PETDER

OIL INDUSTRY ASSOCIATION

2008

Sector Report

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I. SUMMARY OF THE 2008 SECTOR REPORT:

a) Developments in the Fuel Market:

- When compared to 2007, the **total diesel fuel consumption** (diesel fuel –low sulfur- and off road diesel) in 2008 increased by **0.9**% and reached **15.47 million m³**. In 2008, off road diesel consumption, where maximum sulfur content ranges between 1000 ppm and 7000 ppm, **decreased by 4.1**% compared to 2007 and regressed to approximately **12.11 million m³**. Although there appeared to be an upward trend in **diesel fuel** (low sulfur) consumption in 2007, with sulfur content up to 50 ppm, it continued to **increase by 24.4%** and compared to the previous year, total consumption reached **3.36 million m³** in 2008.

- The 2008 **total gasoline** consumption (95, 97 and higher octane unleaded gasoline and blended unleaded gasoline) compared to 2007, **decreased by 9.7**% and reached approximately **2.96 million m³**. **LRP gasoline** consumption, which was used instead of premium gasoline by cars manufactured via older technology, showed a **downward** trend of **48.4%** in previous years; **108 thousand m³** of the product was consumed in 2008.

- According to estimations for 2008, as published in the Republic of Turkey's Energy Market Regulatory Authority report titled "Liquefied Petroleum Gases (LPG) Market, Market Figures of **2008** January - September Period", the **auto-gas LPG** consumption, compared to 2007, **increased by 4.5%** and reached **2.1 million tons** and the total LPG consumption including bulk, gas cylinder and auto-gas decreased by **2.3% reaching 3.4 million tons**.

- Compared to 2007, the total consumption of **automotive fuels** (described as the total of gasolines, Diesel Fuels and LPG auto-gas) in 2008 **decreased by 0.3%** and reached **17.47 million tons**.

- In 2008, black products (fuel oil and heating oil) consumption **increased by 6.2%**, compared to 2007, and reached **2.72 million tons** (due to problems pertaining to the natural gas supply, fuel oil demands of power plants increased).

- The **total fuel consumption** in 2008, which is defined as the sum of white and black products; i.e. Gasoline, Diesels, , Heating Oil and Fuel Oil, **increased by 0.1**%, compared to 2007, and became **18.10 million tons**

- Total lubrication oil consumption (represented by market figures provided by 9 major producers) in 2008 **decreased by 3.1%** and became **340,000 tons**. This figure assumed to represent 80-85% of the total lubricating oil market.

b) Taxes provided by the fuel and automotive fuels sectors and their trading volumes:

- The fuel and LPG sector's are among the leading sectors that provide a significant amount of taxes in terms of indirect taxes. According to the calculations, indirect taxes (VAT and Special Consumption Tax) provided from fuel consumption **increased by 11**% compared to the previous year and reached **28.5 billion TL** in 2008. Based on these calculations, the total amount of the indirect taxes obtained through **LPG** consumption was approximately **5.1 billion TL**. Therefore, total amount of the indirect tax incomes, within the LPG sectors **increased by 11.6%** compared to the previous year and totaled to **33.6 billion TL**.

- Despite that, the consumption amount in the fuel market (black and white products) increased by only **0.1**% in 2008, which approximately remained the same, the trading volume **increased** by **20**% and reached **57 billion TL** from **48 billion TL**. This increase resulted from the increase in VAT, which stemmed from significant

increases in fuel prices and in Special Consumption Taxes at the end of 2007.The total trading volume of the petroleum products sector including LPG, Lubricants, Aviation and Marine Fuels is calculated as 75 billion TL.

c) Crude Oil Prices:

- Oil prices, which have been increasing continuously since the beginning of 2005, continued to increase until July 2008. Oil prices that reached a historical record high of **144.22 USD** per barrel in July 2008 started to drop as of August 2008. In September 2008, oil prices started to drop rapidly by the cause of the global economic crisis and decreased to about **40 USD – 50 USD** at the time when the report was published. The average oil prices in 2008 was about **97.24 USD** per barrel.

d) General Assessment of the Oil Sector for 2008:

2008 was a difficult year where oil prices reached the highest level in history; however, following this increase, the prices started to fall rapidly as the result of the global economic crisis. Due to high oil prices and high taxes, the distributors not only have been affected in their long-term market receivables but also have been effected with the financial burden of the extra mandatory stock costs; these have negatively affected the oil market in our country.

When the 2008 results are examined, the increase reported in the automotive fuel market and the level maintained, which is higher than the economic growth during the last four years, shows stagnation. In addition, indirect taxes provided by the sector, to the national economy, increased by 11% and as a result of high oil prices, the amount of fuel traded in the domestic market increased by 20%.

In addition to these developments, an important debate was initiated in the last quarter of 2008 due to the sudden drop in the oil prices, which the price drops is not being reflected on the pump prices synchronously. With this situation, enterprises in the sector issued public statements pertaining to the formation of crude oil prices those announced in USD in the international markets as well as the pump prices of gasoils, diesel and auto LPG, which carries a high amount of fixed taxes.

In 2008 according to the Fuel Sector Report, published by the Competition Authority, there were no antitrust violations in the sector, but drawed attention to structural hurdles, arising from applicable laws,. Following these developments, the Energy Market Regulatory Authority published the "Pricing Regulation" in 2008, which was construed as an important indicator of the alienation from the free market structure that had successfully developed within the last five years.

On the other hand, technical barriers arising from the "over regulated" market structure, which are frequently turned into an issue by the sector, have resulted in serious cost increases within the sector. For example, the loss in the national economy created by these technical problems and delays during the importing operations, especially because of the variable oil prices of last year, is estimated to be a few hundreds of million USD only in 2008.

When the oil market structure and its actors are examined, it is evident that many new distribution companies have penetrated into the market in the recent years and that their market share growth is greater than the sector's growth in terms of their total consumption at the end of 2008. In 2007 and 2008, important developments like acquisitions, changes in partnership structures, and new partnerships were established in the sector.

These important developments suggest that 2009 will be extremely important and crucial for the sector during a period where the domestic market continues to shrink in the first few months of 2009 and the financial burden on distribution companies continues to grow while the negative effects of the global economical crisis is felt deeper within our country .

The fuel data used in this report was compiled by the independent research firm, Price Waterhouse & Coopers, based on the voluntary statements made by 11 fuel distribution companies with the highest market shares and whose total market shares are over 95%. This data accurately represents 95% of Turkey's total fuel market and it represents the remaining 5% in terms of the estimations made according to the official consumption amounts of the previous years. The significant increases estimated, during the 2007-2008 bracket, were projected to be 5%. The calculations in this report were done with the consideration that the share of this bracket was 5%. When correcting the collected data, based on the total, data from the Energy Market Regulatory Authority was used for Turkey's total consumption after 2005 and data from the Directorate General for Oil Affairs was used for Turkey's total consumption before 2005. LPG figures were supplied from the reports of the Energy Market Regulatory Authority and the Turkish LPG Association.

e) Summary Table of market status

Annual Consumptions		2007	2008	Change
Total White Products	**m3**	**18,628,511**	**18,442,110**	**-1.0%**
95 Octane Unleaded	m3	2,685,333	2,542,009	-5.3%
97 Octane Unleaded and Higher	m3	382,499	309,367	-19.1%
Unleaded Gasoline with Additive	m3	209,256	107,985	-48.4%
Total Gasolines	**m3**	**3,277,088**	**2,959,361**	**-9.7%**
Kerosene	m3	18,175	13,189	-27.4%
Offroad Diesel	m3	12,628,709	12,106,367	-4.1%
Diesel Fuel (Low Sulfur)	m3	2,704,539	3,363,193	24.4%
Total Diesels	**m3**	**15,333,248**	**15,469,560**	**0.9%**
White Products Total	tons	15,510,878	15,375,834	-0.9%
Unleaded 95	tons	2,081,133	1,970,057	-5.3%
Unleaded 98	tons	296,437	239,759	-19.1%
Unleaded Gasoline with Additive	tons	162,173	83,688	-48.4%
Total Gasolines	**tons**	**2,539,743**	**2,293,505**	**-9.7%**
Kerosene	tons	14,540	10,551	-27.4%
Offroad Diesel	tons	10,671,259	10,229,880	-4.1%
Diesel Fuel (Low Sulfur)	tons	2,285,335	2,841,898	24.4%
Total Diesels	tons	12,956,595	13,071,778	0.9%
Heating Oil	tons	455,643	375,318	-17.6%
Fuel Oil No: 6	tons	2,106,217	2,346,240	11.4%
Total Black Products	**tons**	**2,561,860**	**2,721,558**	**6.2%**
Total Fuels	**Tons**	**18,072,738**	**18,097,392**	**0.1%**
Gas cylinder	tons	1,309,950	1,169,959	-10.7%
Bulk	tons	201,070	169,500	-15.7%
Auto-gas	tons	2,007,025	2,096,433	4.5%
Total LPG	**tons**	**3,518,045**	**3,435,892**	**-2.3%**
Total Automotive Fuels*	**tons**	**17,517,903**	**17,472,267**	**-0.3%**

		2007	2008	Change
Brent crude oil	**USD / barrel**	**72,4**	**97,2**	**34.3%**
Fuel Consumption Trading Volume**	**TL billion**	**48**	**57**	**20%**
Fuel Total Indirect Tax**	**TL billion**	**26**	**29**	**11%**
LPG Consumption Trading Volume***	**TL billion**	**10**	**12**	**18%**
LPG Total Indirect Tax	**TL billion**	**4**	**5**	**16%**
Engine Lubricants	**tons**	**151,405**	**133,097**	**-12.1%**
Gear and Transmission Oils	**tons**	**24,883**	**22,928**	**-7.9%**
Chemicals	**tons**	**27,346**	**31,530**	**15.3%**
Industrial Lubricants	**tons**	**107,836**	**108,944**	**1.0%**
Marine Lubricants and Grease	**tons**	**39,368**	**43,505**	**10.5%**
Total Lubricants	**tons**	**350,838**	**340,004**	**-3.1%**

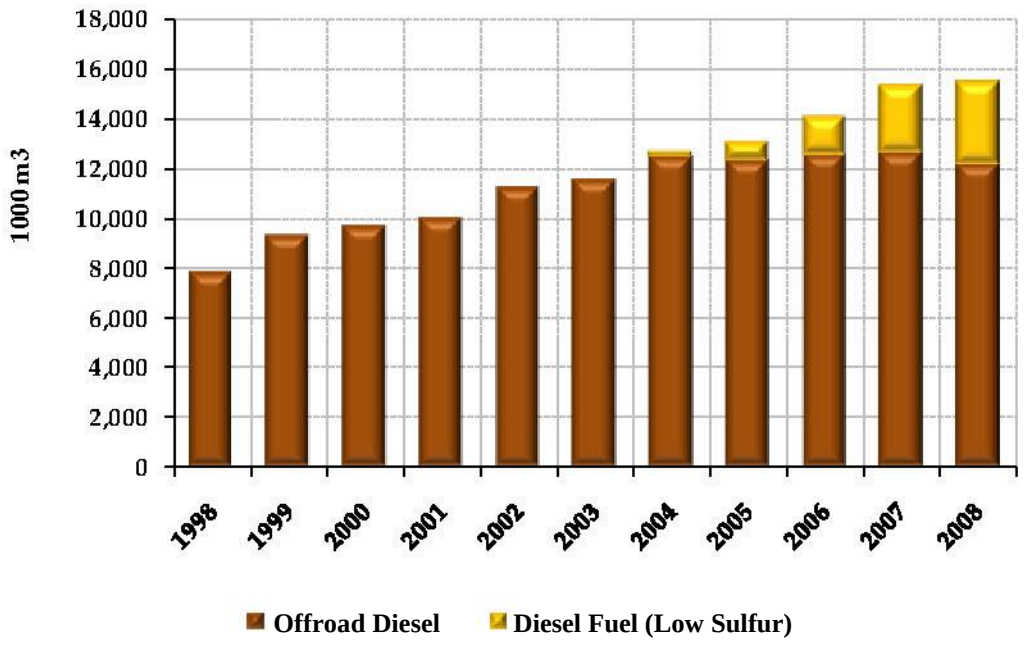
*** Sum Total of White Products and Auto-gas**
**** Represents black + white products,**
***** These values were obtained from the Energy Market Regulatory Authority's projections based on the data from the last quarter.**
Data relating to the Fuels were compiled by PwC, based on the statements made by 11 distribution companies and data relating to the Lubricating Oils were compiled based on the statements made by 6 distribution companies voluntarily.

