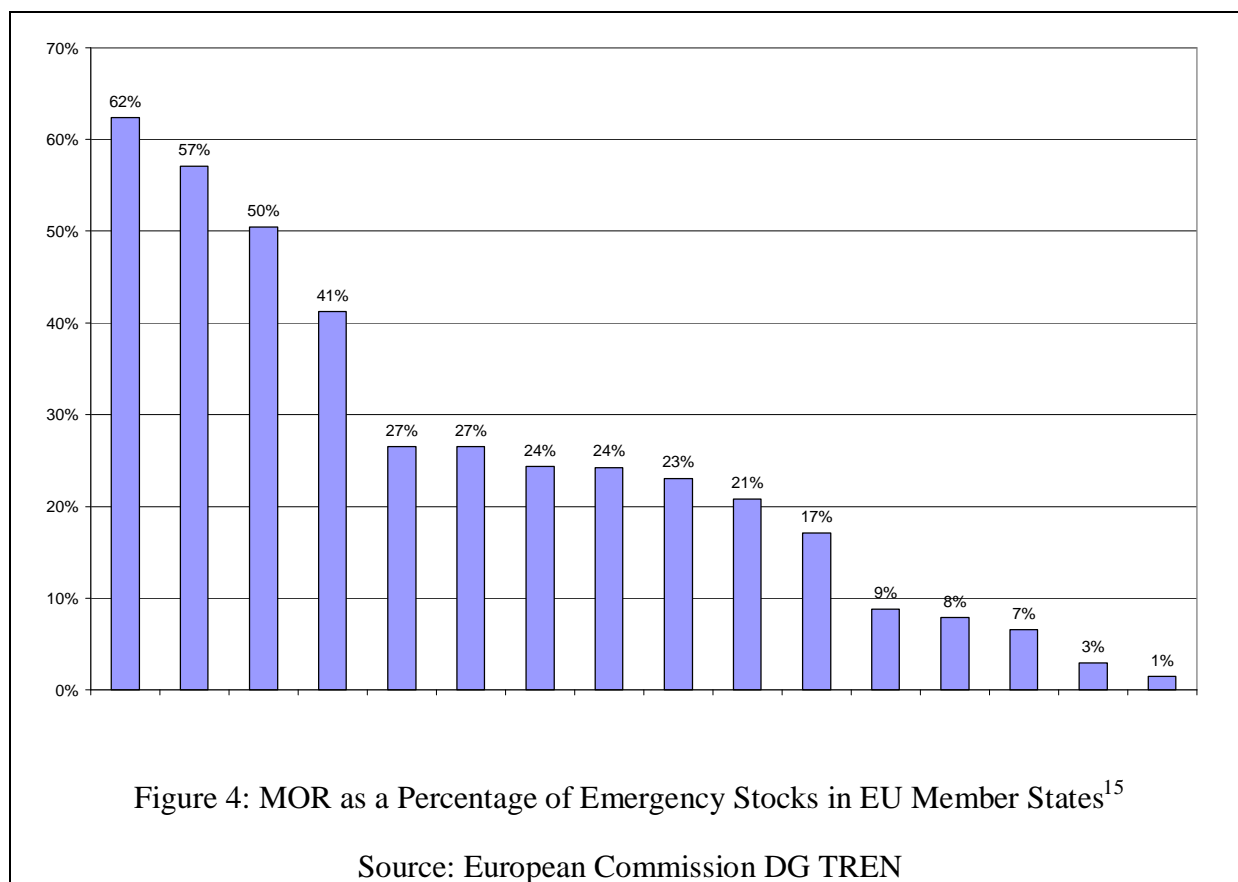
Source: European Commission DG TREN

A stockholding system which relies on government or agency stocks and in which public/state ownership of stocks is compulsory may have the full amount of 90 days at its disposal. This oil is usually very visible because of dedicated storage tanks or underground facilities. This oil is in a crisis available as "fresh", additional oil which has not yet been linked to the existing commercial system.

A stockholding system which relies on mandatory industry stockholding may have less oil available. In this case, emergency stocks can be commingled with working or commercial stocks. Such arrangements do not appear to fulfil completely the objectives of the Directive, one of which is to ensure the stocks' availability and their accessibility to the consumer (Article 3). However, in some Member States the current practice allows that Minimum Operational Requirements¹³ (MOR) and more generally any of the operational stocks are counted as emergency stocks. Responses to a recent questionnaire sent by the Commission to Member States showed a huge variety in MOR ranging from 1.5% to 62% of reported emergency stocks (see Figure 4)¹⁴.

¹³ There is no universally accepted definition of the Minimum Operational Requirements (MOR). Nevertheless, the concept is often used, referring to the minimum amount of oil and oil products which is needed for the day-to-day operation of the oil industry. It is affected by a number of factors, including the size of the refining industry and whether oil is supplied by pipeline or ships. MOR is narrower than working stocks; the latter may include stocks held for other business purposes.

