



**SCREENING CHAPTER 27
ENVIRONMENT**

**AGENDA ITEM : FUEL QUALITY
Directive 98/70/EC
Directive 99/32/EC**

**Country Session: The Republic of TURKEY
29 May - 02 June 2006**



CONTENT

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OVERVIEW

- By the enactment of the Law No.5015 on Petroleum Market (PML) Energy Market Regulatory Authority (EMRA) is designated as the competent authority for regulating and monitoring fuel quality.
- EMRA, has put into force by-laws, communiqués, and decisions to regulate the market, during the years 2004 and 2005. EMRA grants licenses for the market participants. Fuel quality monitoring system was established.
- On the other hand, while EMRA regulating petroleum market, the Ministry of Environment and Forestry (MoEF) put into force the By-Law on Petrol and Diesel Quality.
- EMRA, following the By-law on Technical Criteria to be Applied at Petroleum Market put into force related Communiqués, parallel to Directives with some exemptions to be applied only until 1.1.2007.



LEGAL FRAMEWORK FOR FUEL QUALITY

- **Petroleum Market Law (PML)** Articles 2/1/5, 4/4/1, 9/6, 13/2, 22/2
- **By-law on Technical Criteria to be Applied at Petroleum Market** (By-law on Technical Criteria) Article 5/2, 3/a, 7/1/a
- **By-Law on Petroleum Market Information System** (By-Law on Information System)
- **By-Law on Control of Air Pollution Arising from Heating.** (Article 5)
- **By-Law on Petrol and Diesel Quality**
- **Technical Regulation Communiqué on the Production, Supply from Domestic and Foreign Resources and Delivery of Petrol Types to the Market**
- **Technical Regulation Communiqué on the Production, Supply from Domestic and Foreign Resources and Delivery of Diesel Oil Types to the Market**

LEGAL FRAMEWORK FOR FUEL QUALITY (CONT'D)

According to the Law, By-Laws and Communiqués,

- *EMRA* is the responsible authority for regulating fuel quality.
- Under the provision of PML liquid fuel types are regulated by the decisions of the Board of EMRA.

According to the Board Decisions (21.4.2005 No.478) and repealing Decision (29.12.2005 No.623/1)

- Leaded petrol was banned from market as of 1.1.2006,
- Official names of fuel types and official recognition of CN of fuel types are defined,
- Fuel types which may be distributed in the market are determined.



IMPLEMENTATION

(Petrol Types)

According to Technical Regulation Communiqué,

- As of 1.1.2007 TS EN 228 will be binding technical regulation without any exemption. Analytical methods stipulated by TS EN 228 is binding for petrol types.
- Only 2 types of petrol may be delivered by distributors,
 - 1) “*Unleaded Petrol 95 Octane*”, containing min. 95 max. 97.9 research octane number
 - 2) “*Unleaded Petrol 98 Octane*” containing min. 98 research octane number.



IMPLEMENTATION (CONT'D)

(Petrol Types)

Transition Chart for Petrol Types

Until
1.1.2007

Exemptions,

- (i) Sulphur, max. 500 mg/kg,
- (ii) Aromatics out of the hydrocarbon types, max. 50 %(v/v),
- (iii) Benzene, max. 2.5 %(v/v),
- (iv) Vaporization percentage at 70°C E70% (v/v) of the min. value 15.0 for Type A and 17.0 for Type D,
- (v) Vaporization percentage at 100°C, E100% (v/v) of the min. value 40.0 for Type A and 43.0 for Type D,

Until
1.1.2015

Alloyed unleaded petrol, containing min. 8, max. 20 mg/kg potassium and min. 10 max. 50 mg/kg manganese

IMPLEMENTATION (*Diesel Types*)

According to Technical Regulation Communiqué,

- As of 1.1.2007 TS EN 590 will be binding technical regulation without any exemption. Analytical methods stipulated by TS EN 590 is binding for diesels.
- Only 2 types of diesel may be delivered by distributors,
 - 1) 'Diesel', containing max. 50 mg/kg sulphur
 - 2) 'Off-Road Diesel' containing min. 51, max. 1000 mg/kg sulphur (2000 mg/kg until 1.1.2008).
- Exemptions to be applied until 1.1.2007;
 - (a) Diesel 50 containing max. 50 mg/kg sulphur,
 - (b) Diesel 500 containing min. 51 max. 500 mg/kg sulphur,
 - (c) Diesel 2000 containing min. 501, max. 2000 mg/kg sulphur and
 - (d) Diesel 7000 containing min. 2001, max. 7000 mg/kg sulphurmay be marketed by distributors.
- For all diesel types some technical specifications, such as density, distillation and setan number will be applied differently until 1.1.2007.