II: TURKEY'S FUEL STATISTICS FOR 2008:

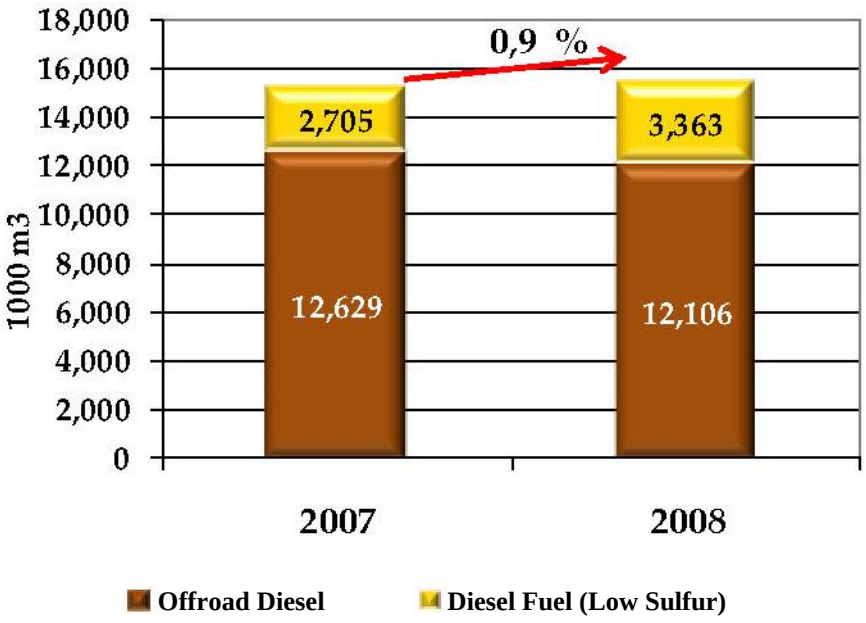
a) Diesel Fuels

The upward trend in **total diesel fuel** consumption that began in 1998 slowed down significantly in 2008. Compared to 2007, the **total diesel fuel consumption** in 2008 increased by **0.9**% and reached **15.47 million m³**. This increase is much behind the increase rates of registered in diesel fuel within the last four years, which were between 6% and 10%. In 2008, **diesel fuel** (low sulfur) consumption **increased by 24.4%** and reached **3.36 million m³.** Thus, **diesel fuel**'s (low sulfur) share in the total diesel fuel consumption increased from **17.6%** to **21.7%**. When compared to 2007, 2008 **off road diesel** consumption, which has the highest share among all diesel fuels, where the maximum sulfur content is between 1000 ppm and 7000 ppm, **decreased by 4.1%** and regressed to approximately **12.11 million m³**.

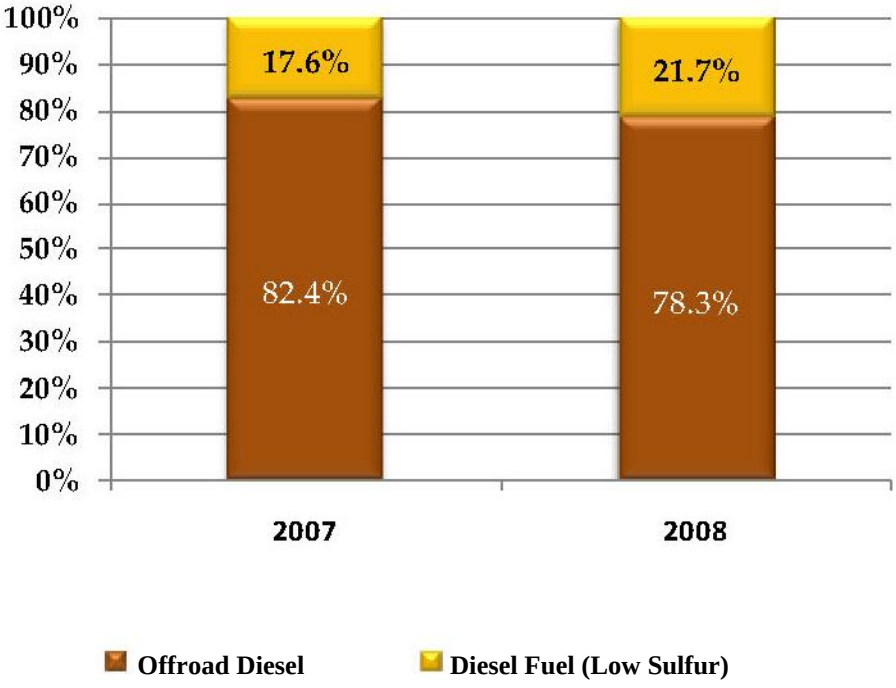
Total Diesel Fuel Consumption According to Years



Total Diesel Fuel Consumption



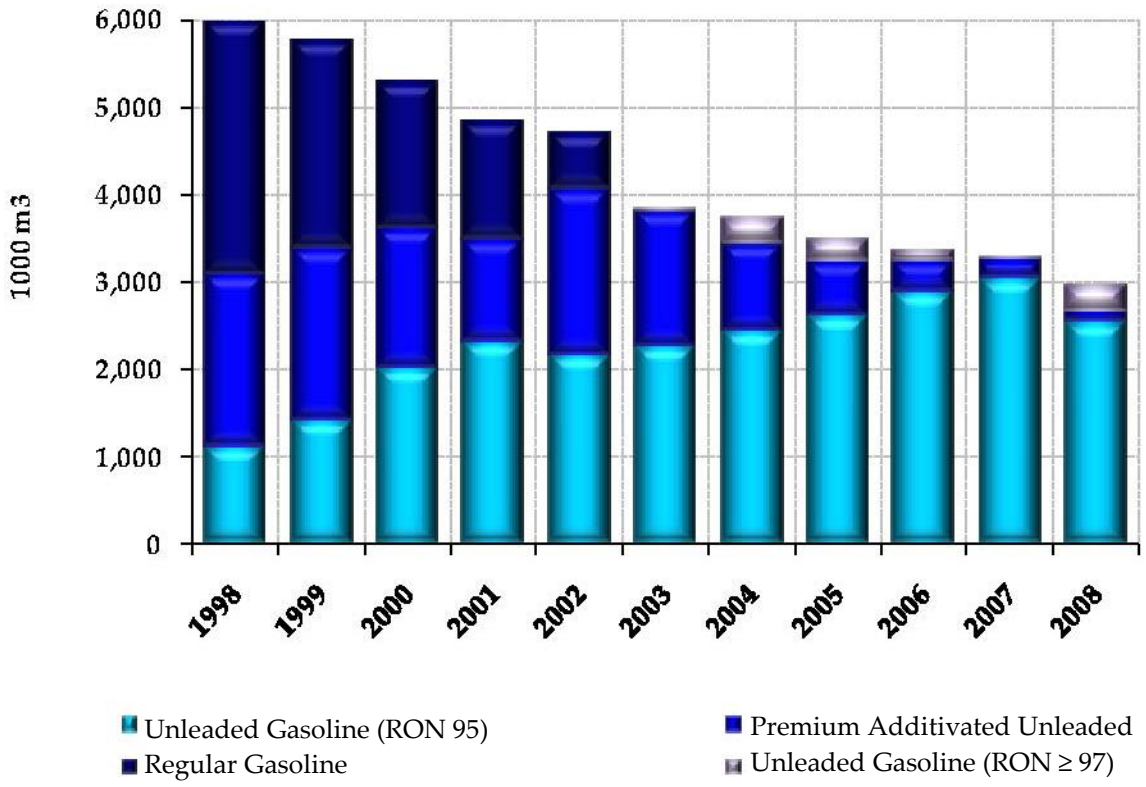
Shares of Diesel Fuel Consumption per Types;



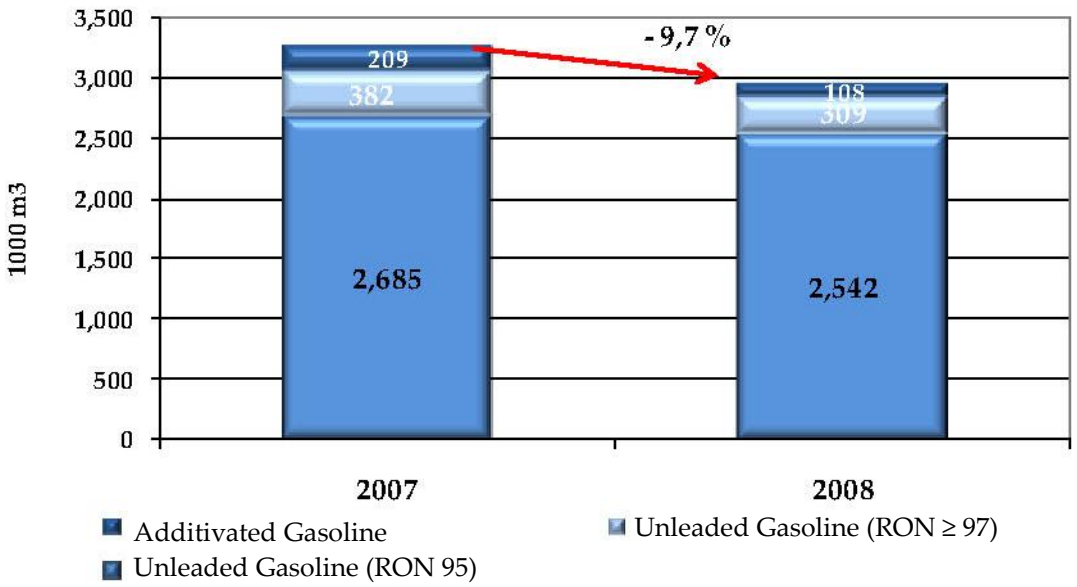
b) Gasolines

In 2008 **total gasoline** consumption (95, 97 octane unleaded gasoline and higher and additivated unleaded gasoline) compared to 2007, **decreased** by **9.7%** and approximately reached **2.96 million m³**. The recent downward trend in **additivated unleaded gasoline** consumption, which is only being used by cars with outdated technology, continued in 2008 where its consumption decreased by **48.4%** and regressed to **108,000 m³.** The decrease in gasoline consumption is resulted by auto-LPG , which is taking increasing amounts of shares from gasoline consumption with the price advantage against gasolines due to lower special consumption tax rates, and diesel motor vehicles usage becoming widespread; this resulted in a decrease in fuel consumption.

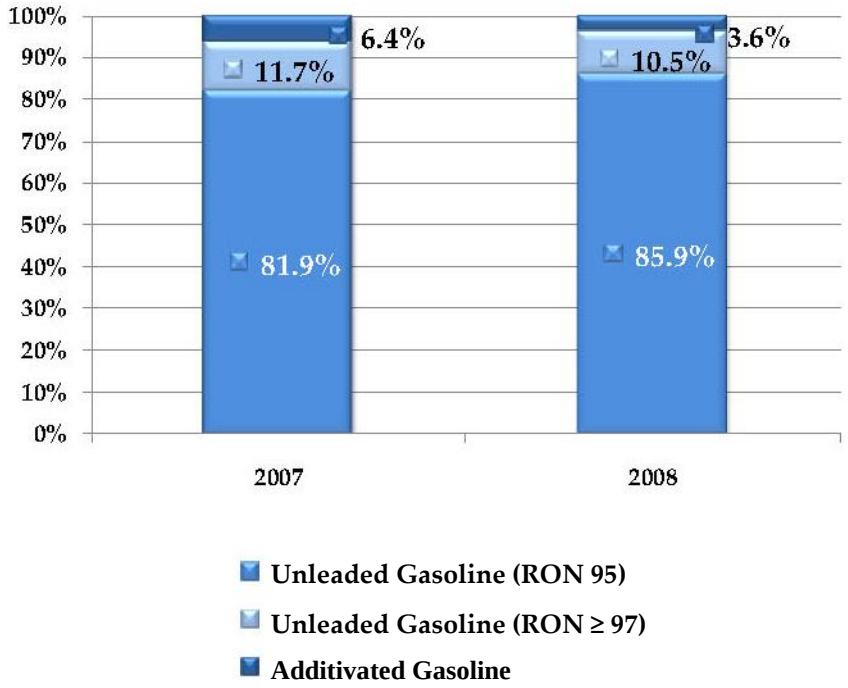
Total Gasoline Consumption According to the Years