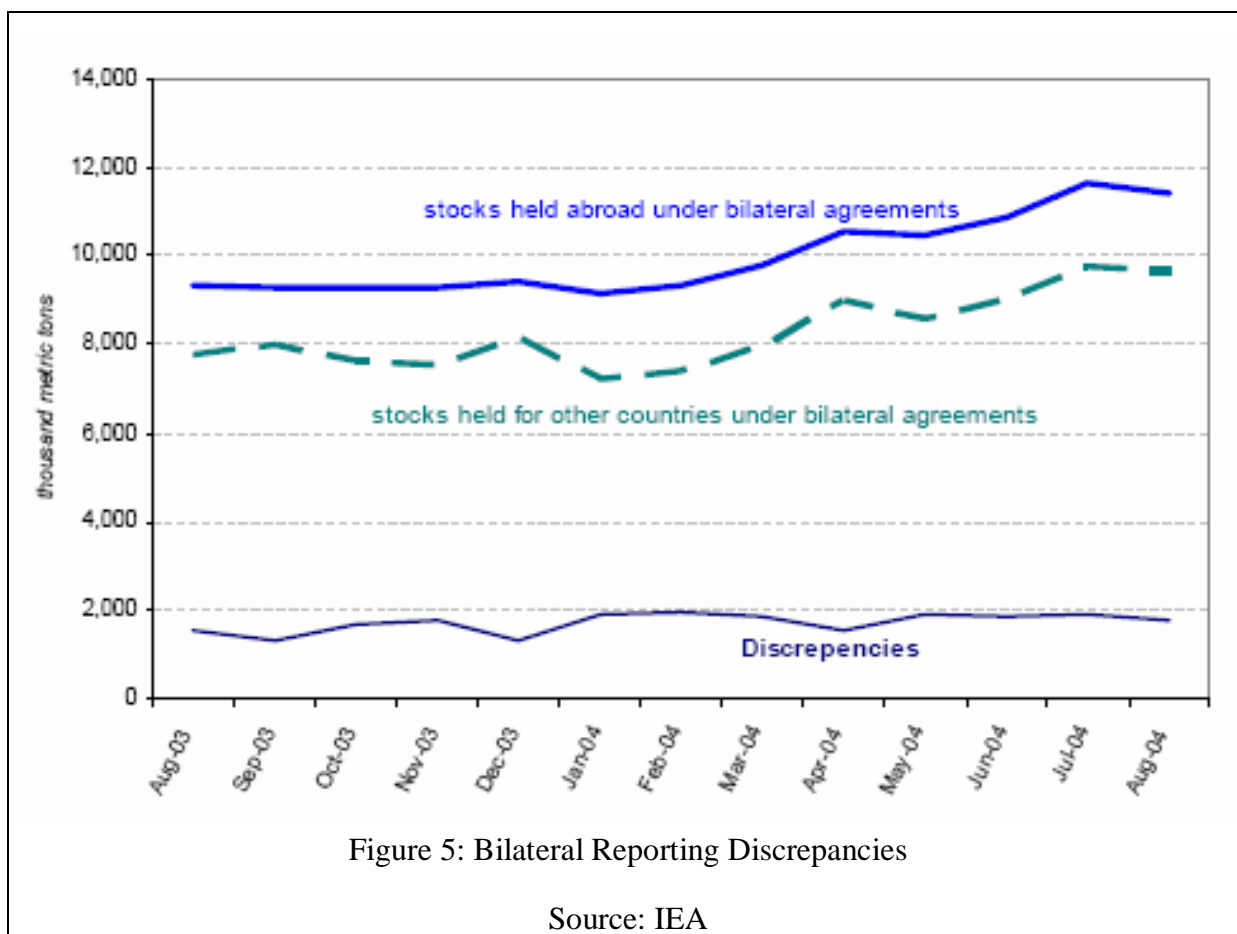
¹⁴ This was an informative questionnaire which did not provide a precise definition of MOR and thus allowed for flexible interpretation of what counts for MOR.



The use of "tickets" can also limit the availability of emergency stocks in a supply disruption, in particular when stocks held under such arrangements are located abroad. Critical expertise confirms that "tickets" are not very transparent and are difficult to monitor with the frequently used three-month validity period. "Tickets" do not provide additional oil to the security system and, in addition, there is no guarantee for the renewal of expiring "ticket" contracts.

Furthermore, there is practically no experience with the use of "tickets" in a supply disruption. Critics may assume that, depending on the specific supply disruption, it will be very difficult or even impossible to purchase the reserved oil. When such stocks are held abroad, the information on the specific "tickets" is sometimes unclear because of double counting problems or delays in administrative procedures. An analysis of the IEA shows that in Europe, total stocks reported to be held abroad under bilateral agreements are well above the level of total stocks reported to be held domestically for other countries, suggesting that 10-20% of stocks could be counted more than once (see Figure 5). Apparently, there is a need to address this problem and avoid such discrepancies.