IMPLEMENTATION (*CONT'D*)

(Diesel Types)

- Diesel fuels are categorized as diesel fuels for non road machinery and forestry tractors (Decision no. 623/1 of the Board of EMRA). Implementation of this norm requires use of additional financial and administrative policies by relevant Ministries.
- Although projects and investments have been initiated for achieving fuel quality target, extension of exemption period for 1,5 year is under consideration by the Board of EMRA due to the delays caused by privatisation process.



IMPLEMENTATION (CONT'D) Transition Chart for Diesel Types

**As of
1.1.2007**

Marketing of 'Diesel 500' and "Diesel 7000" will be prohibited.

"Diesel 50" will be named as "Diesel"

"Diesel 2000" will be named as "Off Road Diesel"

**Until
1.1.2007**

Exemptions,
(i) Density as 860 kg/m^3 at $15 \text{ }^\circ\text{C}$,
(ii) Distillation, the heat for the production of the 95% (V/V) of the product to be max. 370,
(iii) Setan number for "Diesel 2000", "Diesel 7000" and "Off-Road Diesel" is applied as min. 49.

**As of
1.1.2008**

Max. sulphur content of "Off Road Diesel" will be fixed as 1000 mg/kg.



IMPLEMENTATION (CONT'D)

(fuel oils, etc.)

Regarding quality of fuel oils, marine fuels, kerosene and fuel naphtha;

- Technical studies for designing technical regulations and analytical methods for sampling and testing activities are in progress.
- All fuel types will be covered by the surveillance system.
- In addition Article 5 of the By-Law on Control of Air Pollution from Heating regulates fuel oil quality for combustion plants.
- The By-law prohibits the use of fuel oils with sulphur content more than 1.00% by mass if imported or with sulphur content more than 1.50% by mass if national product until 1.1.2007.



FUEL QUALITY MONITORING SYSTEM

- Fuel quality monitoring system covers notification and supervision and surveillance mechanisms.

- In order to establish supervision and surveillance mechanisms;
 - EMRA signed protocols with public administrations.
 - Sampling activities are being carried out by provincial staff of relevant public administrations.
 - Testing activities are being carried out by contracted accredited laboratory.

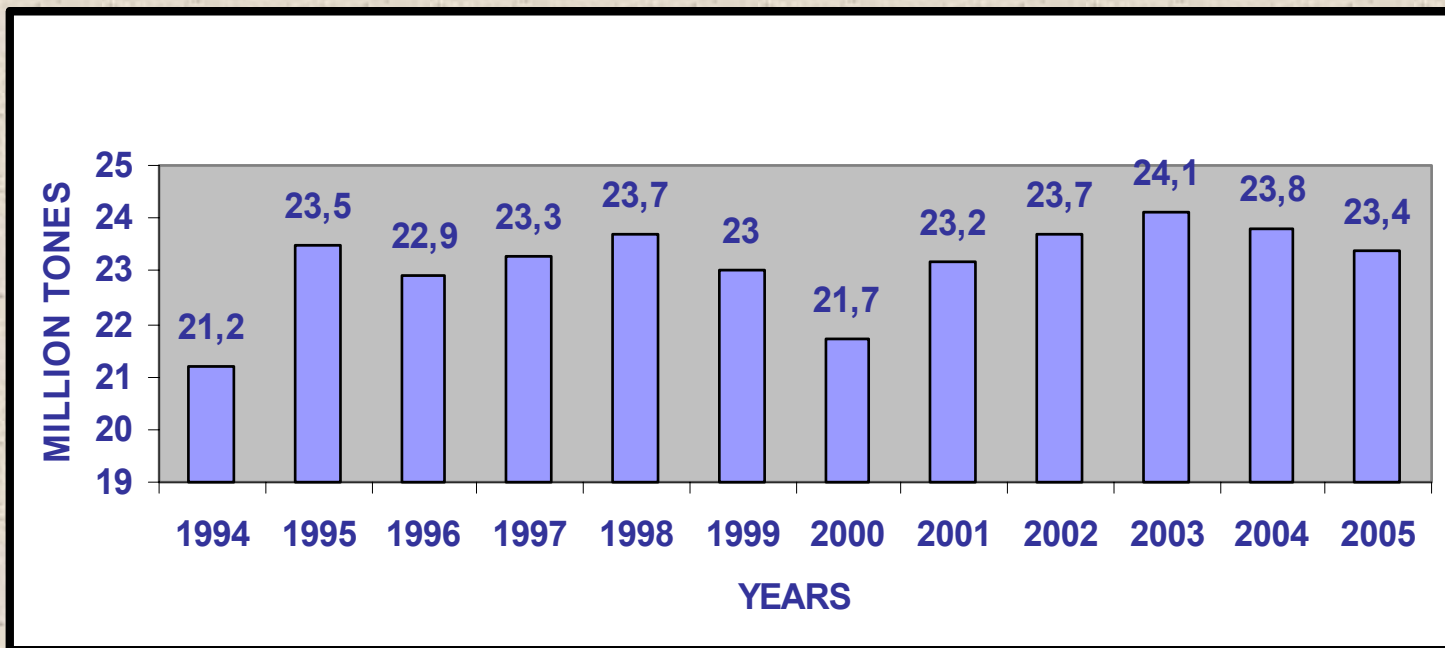
- Notification mechanism gathers information from refineries, distributors, eligible consumers, lube oil producers and bunker delivery licensees monthly, quarterly and annually.