Total Gasoline Consumption



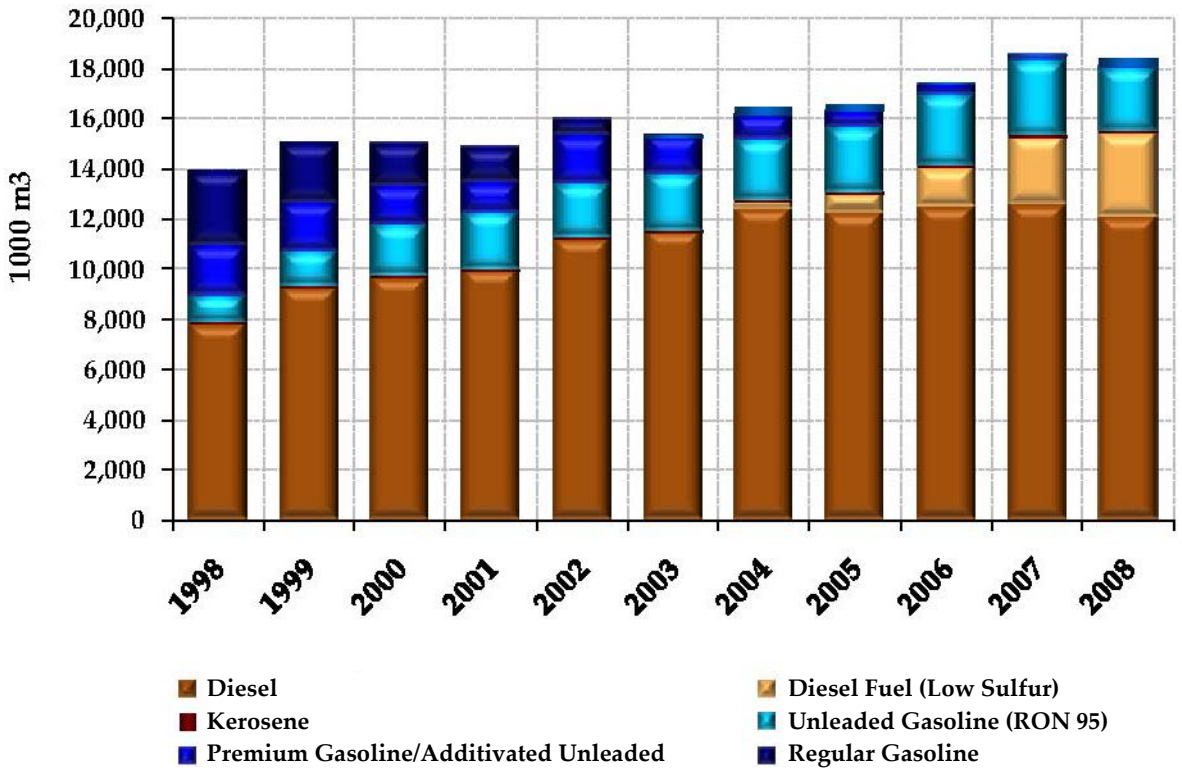
Shares Of Gasoline Consumption per Types ;



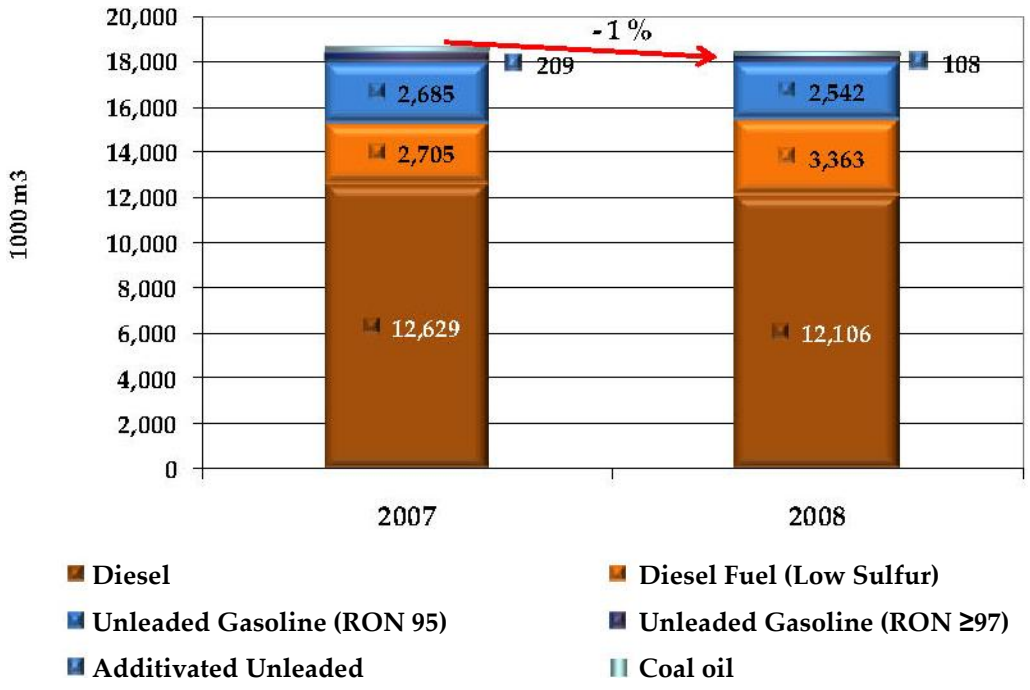
c) White Products (Gasolines, Diesel Fuels and Kerosene)

The total consumption of **white products** in 2008, compared to 2007, **decreased** by **1.0**% and reached approximately **18.44 million m³**. The changes, in total white product consumption between 1997 and 2008 are given in the chart below. As seen in the chart that, diesel fuel's share in total white product consumption increases, the downward trend in gasolines consumption continues.

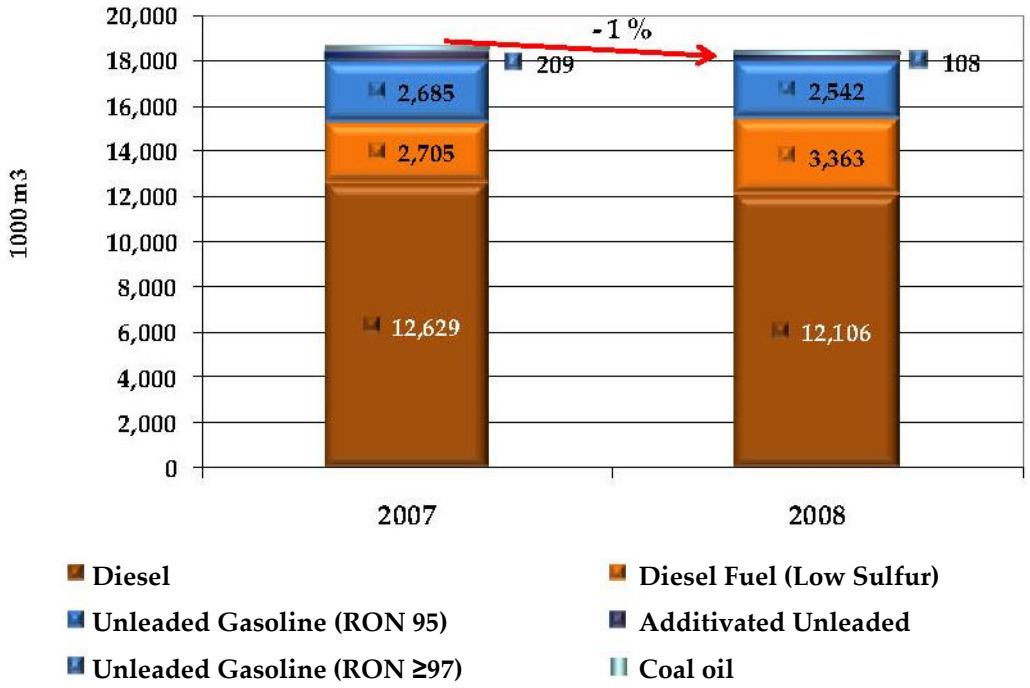
Total White Product Consumption According to the Years



Total White Product Consumption



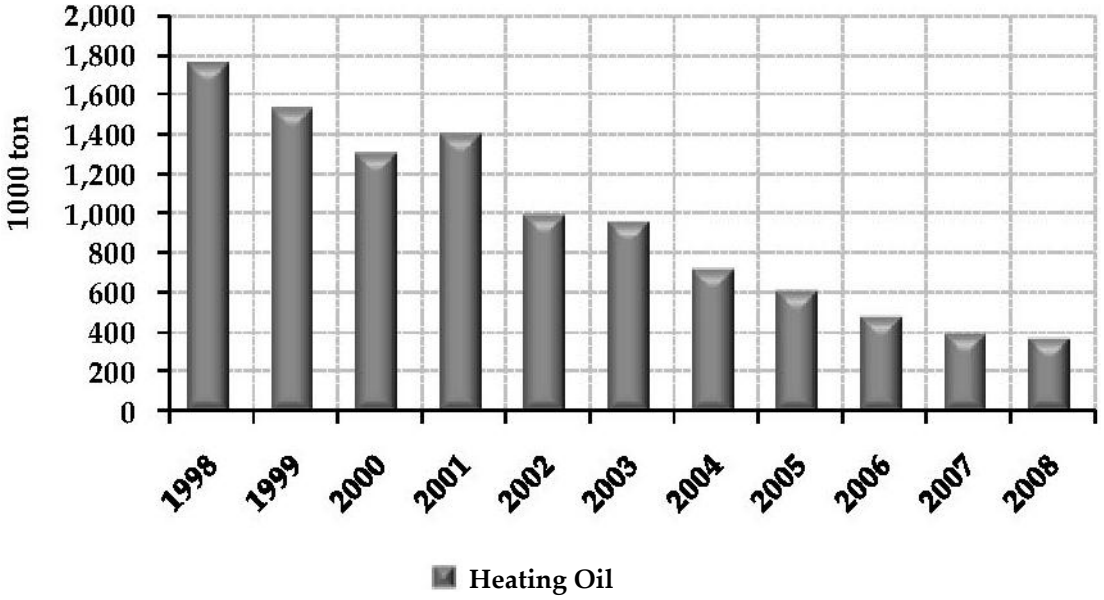
Shares of White Product Consumption per Type;



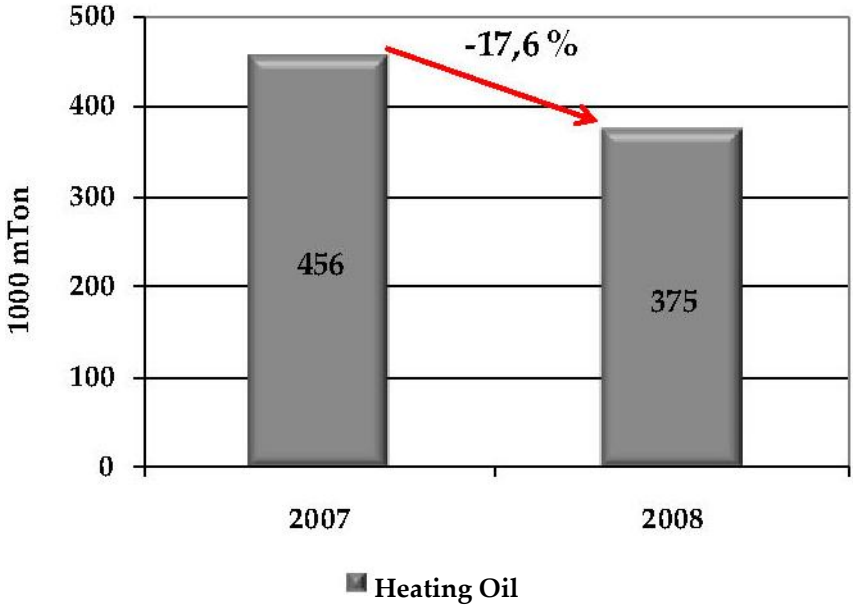
d) Heating Oil

The total **heating oil** consumption **decreased** by **17.6**% in 2008 compared to 2007 and became approximately **375 thousand tons**. The said consumption amount is below the consumption amount of the last 10 years.