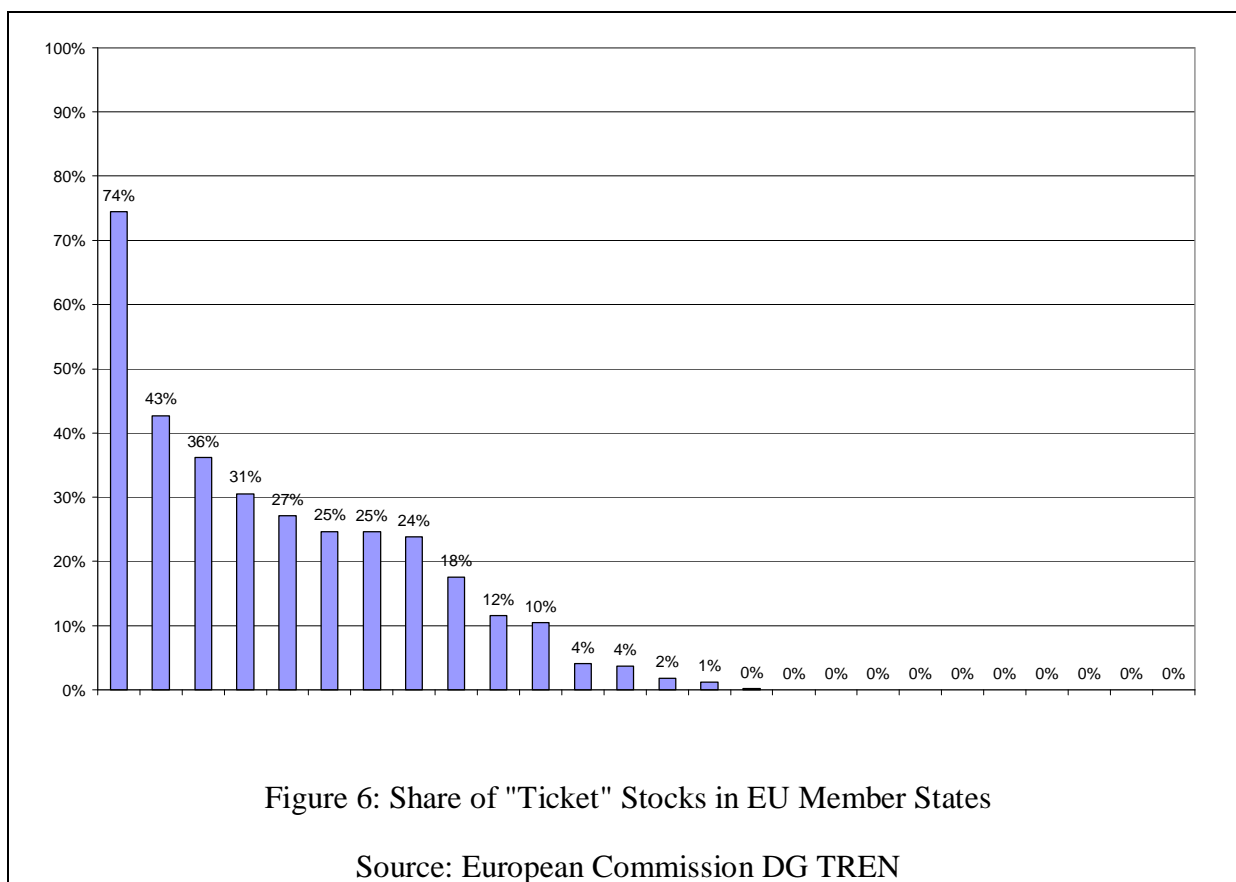
¹⁵ Only Member States where part of the stocks are held by the industry were requested to answer this question; still, some of these countries did not provide data.



Logistic problems may also intervene in the possibility of using stocks held under "ticket" arrangements in a prompt manner. For the most extreme example, a local supply disruption in Cyprus could be addressed only with difficulty by using stocks located in Finland, unless a swap¹⁶ can be arranged. Moreover, if the coverage for "tickets" is in the form of crude oil or blending components (e.g. naphtha to be used for gasoline production), this also calls the prompt availability of products into question.

Member States hold about 18 million tons of oil and oil products in the form of "tickets", which represents an 11% share of the overall emergency stocks. Ten Member States do not hold or do not permit "tickets" to be held while eight Member States hold more than 20% of their stocks in "tickets" (see Figure 6). Almost half of such stocks are located abroad. 70% of "tickets" are held by industry, 30% by agencies.

¹⁶ In a geographical swap stocks in different locations are exchanged.



2.2.3. Stock Composition

The existing product categories must be adapted to changing demand patterns. It may be necessary to integrate new and to delete obsolete products from the current categories. A complete change or deletion of products does not appear appropriate, based on the experience of the Katrina disruption which, in addition to closing oil production facilities, also shut down a number of refineries in the USA.

The current system establishes fairly aggregated product categories, endangering the availability of potentially key oil products. For example, jet fuel belongs to category II (middle distillates) but it is significantly more expensive to store than other middle distillates and therefore stored in relatively small volumes as part of the emergency stocks. In addition, some important products (e.g. naphtha) are not covered in the current product categories.

Product category 3 (fuel oils) in particular needs revision due to its decreasing importance in Europe. The consumption of fuel oil today amounts to about a quarter of what it was in the early 1970s as it has been continuously phased out from both electricity production and other sectors.

The use of naphtha (a light distillate) as a feedstock for the petrochemical industry and for its use in energy must be also taken into consideration.

The increasing share of biofuels also raises some questions with respect to emergency stocks. In particular, it is to be clarified whether the use of biofuels, either in pure or blended form, impacts on the stockholding obligation. It is also necessary to determine the extent and

conditions in which biofuels or biocomponents can qualify or may be mandated for inclusion in emergency stocks.

