

EUROPEAN COMMITTEE
UNDER THE GOVERNMENT OF
THE REPUBLIC LITHUANIA

**Evaluation of consequences of Council Directive
98/93/EC 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**

September 5, 2001
Final report summary

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THE PURPOSE of the study was to perform the complex evaluation of the consequences regarding implementation of Council Directive 98/93/EC 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 and to evaluate the influence of incremental costs to main consumers of petroleum products.

In the study the following steps were made:

- There was evaluated the market of petroleum products in Lithuania, the analysis of consumption tendencies of petroleum products was made.
- The level of 90 days minimum stocks of petroleum products was calculated and the necessary additional quantity of stocks to accumulate was forecasted taking into account the growth rate of petroleum products market, the derivatives of petroleum produced indigenously, and the stocks that are already accumulated.
- The analysis of storage possibilities of compulsory oil products stocks (COS) was made.
- The analysis of accumulation and maintenance costs of COS was carried out, and the structure and tendencies of these costs were evaluated.
- The main groups of petroleum products consumers were determined, and the structure of petroleum products consumption within those groups was evaluated.
- The interviews with representatives of oil market participants and experts were made and the opinions of representatives of different groups of petroleum products consumers were listened.
- The forecasts of growth of petroleum products prices due to implementation of directive 98/93/EC were made, and the influence to oil products consumers and to their competition possibilities was determined.

The calculation of the accumulation and maintenance costs of COS and the evaluation of the influence of these costs to main oil products consumers were based on these main assumptions:

- The accumulation of stocks up to the level of 90-day consumption will be carried out evenly within the period of 6 years, starting from 2002 to the end of 2007.
- Excise and VAT are excluded from the prices of oil products.
- The prices of oil products during the period of 2002-2007 are assumed to be constant.
- The maintenance costs of COS were determined from data received from thermal electric power stations, Subacius State Reserve Enterprise and wholesalers of petroleum products.
- 30% of COS costs will be financed by the State.
- The forecasted increase in prices of petroleum products is calculated by dividing the incremental costs by the forecasted level of petroleum products consumption.

The evaluation of consequences of Directive 98/93/EC was performed taking into account main factors influencing the level of COS accumulation costs as well: the excise tax inclusion in oil products prices, the different period of COS accumulation, the changes of crude oil prices on international markets and the changes of petroleum products prices, the USD/EUR rate influence.

Based on the study of statistical information, sociological surveys, legal acts, data received from oil market participants, and interviews these main conclusions are drawn:

◆ The Implementation of Directive 98/93/EC will have the positive effect. *The stability of the economic activity will enhance and the possible disturbances due to reduced supplies of oil and petroleum products or significant increase of the prices on international markets will be reduced.*

◆ Taking into account the growth rate of petroleum products consumption, the derivatives of petroleum produced indigenously, and the stocks that are already accumulated, it is forecasted that *by the end of year 2007 the additional level of 165,9 thousand tons of petroleum products must be accumulated: Motor Gasoline – 41,9 thousand tons; Diesel Oil – 119.5 thousand tons; Jet Kerosene – 4.5 thousand tons.* The additional stocks of fuel oils due to Directive 98/93/EC will not need to be accumulated because by this date the sufficient quantity of these stocks is already stored (State Reserve and Energy Enterprises Stocks). The calculation of minimum stocks is provided in Table 1.

Table 1. The forecasted level of COS needed accumulate by the end of year 2007, thousand tons

Products	Motor Gasoline	Diesel Oil	Jet Kerosene	Fuel Oils	Total
Consumption in year 2006	396.8	672.4	34.0	660.5	1763.8
Reduction due to derivatives of oil produced indigenously	95.1	91.9	8.5	55.5	251.0
Adjusted consumption	301.7	580.5	25.5	605.0	1512.8
90-days stocks	74.4	143.1	6.3	149.2	373.0
State Reserve stocks	5.0	17.0	0.0	124.0	146.0
Energy Enterprises and Mazeikiai Oil refinery stocks	21.5	6.6	1.8	97.9	127.8
Covering by Crude Oil stocks	6.0	0.0	0.0	0.0	6.0
Additional quantity of COS needed to be accumulated	41.9	119.5	4.5	0.0	165.9

◆ Implementing the requirements of Directive 98/93/EC *the investments in the modernization of storage capacities will be needed.* The investments in the storage capacities of Subacius State Reserve Enterprise according to the management of that enterprise would approximately reach 30 million LTL. The quality of storage capacities owned by oil products wholesalers is much better but these capacities are not large.