- Data collected from both mechanisms are being evaluated by the EMRA with the aim of monitoring fuel quality.



IMPORTED CRUDE OIL BY YEARS

YEARS	2000	2001	2002	2003	2004	2005
Total Crude (TONNES)	21.671.150	23.242.875	23.661.811	24.096.407	23.830.052	23.369.400

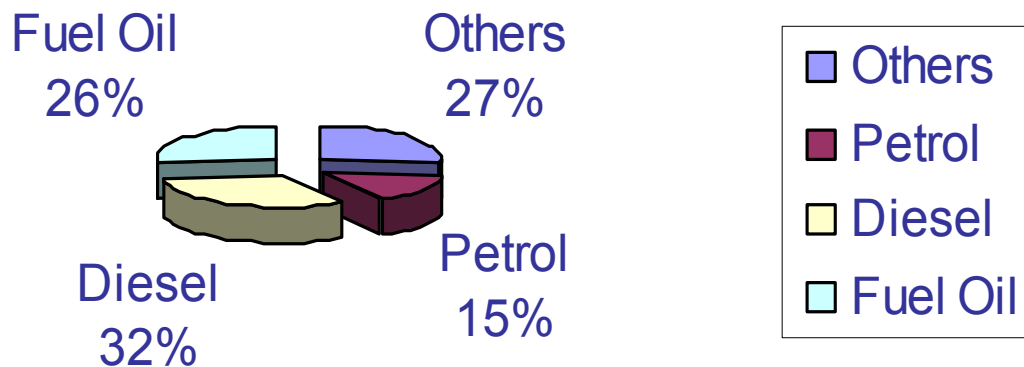


Source : TUPRAS



PRODUCTION VOLUME

PRODUCTS (1000 Tons)	Year 2005
Others	6.456
Petrol Types	3.547
Diesel Oil	7.566
Fuel Oil	6.320
Total	23.889



Source : TUPRAS



IMPORTED LIQUID FUEL (2005)

(ton)

Diesel Oil*	4,351,421	72.74%
Petrol Types**	761,818	12.73%
Fuel Oil***	868,883	14.52%
Total	5,982,122	100%

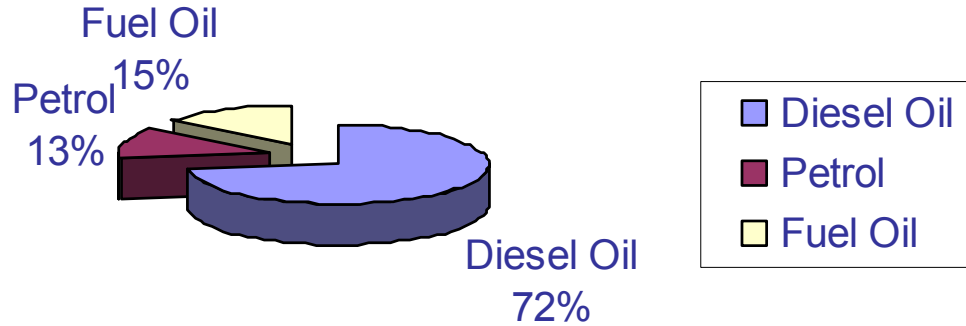
* Total Diesel Oil: for the purposes of transportation and heating