2.3. Other shortcomings

The shortcomings described in this subchapter are not necessarily undermining the efficiency of the emergency oil stock system but might have undesirable (side) effects which could be avoided or mitigated.

2.3.1. Administrative burden on Member States

Member States sometimes complain about the administrative burden of complying with two different obligations, one set by the EU, another by the IEA.

While the IEA stockholding obligation is based on net oil import (including both crude oil and products but excluding naphtha), the EU obligation is based on the consumption of 3 specific product groups (gasoline, middle distillates, fuel oil), covering about 90% of all petroleum products. EU Member States are required to hold products (90 days for each of the three product categories) but can also hold crude oil which is then recalculated to products. The IEA obligation in turn does not specify whether stocks should be held on the form of crude oil or specific products.

Concerning the calculation of stock levels, in the EU system crude oil is converted into products, usually based on refinery yields. Conversely, the IEA converts product stocks to crude equivalent. In addition, a 10% deduction is made in order to account for unavailable stocks, such as tank bottoms. Another important difference is that the IEA explicitly allows the inclusion of working stocks.

The date of compliance to the previous year's consumption/net imports is 31 July in the case of the EU and 1 January in the case of the IEA.

In order to decrease the burden of responding to two different 90-day obligations, a review and possible harmonization should be undertaken concerning:

- the calculation base (consumption or net imports)
- eligibility of crude and/or products (since it covers only three product categories, the EU stockholding obligation is currently lower than that of the IEA, which covers all categories of oil except naphtha)
- date of adjusting the obligation to the previous year's consumption/net imports (immediately at the beginning of the following year or with a delay of 7 months?)
- a deduction for unavailable stocks

Another issue resulting in undue administrative burden is related to stocks held abroad. The existing EU legislation provides for the possibility for Member States to hold stocks in the territory of other EU Member States. From the perspective of a functioning internal market, some of the rules might seem rather restrictive. Stockholding in other countries is only allowed on the basis of bilateral agreements between Member States and is subject to specific conditions and notifications. This imposes additional burden on both administrations and companies. In addition, it can restrict the possibility of a company to choose the location of its

stocks (if there is no bilateral agreement between the countries concerned). Similarly, the IEA takes stocks held abroad into account on the condition that a bilateral agreement is in place between the member countries concerned.

2.3.2. *Distortion of competition*

Although the current legislation calls for "fair and non-discriminatory" stockholding arrangements, this is difficult to realize if all or part of the emergency oil stocks are held by the industry. This is due to the fact that the level of operational stocks (i.e. stocks kept for commercial or logistical reasons) held by importers is generally lower than for refiners. Thus, imposing on everybody the obligation of keeping e.g. 90 days' stocks turns out to be more costly for importers since they have to top up their stock above the normal "operational" level by a higher amount of days than refiners. In addition, small importers may face difficulties in finding access to storage facilities.

Some Member States have tried to address these issues by setting a lower obligation for non-refiners or by establishing a turnover threshold, under which companies are not obliged to hold emergency stocks. However, these solutions are unlikely to end the discussion of different market players over a "level playing field" and may encourage companies to evade the law (e.g. by dividing a company up into smaller ones which are not subject to the obligation).