◆ *The forecasted accumulation and maintenance costs of COS (excise tax is excluded) may reach from 49 to 77 million LTL per year. Total 90-days stocks accumulation and maintenance costs may reach about 373 million LTL.* After the accumulation of necessary quantity of COS the *constant maintenance costs of 47 million LTL would be incurred.* Table 2 provides the structure and tendencies of these costs.

Table 2. The level and structure of COS costs by different costs groups, in millions LTL

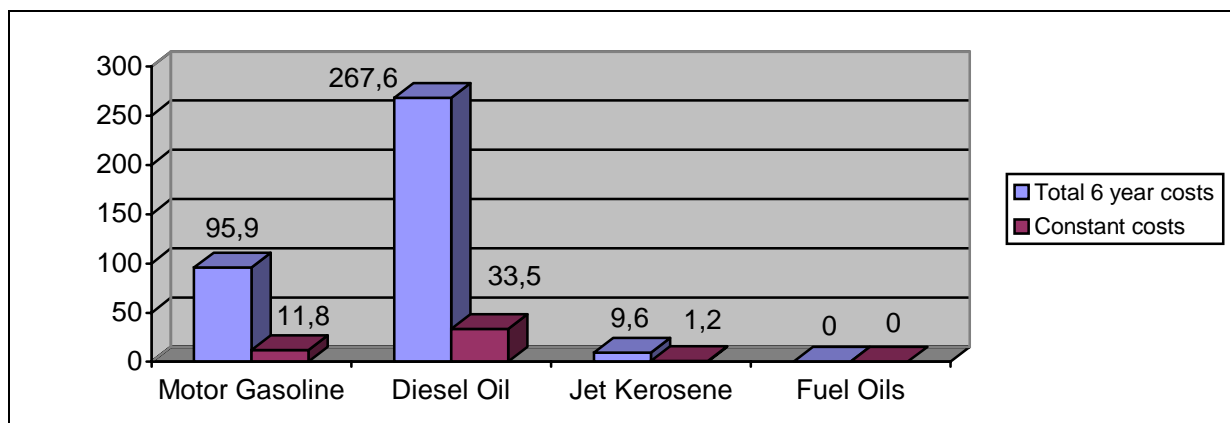
Costs	2002	2003	2004	2005	2006	2007	Total	Constant costs
Accumulation costs	32.7	32.7	32.7	32.7	32.7	32.7	32.7	0.0
Transportation costs	0.8	0.8	0.8	0.8	0.8	0.8	5.0	0.0
Loading costs	0.2	0.2	0.2	0.2	0.2	0.2	0.9	0.0
Storage costs	15.4	15.4	17.4	20.6	23.7	25.2	117.6	25.2
Replacement costs	0.0	3.6	7.1	10.7	14.3	17.8	53.5	21.4
Total	49.0	52.6	58.2	65.0	71.6	76.7	373.1	46.6

Because the largest part of all costs is due to oil products accumulation and storage, so the main decisions by government must be taken taking into account namely these two groups of costs and factors influencing these costs.

◆ *Designing the COS accumulation and maintenance model the Government should combine various alternatives that would enable to minimize costs and would guarantee the non-discriminative nature of stocks accumulation.* It is recommended to use such model where State Agency is established, Investments in storage capacities of Mazeikiai Oil Refinery are made, and the possibility for oil market participants to use stock tickets are given.

◆ *The mostly affected will be the consumers of diesel oil because the largest part of all costs falls on accumulation and maintenance of diesel oil stocks. This part will sum up to 35-55 million LTL per year. The accumulation and maintenance costs of motor gasoline stocks will reach 13-20 million LTL per year, jet kerosene – 1-2 million LTL.* The total and constant costs regarding the accumulation and maintenance of these products stocks are presented in Figure 1.

Figure 1. Oil products accumulation and maintenance costs by different products, in million LTL



◆ *If the excise tax were included in the prices of accumulated oil products, the accumulation costs would rise significantly. They would reach 53 million LTL per year and would be 20 million LTL or 61% larger than in the case there excise tax are excluded. Total accumulation and maintenance costs would reach 69-102 million per year. Therefore we do not recommend to include excise tax in the prices of accumulated oil products for COS purpose.*

◆ *If there was no transition period until the January 1, 2008 for accumulation of oil products stocks and the COS were to be accumulated until January 1, 2004, so the Lithuanian economy would suffer bigger burden and the jump in oil products prices. The COS accumulation costs would sum up to 98 million LTL per year and would be three times larger than having transition period.* It is obvious that short COS accumulation period is harmful to Lithuanian economy so the transition period is necessary.