** Total Petrol Types: unleaded and leaded

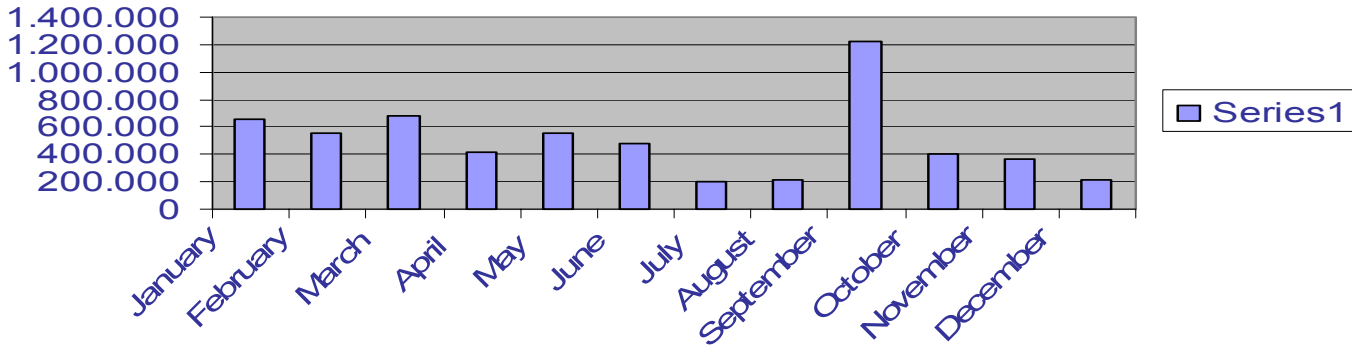
*** Total Fuel Oil: low sulphured and high sulphured fuel oil



IMPORTED LIQUID FUEL (2005)



By months (ton)

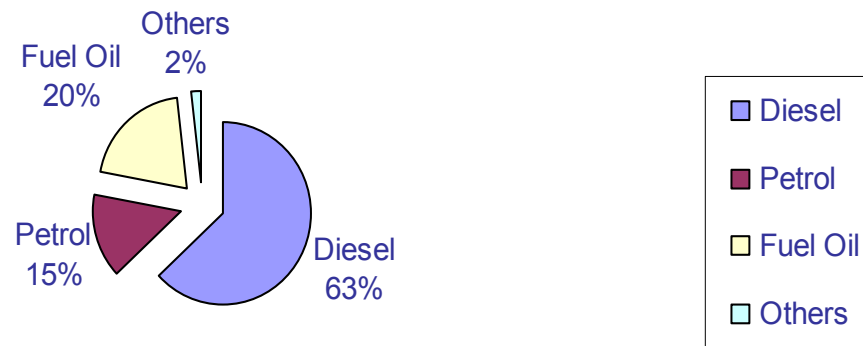


Source : EMRA Information System



LIQUID FUEL CONSUMPTION AS FOR 2005

Fuels	Consumption (ton)
Diesel Types	11.616.250
Petrol	2.752.292
Fuel Oil	3.707.453
Others	371.331
Total	18.447.328
Total white fuels	14.368.544



Source : EMRA Information System



EXCEPTIONAL CIRCUMSTANCES

- According to the Article 22 of PML, EMRA has authority to take specific decisions on exceptional circumstances. Specific decisions concerning the public shall be announced via media and bulletins.
- EMRA is competent authority to assess each case, and the Board of EMRA may consider crude oil supply crisis as exceptional circumstances.



EFFECTIVE ENFORCEMENT SYSTEM

- In order to establish an effective enforcement system EMRA;
 - put into force 7 by-laws, 8 communiqués and various decisions, such as 623/1
 - signed protocols with public administrations (Ministry of Industry and Trade and Ministry of Interior)
 - trained more than 1000 provincial staff about petroleum regulations.
 - assigned an accredited lab to perform testing activities,
 - organized training seminars on sampling activities.

- Regulations of EMRA about licensing and fuel quality have been applied by site inspections.
- Regarding enforcement system EMRA is,
 - carrying out technical studies about fuel quality regulations,
 - performing technical studies for promoting regional accredited labs,
 - organizing new training programmes for provincial staff
 - providing complimentary instruments for sampling activities.



EFFECTIVE ENFORCEMENT SYSTEM (CONT'D)

EMRA inspected more than 1,000 files. There are administrative sanctions and fines to violators (i.e. carried out market activities unlawfully or delivered fuels incompliant with technical specifications).



Thank you for your attention