2.4. **Other issues to be addressed**

2.4.1. *Sufficiency of 90 days*

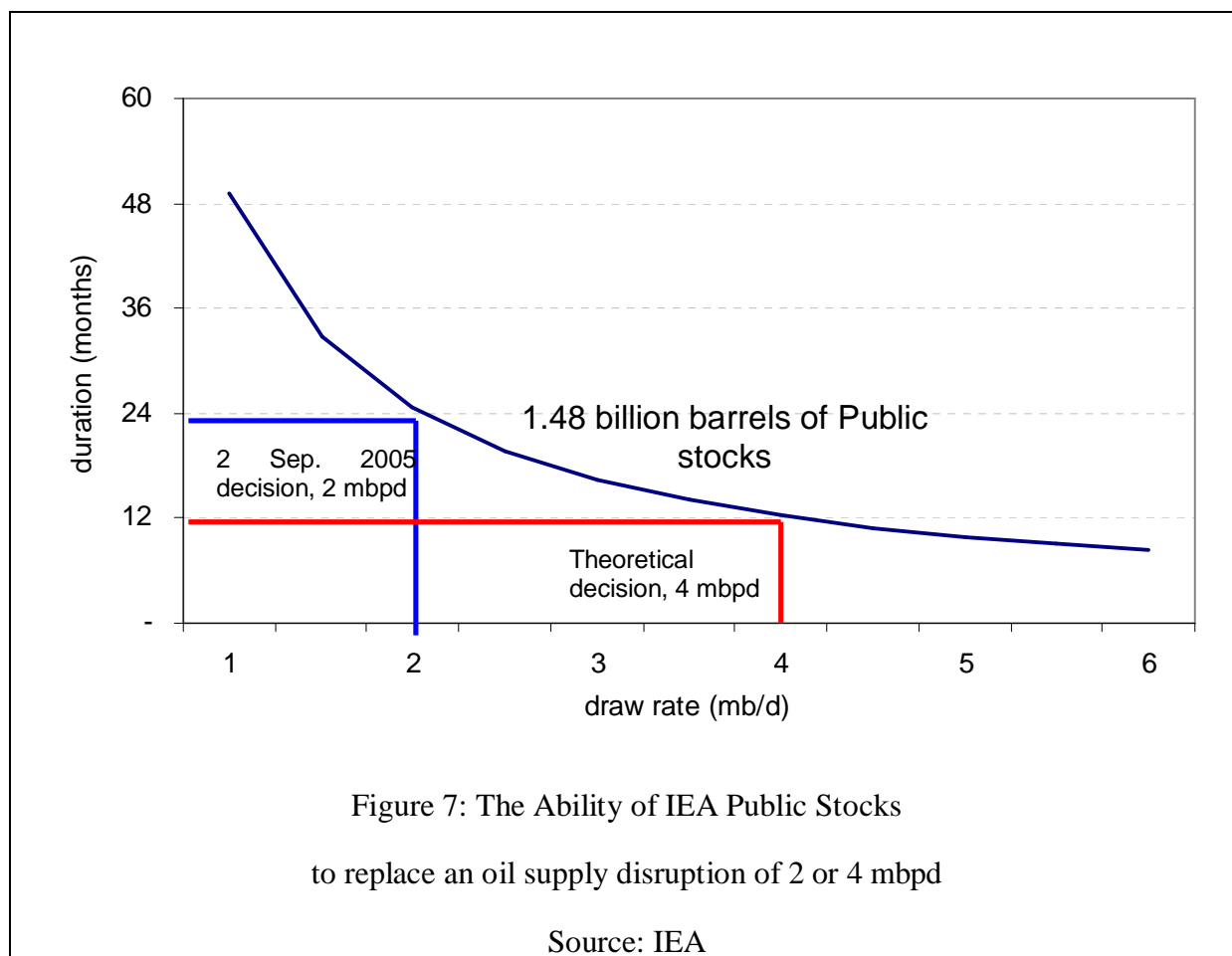
The EU introduced a stockholding obligation of 65 days in the 1960s, before the IEA had been created. Later, in the 1970s, the stockholding obligation was fixed in both the EU and the IEA at 90 days. China has recently decided to copy the obligation to hold 90 days stocks.

Doubts about the sufficiency of stocks had been expressed by the European Parliament which, in a report adopted in February 2007¹⁷, called for an increase in the stockholding obligation from 90 to 120 days. Doubts were also expressed in the press, related to the capability of EU countries to support the United States after hurricane Katrina in 2005.

The choice of the 90-day level is arguably arbitrary. It is probably based on tradition¹⁸ rather than on economic or risk analysis. Analysis show that present stock levels would last for a reasonably long period even in case of a serious supply disruption. The calculations of the IEA show that public stocks alone (the availability of which is not questioned) held by IEA member countries would last for about 2 years in case of a continuous stockdraw of 2 mbpd (see Figure 7). This is equivalent to the stock release rate of the 2005 IEA action, although the latter lasted for less than four months. The sufficiency of the 90-days obligation might depend, on the one hand, on the availability of the emergency stocks and, on the other hand, on the risks of an oil supply disruption and particularly its possible extent and duration.

17 2006/2247(INI)

18 In 1925 France imposed the requirement on its oil industry to reserve stock representing 25% of the declared amount delivered during the last 12 month.



2.4.2. Diversity of national systems

Directive 2006/67/EC requires Member States to keep crude oil or petroleum product stocks equivalent to a minimum of 90 days' internal consumption for each of three main categories of petroleum products (gasoline, middle distillates and fuel oils) but does not specify in which way Member States should organise the holding of these stocks (apart from declaring that they may make recourse to the creation of a "stockholding body or entity" to hold all or part of their oil stocks). Thus, the transposition of the above directive in different Member States has brought about very diverse stockholding systems across the EU.

This diversity in itself does not constitute a problem. However (as it is explained in 2.5.1. below in more detail), if the systems provide a widely different quantity and/or quality/availability of stocks, this may jeopardise the emergency preparedness of the EU as a whole.

2.4.3. Transparency/reporting

In comparison with other parts of the world, Europe's stock reporting is infrequent and has a long reporting lag. Emergency stock levels are reported to the Commission (to DG TREN) on a monthly basis with a lag of nearly 2 months, based on a special Commission questionnaire. Stock data are collected on the basis of Council Directive 2006/67/EC. Although the Commission continues to enforce the reporting discipline foreseen in the current legislation, it is not unusual that some Member States repeatedly fail to comply with this fairly long deadline.

There are no provisions on the publication of the stock data. Nevertheless, emergency stock levels are frequently published on the website of DG TREN, but the regularity and timeliness of this publication is largely dependent on Member States' reporting discipline.

Beyond the above, specific supply of stock data, Member States provide to the Commission (to Eurostat) responses to the Monthly Oil and Natural Gas Statistics (MOS) questionnaire which, among others, comprises extensive information on oil and petroleum products stocks. The MOS questionnaire is common with the IEA which uses it to calculate the compliance of its member countries. Submission deadline is three months after the reference month (M-3). In addition, oil stocks related information – not as detailed as in the MOS – is also provided to the Commission (to Eurostat) via responses to the Joint Oil Data Initiative (JODI) questionnaire. This questionnaire is common not only with the IEA, but with other international organisations as well. Submission deadline is 25 days after the reference month (M-1).