◆ *The implementation of Directive 98/93/EC mostly will affect these groups of oil product consumers:*

- Passenger cars sector;
- Road cargo and passenger transport;
- Railway transport;
- Agriculture;

- Energy sector;
- Air transport.

◆ **The largest amount of total incremental burden will fall on passengers cars sector. It will sum up to 17-26 million LTL per year.** The incremental costs suffered by agriculture will reach 9-14 million per year. The burden of road cargo and passenger transport will sum up to 7-10 million LTL per year, railway transport – up to 4-6 million LTL, air transport – 1-2 million LTL. The energy sector would not suffer the incremental costs, because all necessary amounts of fuel oils are already accumulated. Table 3 presents incremental costs distribution among petroleum products consumers.

Table 3. The impact of COS accumulation on petroleum products consumers, in million LTL

Sectors	2002	2003	2004	2005	2006	2007	Total	Constant costs
Energy sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Passenger cars	16.7	17.9	19.7	22.0	24.2	25.9	126.4	15.7
Road cargo and passenger transport	6.6	7.1	7.8	8.7	9.6	10.3	50.1	6.3
Railway transport	3.6	3.9	4.3	4.7	5.2	5.6	27.3	3.4
Agriculture	8.7	9.3	10.3	11.5	12.6	13.5	65.8	8.2
Air transport	0.8	1.0	1.2	1.3	1.5	1.7	7.5	1.0

Evaluating the relative impact of incremental costs to final consumers it is observed that transportation sector will suffer mostly. The incremental costs incurred by railway transport would be 0.60% of their sales, road cargo and passenger transport – 0.55%, air transport – 0.32%. The impact on agriculture would be lower: the incremental costs would sum up to 0.19% of sales. The similar tendencies are observed by comparing the incremental costs with created value added. The results of relative evaluation are presented in Table 4.

Table 4. The relative impact of COS accumulation to petroleum products consumers in year 2002

Sectors	Percentage of incremental costs of Sales	Percentage of incremental costs of Value Added
Road cargo and passenger transport	0.55%	0.57%*
Railway transport	0.60%	
Agriculture	0.19%	0.28%
Air transport	0.32%	1.04%

* - this relative impact is calculated for all road and railway transport

◆ **The forecasted increase in oil products prices to final consumers due to accumulation of COS would be the following: Motor Gasoline – 1.1-1.6%, Diesel Oil - 2.8-3.7%, Jet Kerosene - 1.8-2.7%.** The raised prices of oil products will increase the production and operation costs of oil products consumers and their operating results will be influenced. The forecasted results are presented in Table 5.

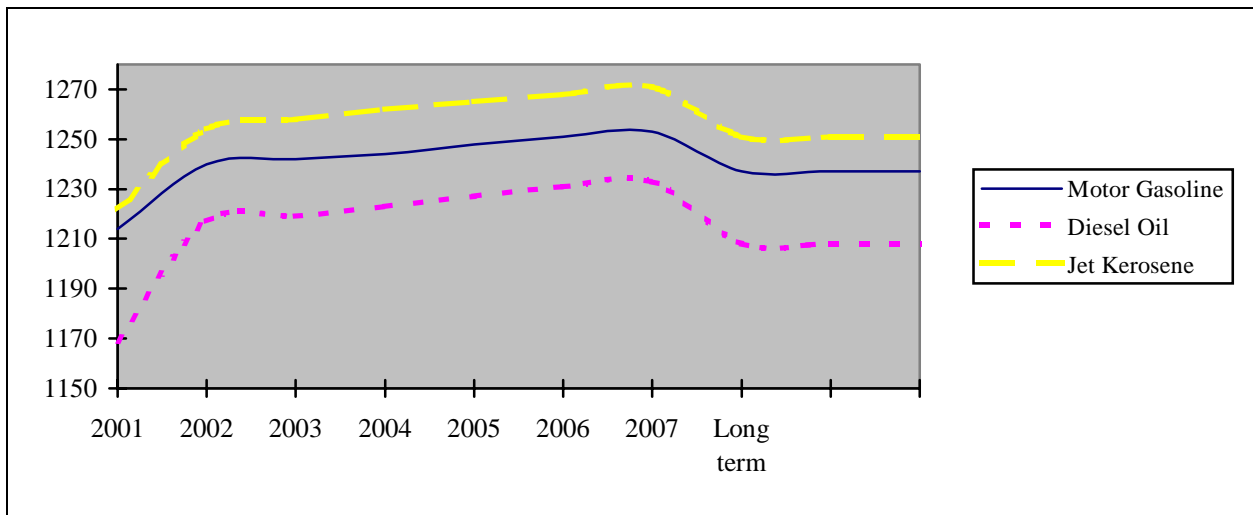
Table 5. The percentage increase in oil product prices (basic price plus excise tax) due to accumulation of COS, compared with year 2001