Heating Oil Consumption According to the Years



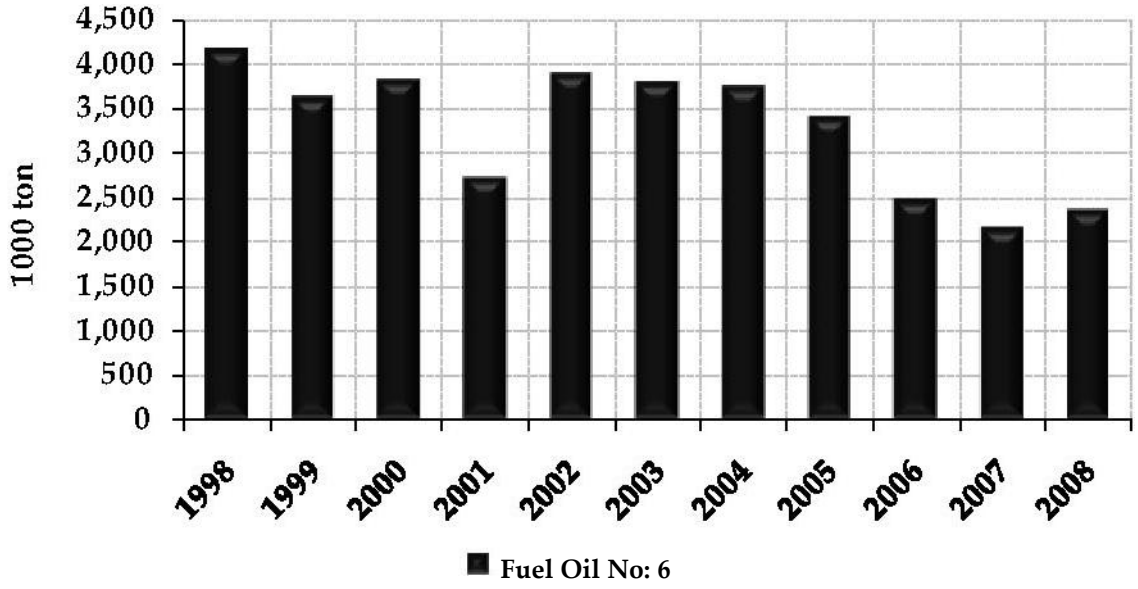
Heating Oil Consumption



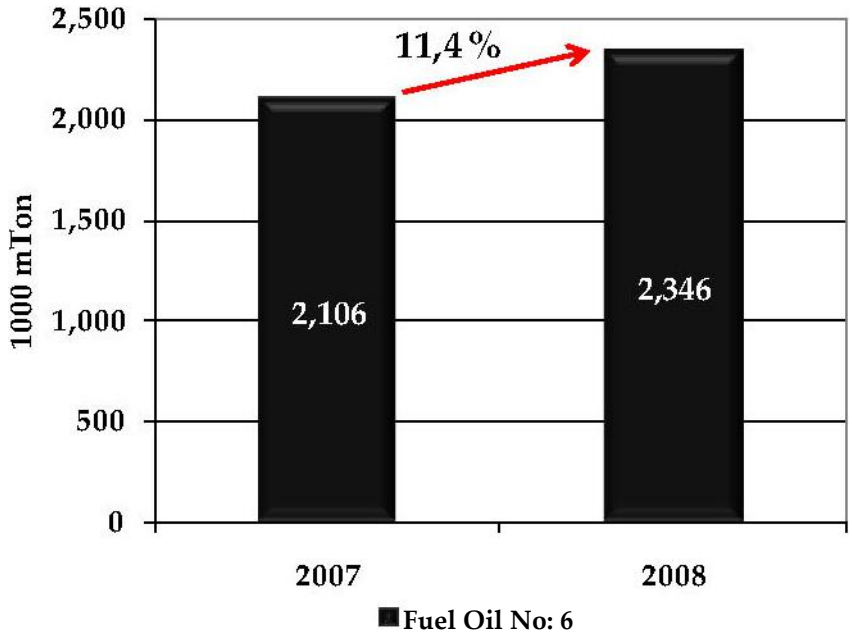
e) Fuel Oil No. 6

Compared to 2007, in 2008, **Fuel Oil No: 6** consumption **increased** by **11.4**% and reached **2.35 million tons**. This increase in fuel oil consumption resulted from the defects in natural gas supply during the last months of 2007 and continued into the first half of 2008.

Fuel Oil No: 6 Consumption by Year



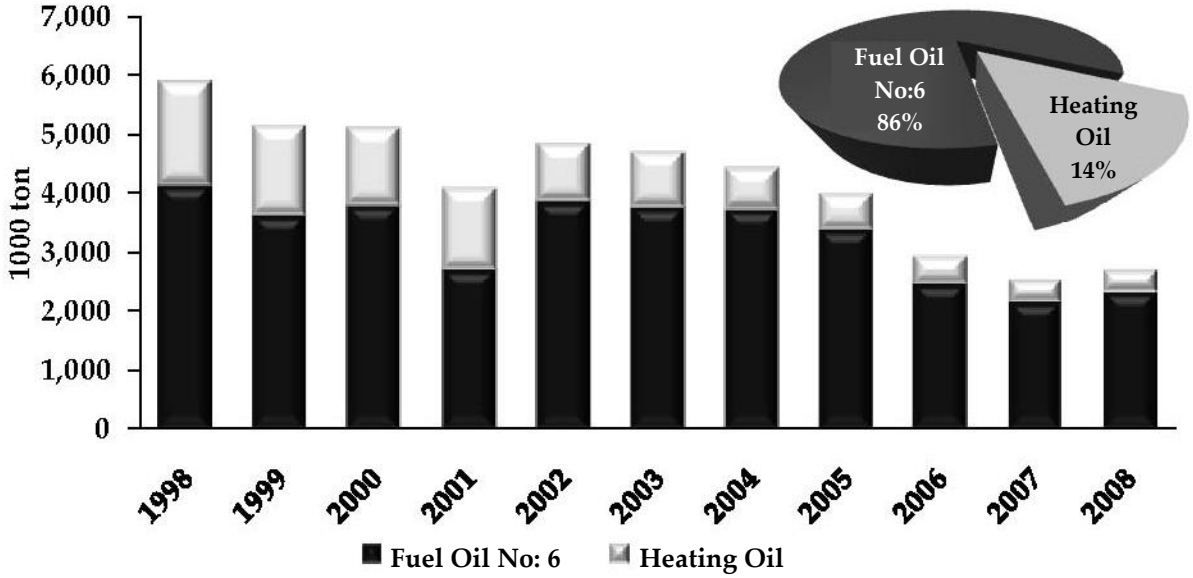
Fuel Oil No: 6 Consumption



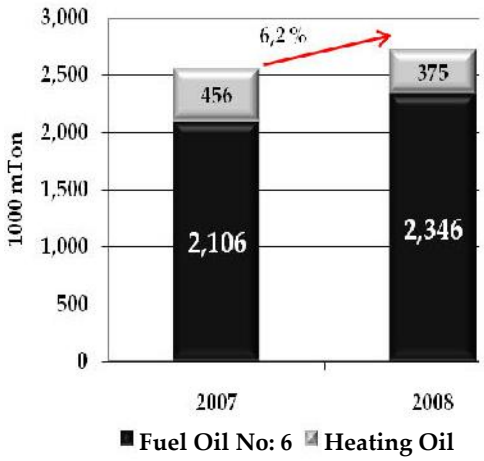
f) Black Products

Consumption of **Black products** in 2008, compared to the same period in 2007, **increased** by **6.2**% and reached **2.72 million tons**. Unlike previous periods, it is estimated that the difficulties experienced in the natural gas supply caused black products consumption to increase.

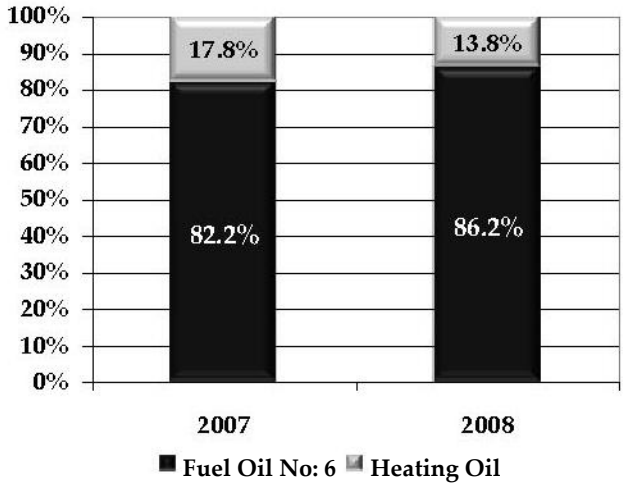
Black Product Consumption by Year



Black Product Consumption



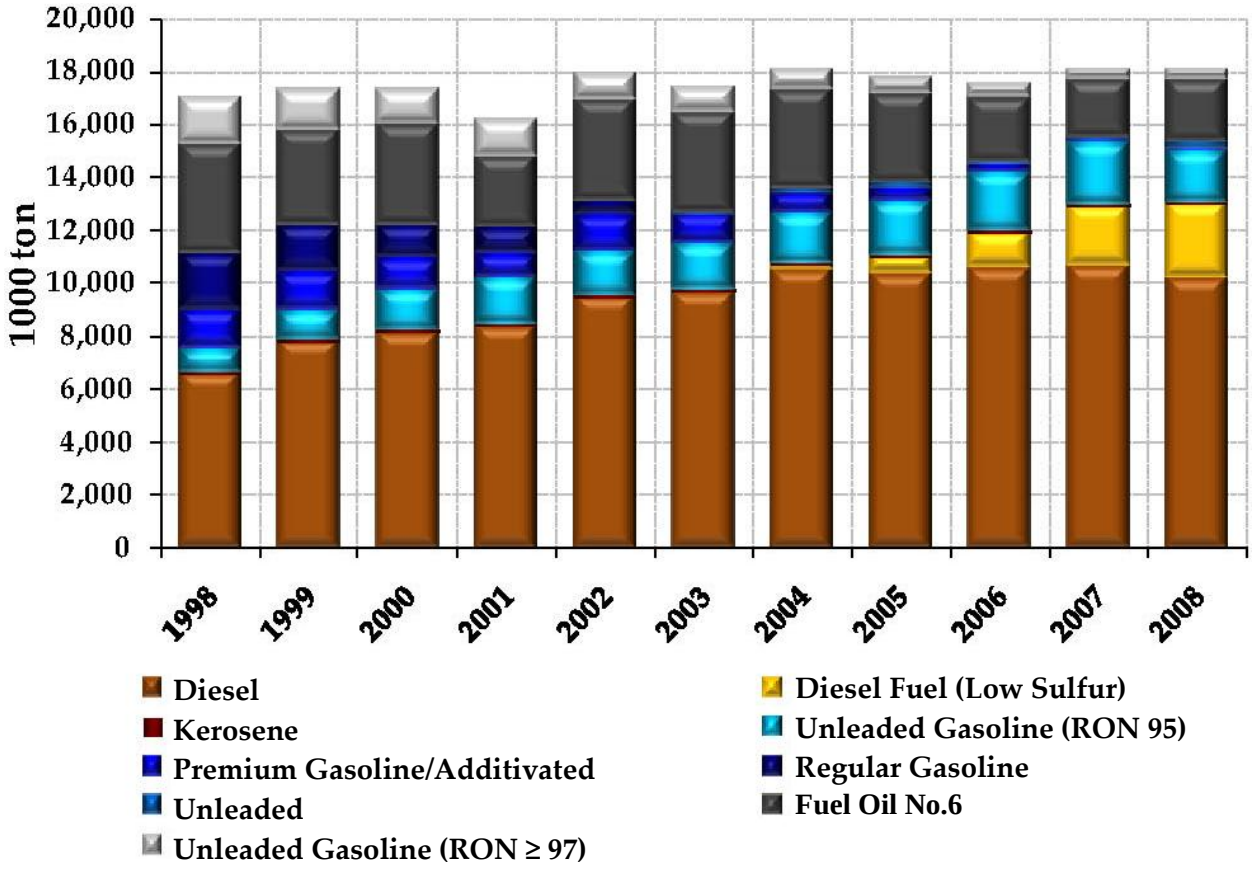
Distribution per Type



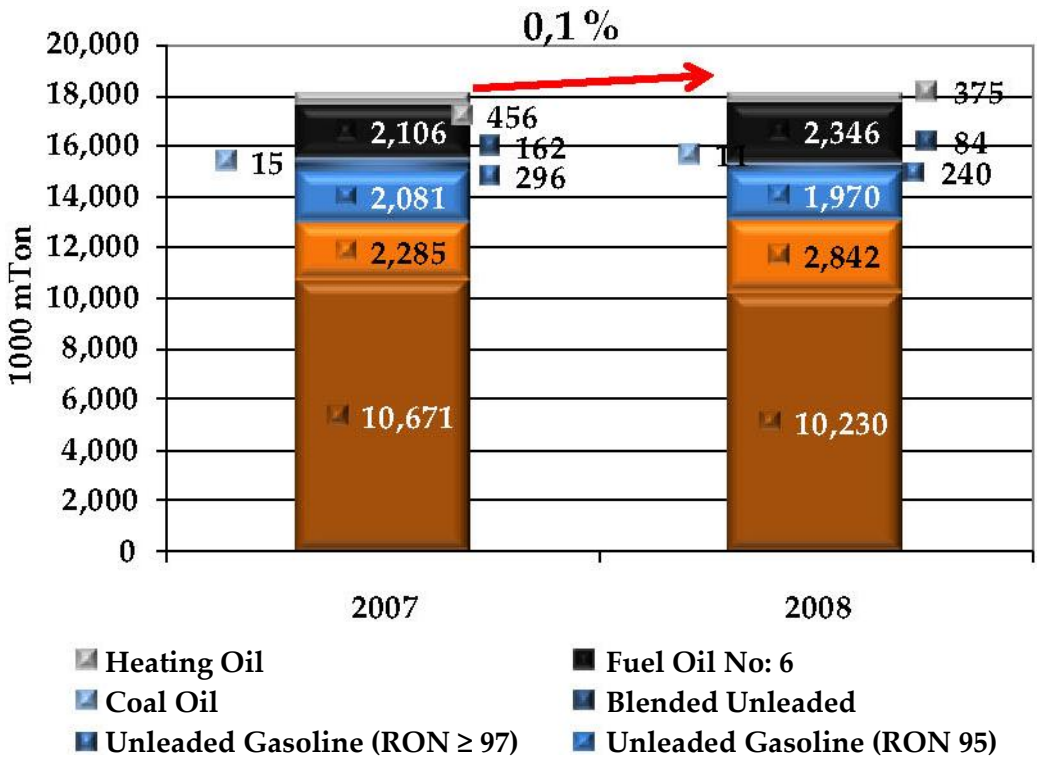
g) Fuels;

Total fuel (Gasolines, Diesel Fuels, Kerosene, Heating Oil and Fuel Oil) consumption **increased** by **0.1**% in 2008, compared to 2007, and became **18.10 million tons**.