MOS information is currently collected from EU Member States on a gentlemen's agreement basis but, together with JODI information, it is also included in the Energy Statistics Regulation which has been adopted by the European Parliament in its plenary session on 12 March 2008. With its entry into force, Member States will have a legal obligation to provide this data.

It is worth mentioning that the Commission is currently setting up the Energy Markets Observation System (EMOS), a database containing data and information relating to the oil, gas and electricity sectors. EMOS will also provide the possibility for external entities to send in data through the filling in of internet-based forms. Utilizing this feature, a module of the system could simplify the reporting, analysis and publication of emergency stock levels.

Although the reporting of commercial stocks is not directly related to emergency stocks, it has to be recognized that in an emergency, commercial stocks might also contribute to an emergency response. Therefore, it can be argued that better data on commercial stocks can contribute to better emergency preparedness and definitely help to achieve better market transparency. Commercial stocks are also viewed as an important indicator of prices and are one of the most closely watched aspects of the oil market. However, it is hard for the industry to follow global stocks as closely as it would like, because the United States and Japan are the only countries to publish comprehensive weekly stock data. China and Korea have also declared their intention to publish weekly stock levels.

European commercial stock data are reported monthly by Euroilstock which was set up by the oil industry and the European Commission in 1984.¹⁹ Stock data are based on input from more than 80 participating companies in EU-15 and Norway, arriving on the 5th working day of each month. Participation is voluntary. Stock data are published through Reuters (available to subscribers), on the 7th working day of each month, reflecting stock levels at the end of the previous month.

It has to be kept in mind that, contrary to the United States, emergency stocks and commercial stocks are not strictly separated in all EU Member States. This might make it more difficult to report and to distinguish commercial and emergency stock data.

¹⁹ Originally, coordination of Euroilstock was in the hands of the Commission. As of July 1986, this task was taken over by the oil industry and for this purpose "Stichting Euroilstock" was established in the Netherlands.

Most stakeholders in Europe are not in favour of weekly reporting because of supplementary costs, administrative burden, the potential inaccuracy of data and the volatility this might provoke. However, the European Parliament and some Member States have recently declared their support for more frequent (weekly) reporting. A first exchange of views between experts from DG TREN, EUROSTAT, the IEA, France and the United Kingdom was conducted in 2007 to analyse the advantages and disadvantages of more frequent reporting.

2.5. Justification of action at EU level

2.5.1. "Subsidiarity Test"

Energy security is a public good and – due to the existence of the internal market – the benefits of the stocks released in a crisis cannot be limited to a single country. The internal market ensures that any stock released can flow freely to any buyer EU-wide. The benefits from releasing stocks will not be captured by a single country but by the EU as a whole. As a result, if the emergency systems adopted by individual Member States are too diverse and provide different levels of preparedness (e.g. different quantity and quality/availability of emergency stocks), this may lead to decreased efficiency and a free rider problem. The countries having sounder systems would probably contribute disproportionately more in case of real trouble.

Since oil markets are global, any disruptions to oil supply – whether occurring in one or more Member States or outside the EU – will have repercussions on all Member States. Furthermore, in integrated economies such as the EU internal market, the level of emergency preparedness of any single Member State will influence the level of preparedness of the Union as a whole. If minimum requirements are imposed throughout the EU, it may be easier to avoid the emergence of a problem or to cope with a disruption.

It must also be kept in mind that several Member States are not members of the IEA, which is responsible for emergency response in case of global disruptions. The European Commission is also a member of the agency but full EU participation in an IEA action can only be guaranteed through an EU mechanism involving EU Member States that are IEA non-member countries.

The above arguments all imply that the objective of maintaining a high level of security in the supply of oil and oil products within the EU can be best achieved in a coordinated way. Clear rules at the Community level are therefore needed.

2.5.2. Political mandate

In 2002 the Commission proposed a directive to increase the volume of stocks to be maintained in each Member State, and to give the EU the possibility to decide how these stocks are used, not only in the event of a physical disruption but also in the event of a perceived risk which would trigger dangerous market volatility. Although the Commission failed to convince the European Parliament and the Council and subsequently decided to withdraw the proposal, the political debate resulted in several consensual conclusions, including the need for a closer link between Community crisis procedures and IEA mechanisms.

The 2007 Spring European Council acknowledged that global warming, together with the need to ensure security of supply and to enhance competitiveness, make it ever more vital and

pressing for the EU to put in place an integrated climate and energy policy combining action at the European and the Member States' level. To back up such a policy, the Council adopted a comprehensive energy Action Plan for the period 2007-2009 which – inter alia – underlines the need to enhance security of supply for the EU as a whole as well as for each Member State through a number of measures. One of these actions addresses emergency oil stocks: the European Council gave a clear mandate for the revision of the current system by calling for "improving oil data transparency and reviewing EU oil supply infrastructures and oil stock mechanisms, complementary to the IEA crisis mechanism, especially with respect to availability in the event of a crisis".