Products	2002	2003	2004	2005	2006	2007	Long term
Motor Gasoline	1.1%	1.1%	1.3%	1.4%	1.5%	1.6%	1.0%
Diesel Oil	2.8%	2.9%	3.1%	3.4%	3.6%	3.7%	2.3%
Jet Kerosene	1.8%	2.0%	2.2%	2.4%	2.6%	2.7%	1.6%
Fuel Oils	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

◆ *The results of representative survey conducted in 2001 showed that the number of personal car drivers very sensitive to fuel prices is increasing.* Therefore the increase in oil product prices can stipulate the reduction in Motor Gasoline and Diesel Oil consumption among personal car drivers.

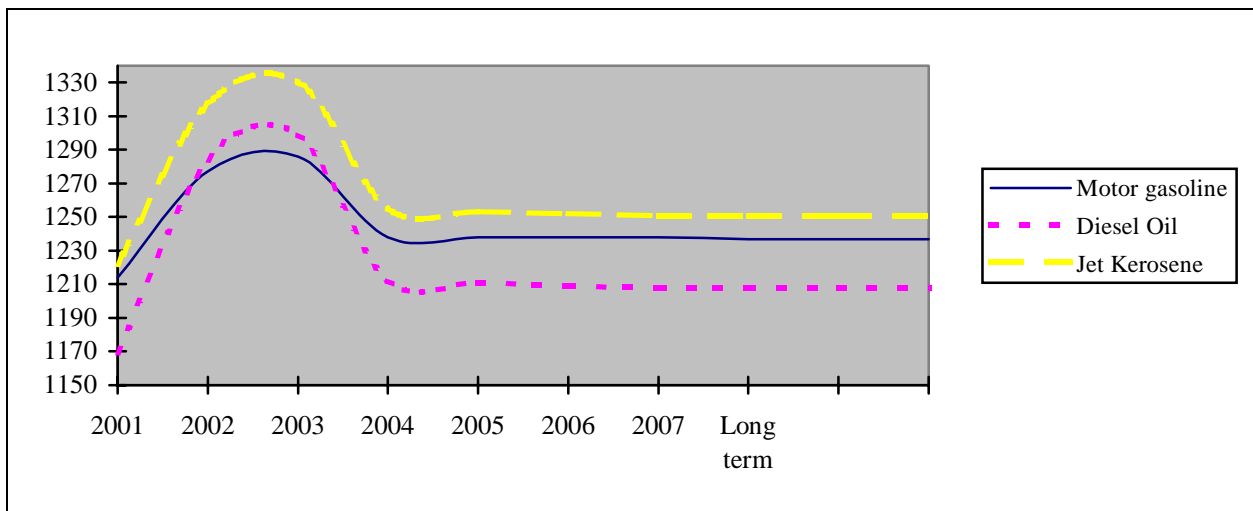
The possible tendencies of oil products basic prices comparing two scenarios – 6-year accumulation period and 2-year accumulation period – are presented in Figure 2 and Figure 3.

Figure 2. The possible tendencies of changes in oil products basic prices (6-year accumulation period), in LTL



If there were no transition period and COS must be accumulated until January 1, 2004, so the increase in prices would be much larger.

Figure 3. The possible tendencies of changes in oil products basic prices (2-year accumulation period), in LTL



◆ *The increase in oil products prices due to COS accumulation and maintenance would not be large, but taking into account other factors (such as excise tax increase) the total impact would be significant* and it could not only have the negative economical consequences but increase the social – psychological stress of the society and the number of Euro-sceptics as well.

Taking into account the results of the study and the opinions of representatives from different groups of oil products consumers we make the conclusion that the implementation of Directive 98/93/EC amending Directive 68/414/EEC having the transition period of 6 years will not make any significant negative impact to Lithuanian economy and oil products consumers. Much more burden would be suffered by oil products consumers if there were no transition period for COS accumulation. In this case the serious social and economic consequences can occur.

Having no possibility to use transition period for harmonizing excise tariffs with the requirements of European Union, the transition period for accumulation of 90-day oil products stocks trying to reduce the total negative impact to the Lithuanian economy is especially necessary.