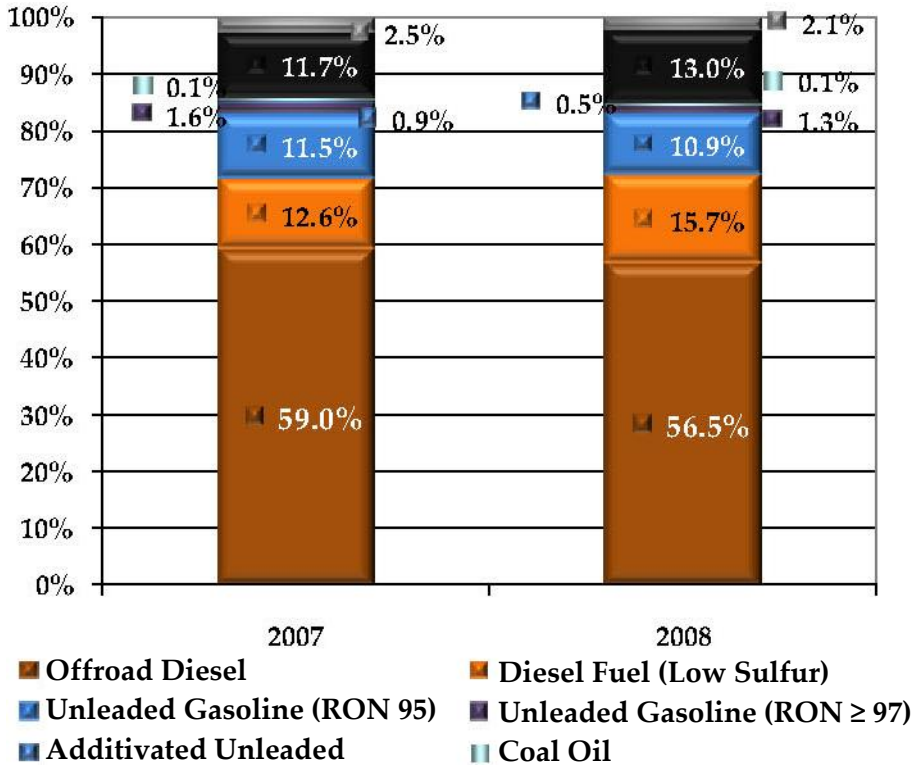
Total Fuel Consumption by Year



Total Fuel Consumption



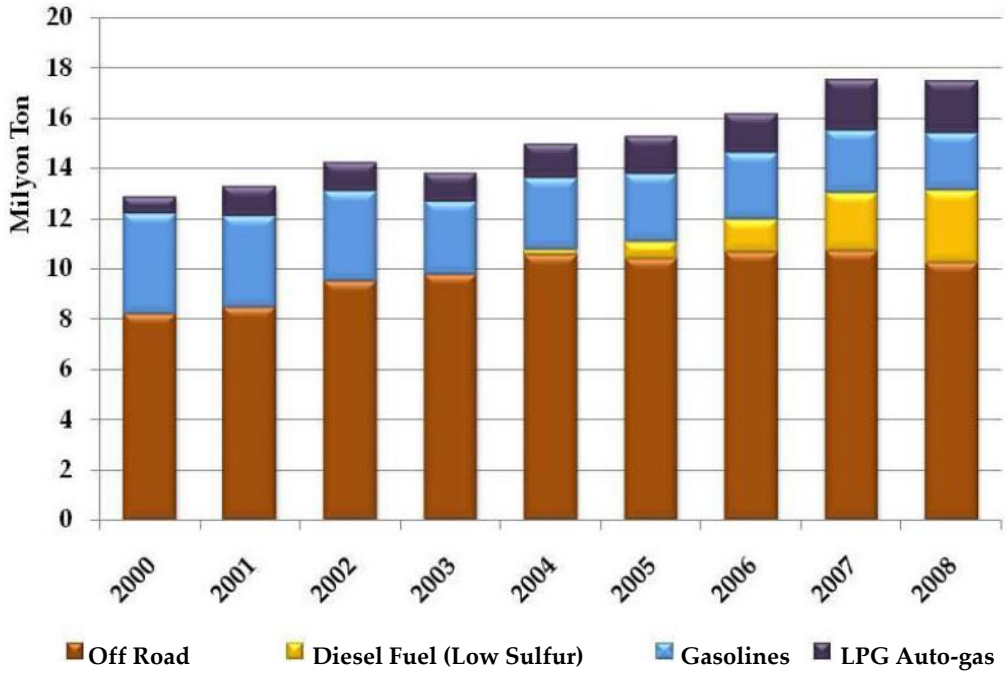
Shares of Total Fuel Consumption per Type;



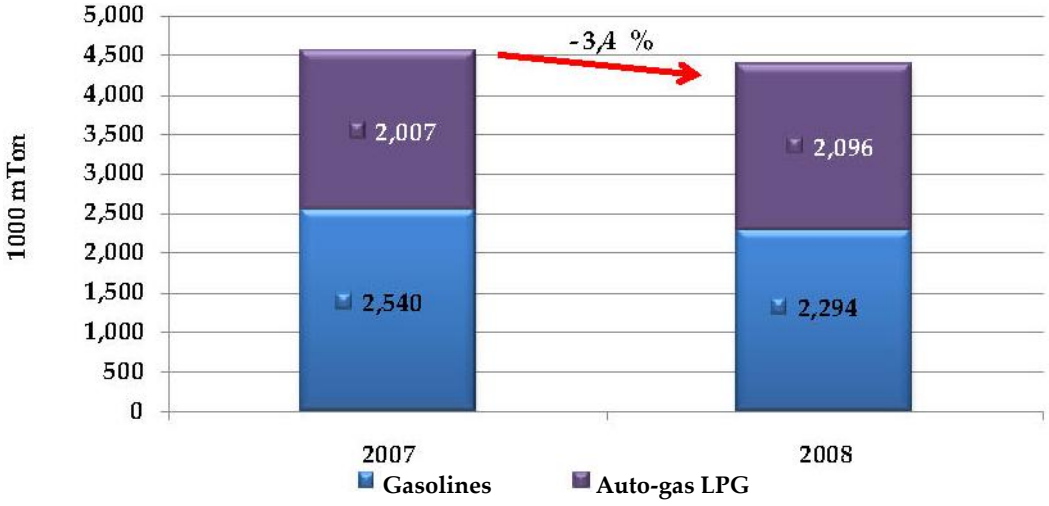
h) Automotive Fuels;

Compared to 2007, the **total automotive fuels** (Gasoline, Diesel Fuels and LPG Auto-gas) consumption **decreased** by **0.3**% and became **17.47 million tons** in 2008.

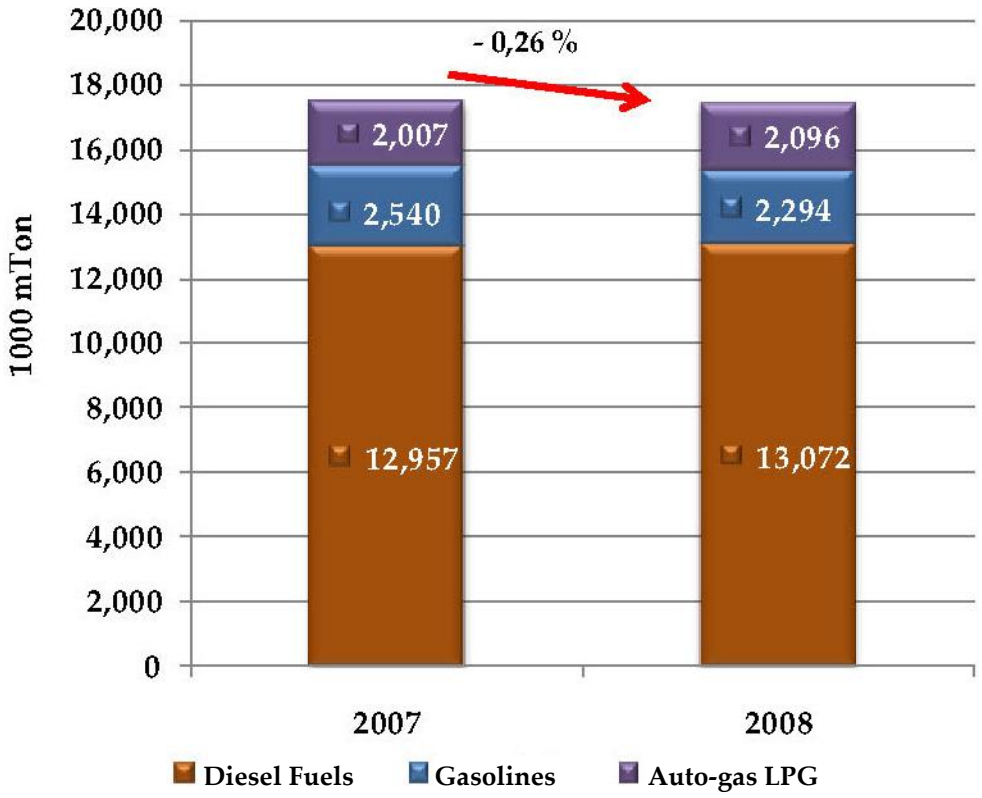
Automotive Fuels Consumption by Year



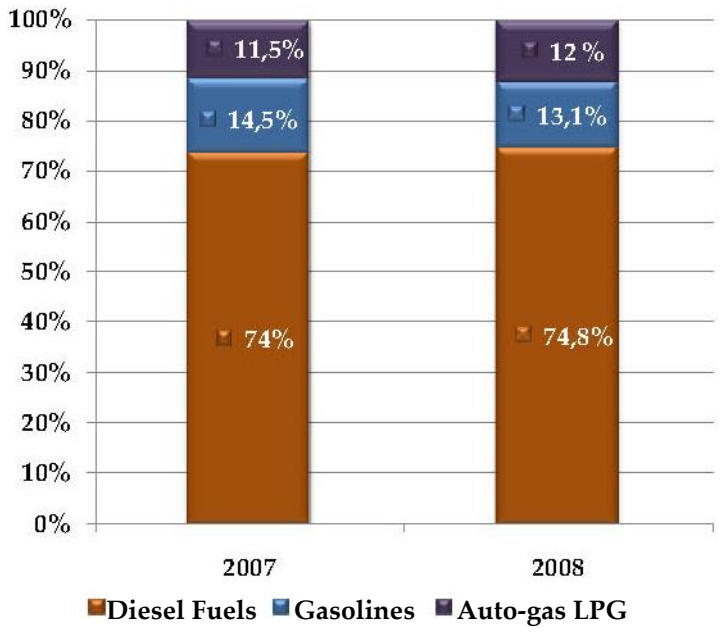
Fuel and LPG Auto-gas Consumption



Total Automotive Fuels Consumption



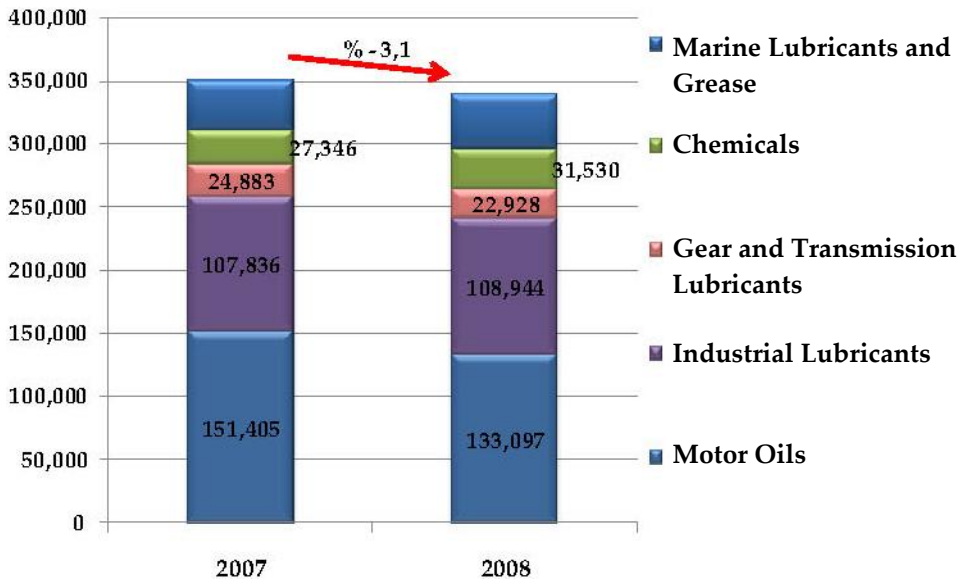
Shares of Total Automotive Fuels Consumption per Type;