3. THE OBJECTIVES OF THE REVISION OF THE EMERGENCY OIL STOCK LEGISLATION

3.1. General objectives

3.1.1. To strengthen security of supply by an effective instrument based on solidarity, transparency and practicality

The EU, like all advanced economies, depends heavily on continuous, reliable and affordable supply of oil and oil products. Any difficulty, even temporary, having the effect of reducing these supplies, could cause serious disturbances in the economic activity of the Community. The EU must therefore be in a position to offset or at least to diminish any harmful effects in such a case.

Provided that emergency stocks exist, their release constitutes the easiest and fastest way of making large volumes of additional oil and/or oil product available to an undersupplied market, thereby alleviating market shortage. In order to allow an effective response to oil supply disruptions, the emergency oil stock system has to ensure the solidarity of Member States in case of activation. It has to allow for correct monitoring through transparency of calculations and reporting. Overall, it has to be characterized by practicality in order to ensure the effectiveness of its use. The general objective of the proposal is therefore to strengthen the capacity of the system to react to an emergency, by improving its efficiency and effectiveness.

3.1.2. To minimise negative impacts of a disruption on EU economy

The economy's reliance on oil is especially true for transport, the main user of oil, which at present has no real alternatives to the use of oil at its disposal. Considering the important role of transport in the economy, a physical shortage of fuel would have serious repercussions in other sectors, as well as on the mobility of citizens.

Emergency oil stocks are not meant for market intervention or price manipulation. A release of stocks should be realized only in case of a severe disruption that significantly reduces oil supplies. It will then be important to compensate for missing volumes and to ensure the integrity of supplies to consumers and thereby to mitigate negative economic impacts.

However, a disruption of oil supply (e.g. outages in a major producing country) may not necessarily entail a physical shortage of oil in Europe and yet may – due to the low price elasticity of oil demand – bring about skyrocketing prices which could also impact negatively the economy. A well-grounded and credible system of emergency stocks, by its pure existence, can have a moderating impact on markets in case of a disruption. The release of stocks can replace disrupted volumes and thereby it might be possible to avoid physical shortage and/or large price hikes. As a result, negative impacts on the economy could be mitigated.

Oil stocks thus have a crucial role in minimizing the negative impact of a temporary supply disruption on the EU economy. This holds as long as they are available in required quantities, qualities and degrees of accessibility.

3.2. Specific objectives

3.2.1. To assure that the stocks have the potential to address shortage

In a supply disruption, it is essential to replace disrupted oil swiftly and effectively. Therefore, emergency stocks have to be fully available in the required quality and in the required quantity. At least a part of the stocks have to be in the form of finished products, serving as an instant remedy even if refineries came to a halt. Moreover, unless the reporting of stocks is appropriate, in terms of frequency, timeliness and report quality, the available quantity and quality of stocks cannot be assessed.

3.2.2. To be able to release stocks effectively

Although the directive stipulates a consultation between Member States in case of a disruption, up to now the EU has not created a clearly defined framework for oil emergency policies and for adequate procedures and measures to use in an oil supply disruption. Crisis management has to be swift and effective. Therefore, the EU's relationship with the IEA, which has an internationally accepted mandate to deal with global oil supply disruptions, needs to be clearly defined. At the same time, the relationships between the European Commission and Member State administrations, which are in charge of emergency stockholding, have to be better defined, and, thus, needs to be revised.

Political decision making procedures have to be better defined and there is explicitly a need to define complementary procedures to the IEA crisis management. This is particularly important for Member States which are not members of the IEA, since they are not enabled to receive regular information on emergency issues through the relevant IEA committees.

3.2.3. To increase the credibility of the system and show readiness

When the system of emergency stocks is credible, market players are convinced that reported stocks are available and, if necessary, can be offered to the market in a swift way. This can prevent extreme market reactions when supplies are potentially or actually disrupted. Therefore, price hikes and speculation may be avoided or at least mitigated. If, however, not all 90 days of emergency stocks can be available to the market, in a very severe supply disruption this may hamper the trust that the system is working effectively.

3.2.4. To simplify compliance burden for Member States

In addition to the costs of buying and holding stocks, emergency stockholding entails for the Member States also administrative burden related to calculation, control and reporting on the stock levels. Member States have to ensure that the stocks are at their disposal. This requires a reporting and control system. If stocks are held abroad and/or by way of "ticketing" or other similar instruments, controls are especially important. If a Member State wants to hold stocks abroad, it has to negotiate a bilateral agreement with the Member State concerned. This is time consuming and checking these stocks involves extra efforts.

Member States which are also members of the IEA²⁰ have to comply with two different stockholding obligations, with different calculation methods and separate reporting. The IEA calculation and reporting methodology is internationally employed and accepted. In addition, more EU Member States are preparing to join the IEA. Aligning the calculation and reporting method within the EU to that of the IEA would reduce the administrative burden which arises through the duplication of administrative work.

Notwithstanding the importance of reporting and control, the Commission has to make an effort to ease the administrative burden on Member States and the industry. This is in line with the Commission's Better Regulation strategy and the simplification programme. In particular, the Commission may approximate the EU and IEA system (e.g. common reporting and the uniform calculation of the stockholding obligation) and replace bilateral agreements with a multilateral scheme and an enhanced control system.

3.3. Operational objectives

3.3.1. To increase the effectiveness of the system and to select best practises/arrangements

Oil security and energy security is not for free. Sometimes Member States may have chosen low-cost policies which are in a crisis less efficient as they do not provide 90 days stocks. These practises may have negative impacts on Member States' ability to act adequately in an emergency and may explain to some extent why emergency preparedness is divergent across the EU. The Commission's role in this context is to moderate excessive divergences and to avoid a serious lack of solidarity from some countries in an emergency response to a crisis.

In the spirit of subsidiarity, the Commission should not prescribe to Member States ways and means of fulfilling emergency or stockholding obligations. However, in reviewing Member States' emergency policies, there might be a need for the Commission to indicate specific deficiencies of existing systems and to highlight existing best practices in Member States, particularly concerning stockholding arrangements.

3.3.2. To strengthen the system in case of activation/use

In addition to choosing an appropriate stockholding arrangement, it is also important to have the right emergency policies and measures to address an actual disruption. It may be useful to establish what policy tools and procedures are most suitable in an emergency. In the context of stocks, the procedures should facilitate swift and visible stock release.

Stock release is not the only policy tool at the disposal of Member States. They can also implement demand restraint measures (e.g. restriction of passenger car use), in some sectors it is possible to replace oil by other fuels (fuel switching), while oil-producing countries might also resort to the increase of indigenous production. In a severe supply disruption, the combination of the above measures might be desirable.

²⁰ EU Member States who are also members of the IEA are: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Slovakia, Spain, Sweden, United Kingdom. Poland is likely to become member in 2008.

3.3.3. *To optimize the stockholding system in terms of quantities of stocks held (90-day stockholding obligation vs. 120 days etc.)*

The Commission has started to analyse the availability of emergency stocks and at the same time is aware of the fact that the extent of the 90 day obligation has been questioned by some stakeholders. The optimal size of emergency stocks is inevitably a compromise between security and costs. It has to ensure the replacement of disrupted oil volumes for a sufficiently long period of time, without inducing excessive financial burden.

In strengthening the system, there may be no need to increase the 90 day obligation but the availability and reliability of stocks should be improved. However, if the difference between the "nominal" 90 days stocks and the really available level of stocks in a crisis is significant, the request of the Parliament to increase the stock obligation to 120 days might be a very reasonable proposal.

It is worth noting that the harmonization of the EU stockholding obligation with that of the IEA may increase EU stock levels in comparison to the existing levels.

3.3.4. *To optimize the stockholding system in terms of frequency of data reporting for oil stocks and the nature of such reports*

Considering the low volatility of the level of emergency stocks, increasing the reporting frequency on such stocks is probably unnecessary. Conversely, the long reporting lag specified in the current legislation can and should be reduced.

On the other hand, the request of some stakeholders to introduce more frequent reporting on commercial oil stocks seems more reasonable. Higher transparency of oil market developments may give higher benefits to the end consumer of oil products. These benefits might outweigh the potential, often disputed disadvantages (e.g. increased market volatility). Europe might have a need to follow important consumer regions like North America or Asia (Japan, China, Korea) where more frequent reporting on commercial stocks is already in place or will be soon.

3.3.5. *Establishing the rules for EU interaction with IEA*

It is necessary to define the role of the Commission vis-à-vis the IEA. In addition to the majority of EU Member States, the European Commission participates in the work of the IEA²¹. However, this is not the case for the EU Member States which are not members of the IEA. It is to be decided if the latter should be involved in common actions. If so, this obviously necessitates some action/co-ordination from the Commission.

A smaller, regional disruption may not trigger an IEA action. Nevertheless, such a disruption might have serious implications on the supply on one or more Member States which requires an action at the EU level. The EU needs therefore to have at its disposal its own instruments, independent from the IEA, to solve energy supply problems which do not require solidarity actions from countries outside Europe such as Japan or the United States. Nevertheless,

²¹ The Commission is not a full member of the IEA but practically has an "active" observer status: it has the right to have access to meetings of IEA bodies, to receive documents, and to speak and make proposals, but has no right to vote in those bodies.

considering the expertise and the market knowledge of the IEA Secretariat, co-operation with the IEA might be useful even in such a case (e.g. exchange of information).

3.3.6. Simplification of the regulatory environment

The regulatory framework in which businesses operate is a key factor of their competitiveness, growth and employment performance. Therefore, a key objective of the European Union's enterprise policy is to ensure that the regulatory environment is simple and of high quality. To make sure that regulation is used only when necessary and that the burdens it imposes are proportionate to their aim, the Commission has a number of processes and tools in place, including measures to simplify existing legislation.

There is possibly scope for simplification with respect to the EU legislation on emergency stocks, which could help not only businesses but also Member State administrations which are involved in the management and/or control of stocks. An approximation of EU and IEA rules would definitely be beneficial to those countries which have to comply with the stockholding obligation of both institutions. It could simplify the calculation of the obligation and also reporting (see also Section 3.2.4.).

A further possibility for simplifying legislation is to replace the bilateral intergovernmental agreements, which are at present necessary for holding stocks abroad, with an EU-wide agreement. This measure has also been suggested by several Member States.