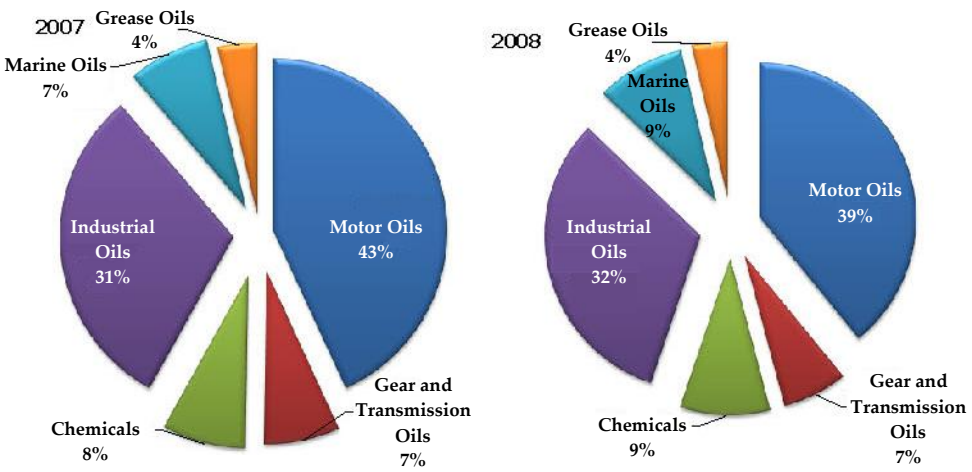
j) Lubricants

According to the information provided from the voluntary participation of AKPET, ALPET, BP, CASTROL, EXXONMOBIL, OPET, POAŞ, SHELL, and TOTAL companies, which is believed to represent 80% of the entire market, when compared to the same period of the last year, in 2008, the total of lubricating oil consumption **decreased** by **3.1**% and became **340 thousand tons**. In the chart below, the total lubricating oils market of 2008 is compared to 2007;

Lubricants Consumption (Tons)

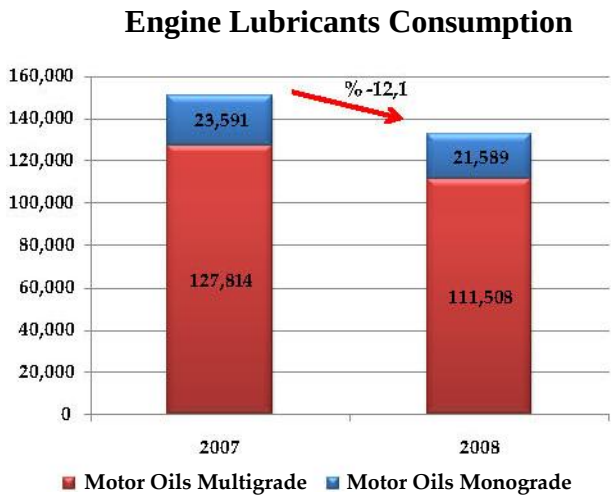


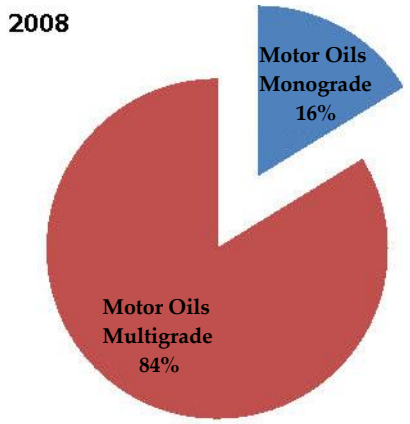
Percentages of the Product Groups within Lubricants



- **Engine Lubricants**

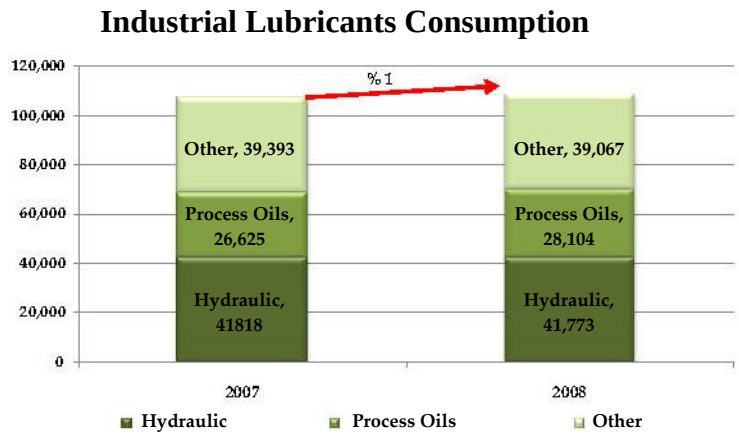
When compared to the previous year, motor oil (monograde and multigrade) consumption in 2008 **decreased** by **12.1**% and became **133 thousand tons**. During this period, motor oils had approximately 39% of shares within total lubricating oil products. Periodic comparison charts relating to the motor oils are provided below;

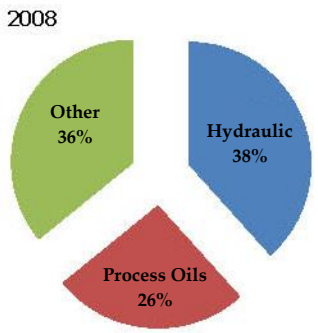




- **Industrial Lubricants**

The total of industrial lubricants (hydraulic, process, other) consumption **increased** by **1**% and became **109 thousand tons** in 2008. Industrial oils held approximately 32% of shares within total lubricating oil products in 2008. Comparison charts relating to the industrial oils are given below;





III- INDIRECT TAXES AND SECTORAL TRADING VOLUME

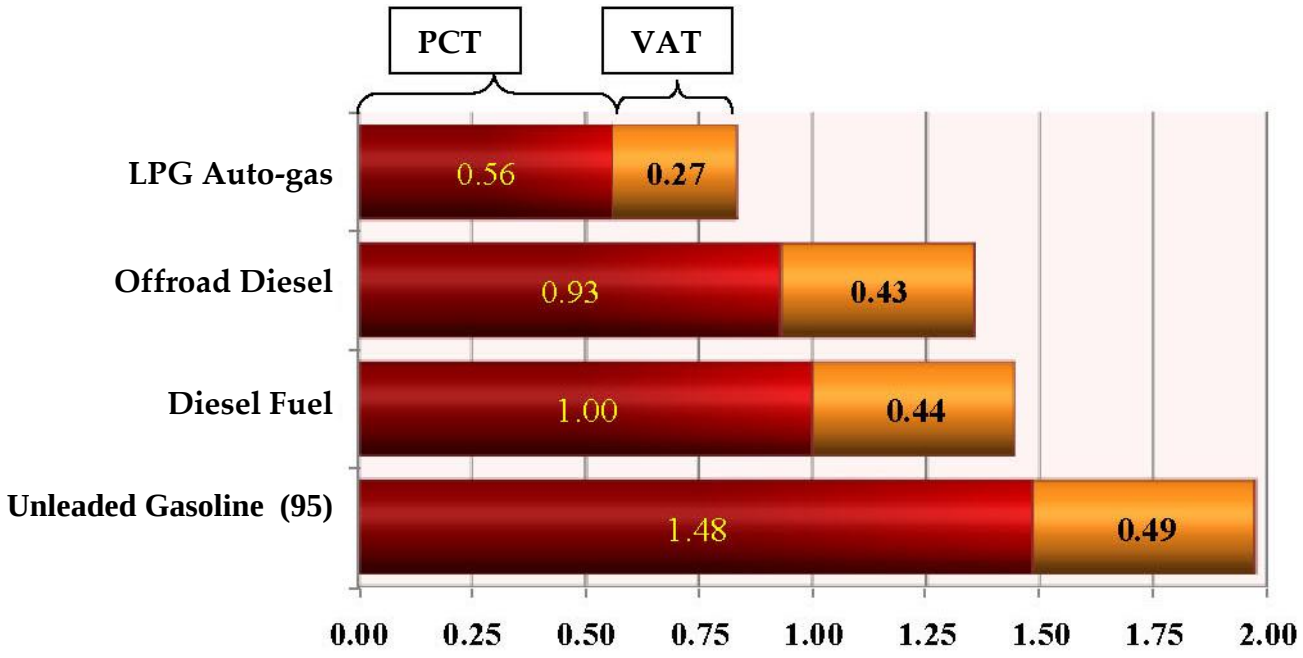
The fuel and LPG sector are among the leading sectors that provide a significant amount of taxes in terms of indirect taxes. The chart below shows, on average, Special Consumption Tax and VAT amounts that accrued per liter of fuel and auto-gas LPG in 2008. As seen in this chart;

- 1.97 TL per one liter of gasoline,
- 1.44 TL per one liter of diesel fuel,
- 0.83 TL per one liter of auto-gas LPG

consist of the indirect taxes in 2008.

Indirect Tax Amounts per Liter for Automotive Fuels

(Average of 2008 TL/Liter, Private Consumption Tax and VAT)

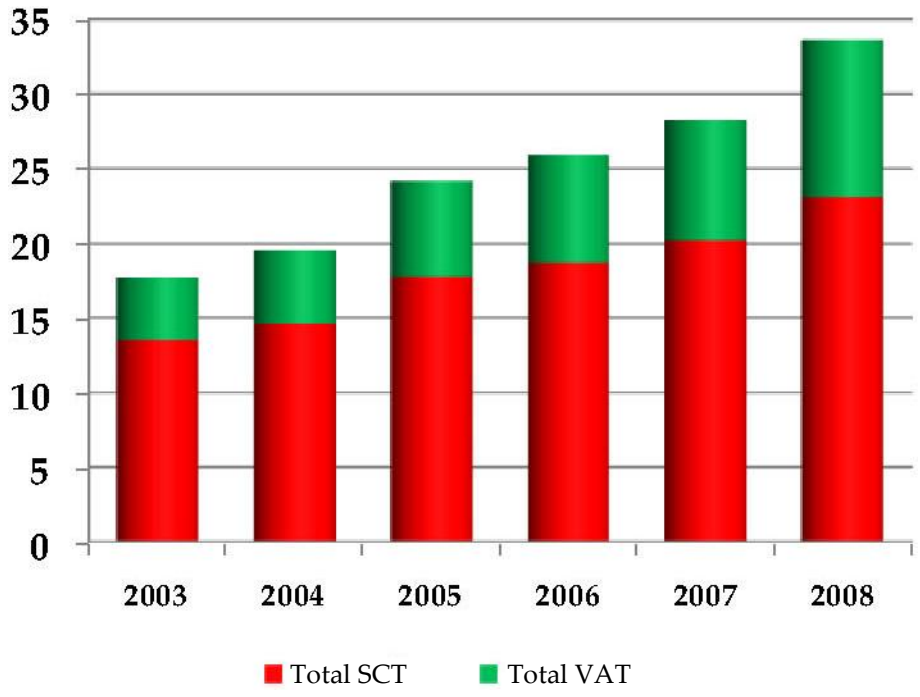


Total amount of unit taxes stated above and indirect tax incomes calculated on the basis of total consumption amounts are shown in the following charts.

According to these calculations, indirect taxes consisting of VAT and Special Consumption Tax collected for fuels (gasolines, diesel fuels, and fuel oils) have increased by **11%** and reached **28.5 billion TL** in 2008. The total amount of the indirect taxes collected for **LPG** consumption during the same period was calculated as **5.1 billion TL**. Thus, the total amount of indirect tax incomes to the country collected for fuels and LPG in 2008 increased by **11.6**% compared to 2007. According to these calculations, indirect tax incomes showed the highest increase rate for fuels and LPG in 2008 compared to the previous years and the **total amount of tax incomes acquired within the last five years** exceeded **130 billion TL**.

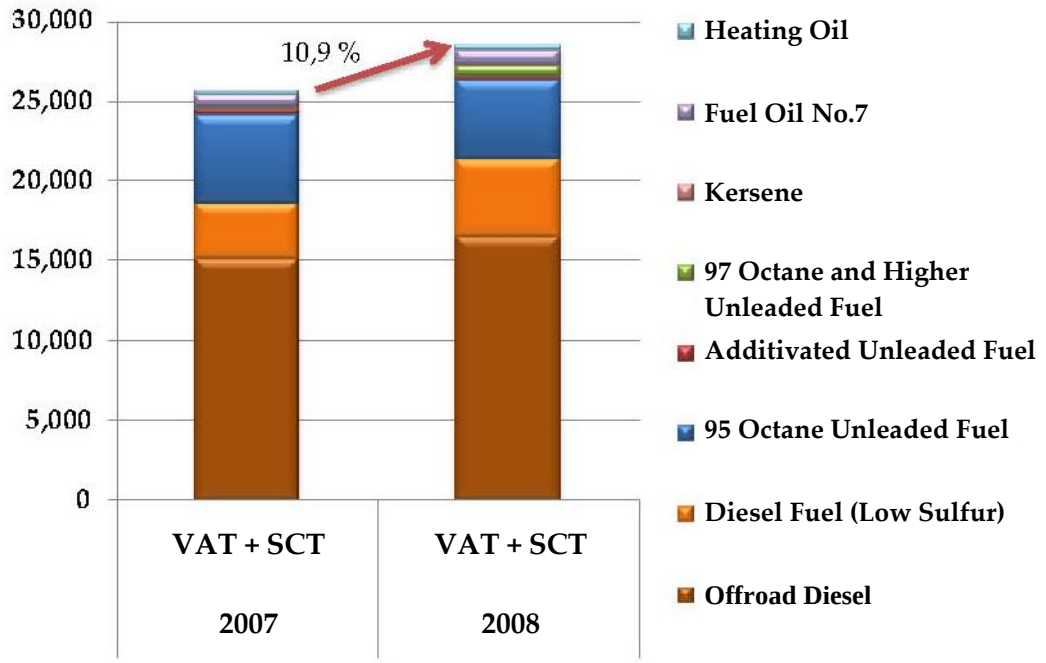
Changes in Indirect Tax Incomes Collected From Fuels and LPG according to the Years

(Billion TL):

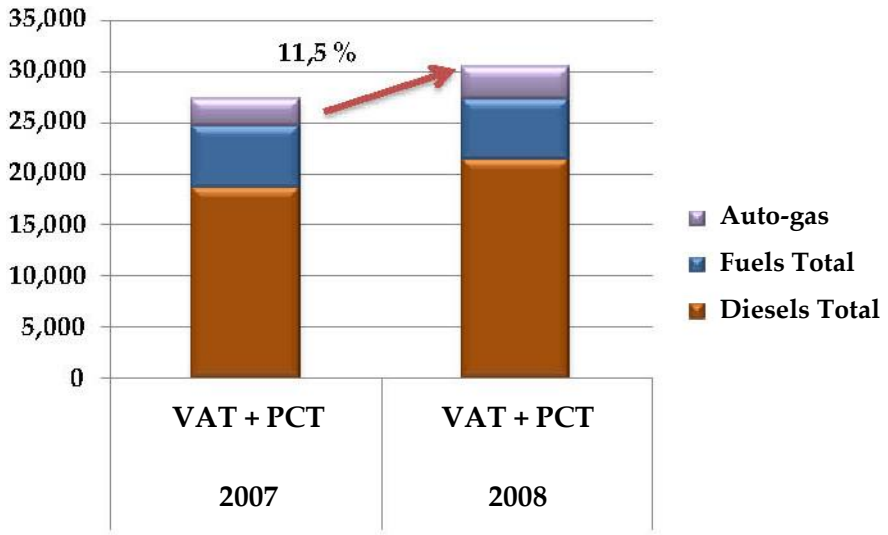


Indirect tax incomes collected from fuels and LPG sectors in 2007 and 2008 are shown separately in the charts below.

Estimated Total Special Consumption Tax and VAT Amounts Roughly Calculated for Fuel Consumption (Billion TL)



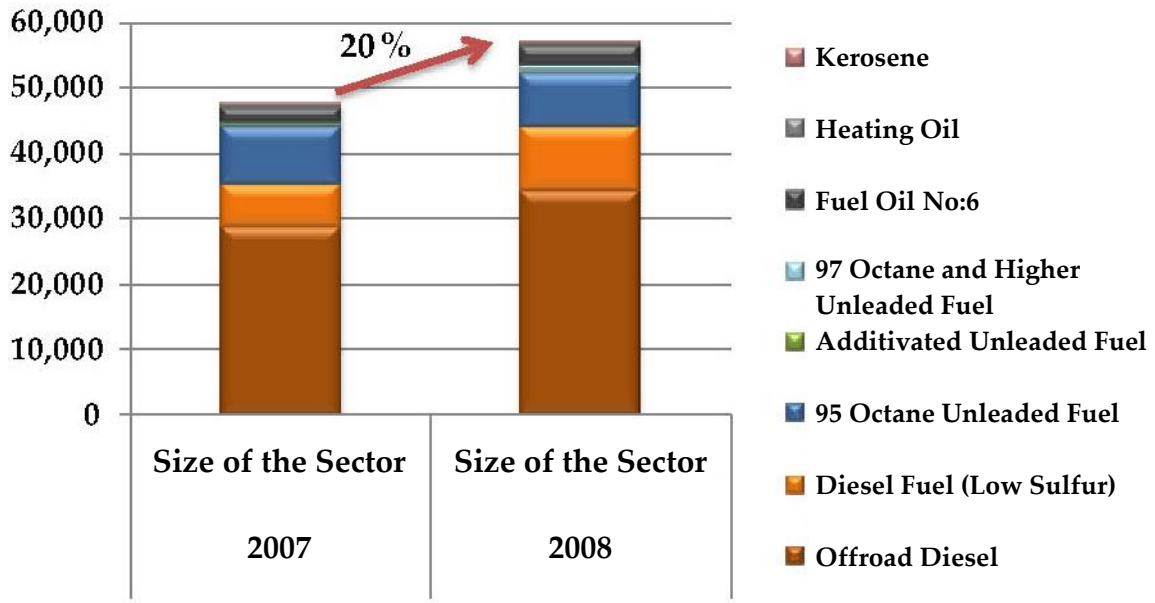
Estimated Total Special Consumption Tax and VAT Incomes (Billion TL) Roughly Calculated for Automotive Fuels (Fuels, Diesel Fuels, LPG Auto-gas)



Although total consumption amount remained unchanged in 2008, the total trading volume created by the fuel market (black and white products) **increased** by **20**% and reached **57 billion TL** because of the significant increase in oil prices and the increase in private consumption tax rates actualized at the end of 2007. The total growth created by the fuel market was approximately **48 billion TL** in 2007.

- Trading volume of fuels: **57 billion TL**
- Trading volume of LPG: **12 billion TL**
- Trading volume of lubricants, aviation and marine fuels: **6 billion TL**
- Sectoral trade volume (Fuel, LPG, lubricant, aviation and marine fuels) where PETDER (Association of Oil Industry) members are active: **75 billion TL**

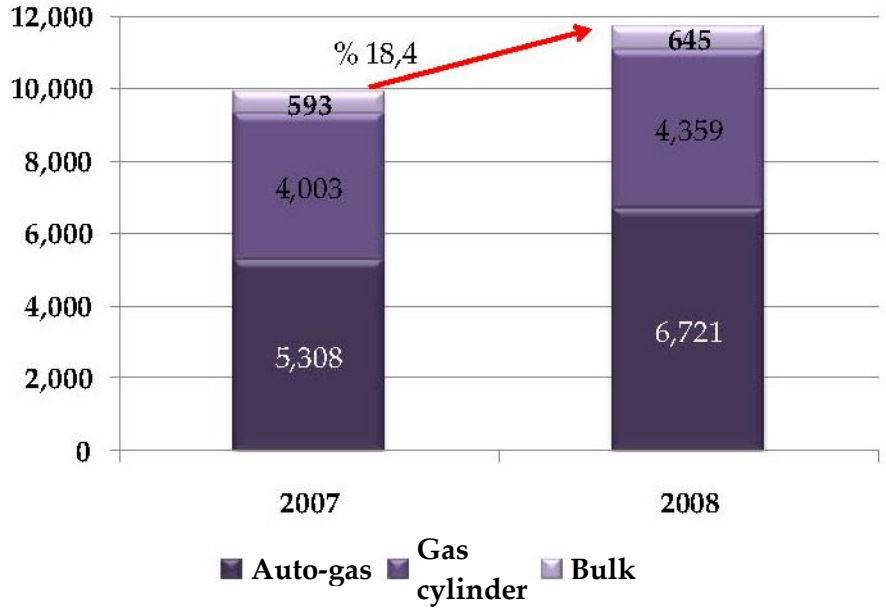
Trading Volume Comparisons for Fuel (Gasolines, Diesels, Kerosene, Heating Oil and Fuel Oil No:6) Consumption* (Billion TL)



**Sales (aviation and marine fuels, transit fuels and consumptions of independent consumers) and lubricant consumptions exempt from Private Consumption Tax and/or VAT are not included in sector growth calculations.*

Comparison of LPG Consumption Trading Volumes*

(Billion TL)



**Projected calculation were made based on the 2008 third quarter report prepared by the Energy Market Regulatory Authority and the data provided by the Turkish Liquefied Petroleum Gas Companies.*

IV- IMPORTANT SECTORAL ISSUES DEVELOPED IN 2008:

a) Crude oil prices and their effects on fuel and LPG pump prices in Turkey:

The average barrel price of Brent crude oil that was **54 USD** in 2005, **65.1 USD** in 2006 and **72.4 USD** in 2007; continued to increase until July 2008. The crude oil prices hit a historical record by reaching **144.22 USD** in July 2008. Crude oil prices started to decrease as of August and the average for 2008 realised as **97.24 USD** per barrel. Oil prices, which began to show a downward trend, started to decrease seriously and rapidly after July because of the effects of the global economic crisis that appeared in September; the barrel price regressed to **40 USD – 50 USD** a barrel, during the period this report was being prepared.

This serious increase in oil prices followed by a harsh decrease had significant effects on the world's economy and became a controversial subject because of the continuously changing oil prices. Specially in the last quarter of 2008 various comments made such as the rapid decrease rate of crude oil prices, , were not reflected on the pumps at the same rate. Below are the statements prepared for informing the consumers and various institutions, in response to the question "Why the movements in crude oil prices (in USD) in international market are not reflected on the pump prices of oil at the same rate?".

Although there is an important relation between the crude oil and pump prices, , it is technically impossible to find a simultaneously full correlation between the crude oil prices those occur in the world's international exchange markets (in USD), and pump prices, paid by consumers. Because;

i. Taxes that constitute about 45% - 65% of the total pump price, like Special Consumption Tax, which is fixed and completely independent of oil prices, and VAT, which is calculated by a percentage of the price, are included in the prices of final products like gasolines, diesels and auto LPG those are offered to the consumers.

ii. The oil prices known by public are the instant prices of crude oil per barrel in USD currency in the international markets. On the other hand, the prices of gasolines, diesels and auto LPG offered to the consumers at the service stations are the final product prices. The relationship between these prices should be considered as the relationship between raw material and final product prices.

iii. Much different from crude oil prices, pump prices are affected by various factors including supply-demand, seasonal conditions, refining expenses, transport, logistics, storage, and distribution expenses.

iv. Crude oil prices in world exchange markets are in USD currency and the pump price is in TL. Therefore, the exchange rate also effects the pump prices.

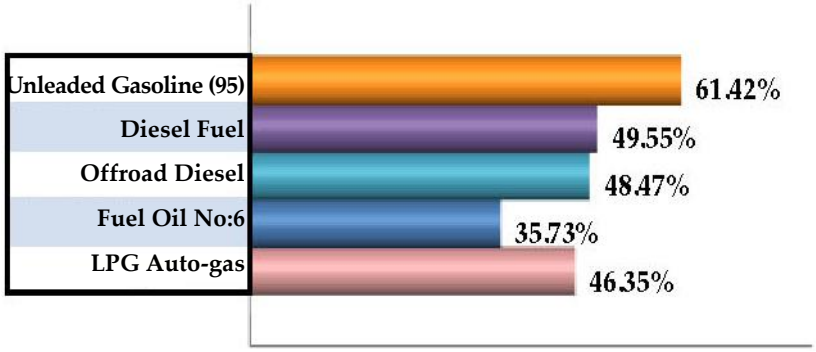
i. Effects of the fixed Special Consumption Tax and VAT on pump prices:

The total amount of the indirect taxes (fixed Special Consumption Tax and 18% VAT) and ex-refinery prices make up the largest portion of the pump prices in TL in Turkey. Today these two components together compose approximately 85% to 87% of the (ceiling) pump prices, depending on the product type, those pump prices is being announced on the Energy Market Regulatory Authority's official web page. Those values are independent of the world crude oil prices and exchange rates. If the pump price increases so does the VAT, if the pump price decreases, the tax shares percentages, within the total price, increases. When the 2008 average values are considered, the tax amount for gasoline is 61.4% and 48.5% for offroad diesel . The average values for 2008, the amount of indirect taxes (which consists of a fixed Private Consumption Tax collected for gasolines, diesels and auto LPG and VAT which is 18% of the pump price), and their shares within the figures declared as the ceiling pump price are stated in the next chart. As seen in this chart, if the pump prices were marked at zero, the gasoline pump price would be 1.97 TL per liter, the diesel fuel price would be 1.44 TL per liter and the auto LPG price would be 0.83 TL per liter.

Taxes for the Average Oil Pump Prices in 2008			
2008	**VAT Amount TL/L**	**Private Consumption Tax Amount TL/L**	**Unit Price Tax Percentage**
Unleaded Gasoline (95)	**0.49**	**1.48**	**61.42%**
Diesel Fuel	**0.44**	**1.00**	**49.55%**
Offroad Diesel	**0.43**	**0.93**	**48.47%**
Fuel Oil No:6	**0.17**	**0.223**	**5.73%**
LPG Autogas	**0.27**	**0.56**	**46.35%**

Amount of Tax Within the Average Pump Prices in 2008

(Pump Prices of 8 Distribution Companies with the largest market shares in Istanbul's Şişli District)



ii. The price in the world exchange markets is the price of crude oil (raw material); therefore, expenses like refining, stocking and distribution influences the pump price that is the final product price. In addition to these expenses, factors like seasonal conditions and the supply-demand equilibrium also have effects on the price of the final product. The prices of gasoline, diesel and auto LPG, offered to the consumers, are the final product prices. There are additional factors, other than crude oil prices, that affect the price of final products also exists. Product prices (gasoline, diesel and auto LPG), which are known as the ex-refinery prices, constitute approximately 25% to 30% of the total pump price in Turkey and varies according to the product type. The supply-demand factor has considerable effects in the formation of product prices. For example; recently, the demand for diesel types has been constantly increasing whereas the demand for gasolines have been decreasing. Changes in technical specifications and the fact that sulfur, lead and similar contaminating components were decreased to an almost "zero" level resulted in higher manufacturing costs; therefore, diesel cars became more widespread and the demand for diesel fuel increased. Recently, because of this, diesel prices increased more than other products. When crude oil is refined in the refineries, it is possible to obtain different products in certain amounts. Because of the increase in the demand for diesel , a gasoline surplus appeared in the world; such factors, which have effects on the supply and demand equilibrium, may have affected the final product prices much differently than the crude oil prices.

In addition, crude oil prices and product prices may be different from each other depending on the supply and demand as well as seasonal effects. For example, at any given time, the price for a ton of unleaded gasoline may be equal to the price of a ton of its raw material, which is crude oil; however, the price of unleaded gasoline may be 66% higher than the price of crude oil during another time. Similarly, a ton of diesel might decrease to 0.94'th of the crude oil price but it also might increase by 1.45'th of crude oil on another date. Therefore, the prices of the final product in the international markets (Platts etc.) might develop much differently from the general flow of crude oil prices.

iii. Exchange Rate Effects:

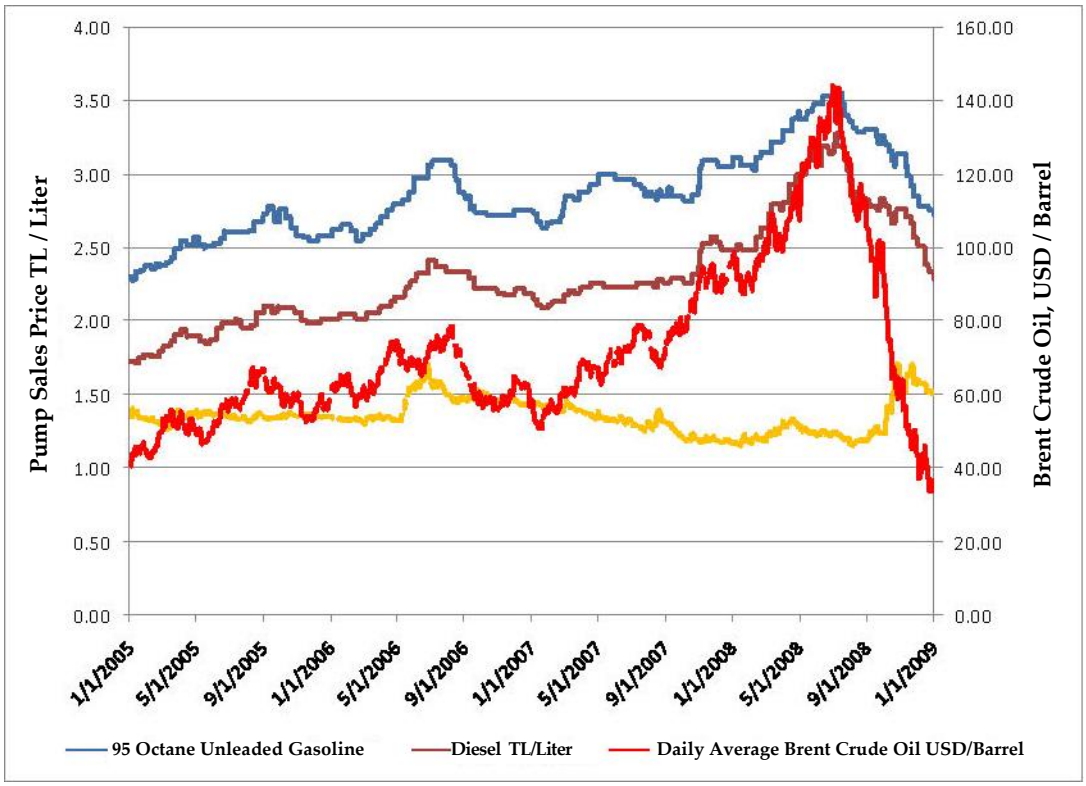
Crude oil prices in the world exchange markets are in USD and the pump prices are in TL. Therefore, the exchange rate also has effects on the pump prices. For example, if we consider the price of a barrel of Brent crude oil to be 100 USD in the international market and the current exchange rate for TL/USD is 1.2, then, we are required to pay 120 TL for 1 barrel of crude oil. Considering that the price of crude oil decreases by 50% and becomes 50 USD per barrel and the exchange rate increases to 1.6 TL, then, the price for one barrel of crude oil will become 80 TL. Because crude oil prices dropped by 50% in the international market, the price for one barrel of crude oil decreases from 120 TL to 80 TL; this 33% decrease is the result of the effects of the changing exchange rate. Although no significant changes in crude oil prices were observed during January and February 2009, when the report was prepared, fuel prices have shown an increase since the USD increased in value against the TL.

iv. Other Cost Elements:

In addition to the effects of supply-demand and seasonal conditions, which affect the final product prices differently from the crude oil prices, various factors like refining costs, transport, logistics, stocking, distribution expenses and the cost of compulsory oil stocks may have effects on the total cost, independent of the crude oil prices. Generally

even if increases and decreases in crude oil prices are not reflected at the same time to gasoline, diesel and auto LPG pump prices, , they are gradually reflected by the distribution companies. with a delay; As indirect taxes constitute more than half of the pump prices, it is impossible for final product prices to be same as raw material prices; therefore, this relationship cannot be identical and simultaneous. Moreover, comparing crude oil prices with pump prices based on percentages causes misunderstandings; to avoid taking a wrong approach, exchange rate effects and tax amounts should certainly be considered. Regardless of all, fluctuations in crude oil prices are reflected in gasoline and diesel prices between 2005 and 2008 can generally be observed in the chart below.

Gasoline and Diesel Prices between 2005 and 2008 and the Daily Change of Brent Crude Oil Prices



In addition, below is a comparison in relation to the reflection of increases in crude oil prices, which showed a continuous upward trend until August during the last four years, and in product prices.

January 2005 – January 2008

Price change in Brent Crude Oil	: 107.0%
Price change in pump price of gasoline	: 33.0%
Price change in pump price of diesel	: 43.7%
Change in LPG pump price	: 49.6%

In this comparison, the long-term increase of crude oil, which was more than 100%, was reflected on pump prices; however, these effects were observed to be less than 50%, despite the fact that the Private Consumption Tax was increased during this period.

b) Important sector issues, technical and operational problems, and unnecessary financial burdens they caused:

The continuous growth in automotive fuels market recorded during the last four years not only exceeded the economic growth but also started to stagnate in 2008. When the developments of the first months of 2009 are examined, it is obvious that the shrinking trend will progressively continue for automotive fuels in 2009, like the previous year.

Besides high oil prices and the global economic crisis, other crucial developments in the Sector made a mark on 2008, too. The "Fuel Sector Report" published by the Competition Authority is the most important among these developments. This report carries significant importance by discussing the environment that is created by the negative informations and perceptions at the public that the competition in the sector is insufficient time to time and in a way and also the price movements in the international fuel markets are not reflected on the pump prices properly; from a competitive analysis

perspective. According to this report, the Competition Authority confirmed that nothing in the sector was to be construed as a violation of antitrust laws and indicated that a supplemental investigation was not required. The Authority confirmed that structural problems affecting competition negatively did exist in the sector and conducted important evaluations related to the stated problems in the report. It is certain that the comments in this report related to the durations of the long-term usufruct and annotated deed rental agreements those are common applications in the sector shall be crucial for the sector in the next period. As specified in the Competition Authority's report, not only the structural difficulties interrupting the creation of the competitive market result in serious cost increases in the sector, but the technical difficulties created by the over regulated market structure, which have been frequently discussed by the sector in recent months as well.

According to this sector report prepared by PETDER (Oil Industry Association), which contains a general assessment of 2008, it appears that it would be helpful to discuss the extra financial burdens, which have stemmed from the over regulated structure formed specially in 2008 and the technical operational difficulties; the heavy and unnecessary expenses created technical barriers to importation.

i. Concerns regarding import transactions and related losses to the national economy:

Since Turkey's demand for diesel exceeds the total domestic refinery production capacity, it is essential to import 5.0 – 5.5 million tons of diesel per year. Therefore, importation to cover the country's total diesel demand efficiently and reflecting on spot trade opportunities in the international market benefits on to the national economy in a rapid way by establishing a price advantage is important. However, the distributors do not prefer importation in general because of the technical regulations, difficulties in import transactions and problems in test procedures. Unfortunately, not much progress was gained among the subject with the various applications made by PETDER to the

Undersecretariat of Foreign Trade, the State Department of Customs, the Energy Market Regulatory Authority and the Turkish Standards Institute. Because of the existing regulations and applications, import transactions for fuel are processed for 15-20 days or longer in Turkey. EU countries and developed countries, where import transactions are cleared in a maximum of one or two days, have the opportunity to benefit from importation as a quick supply method. However, due to the technical barriers to importation, it is not possible to benefit from the advantages of importation in Turkey and even high and important costs are created.

It is estimated that the losses Turkey incurred in 2008, because of the duration of the importation period and technical reasons, amount to several hundred million USD. Especially during the July-October period in 2008, when oil prices are actively fluctuating, the effects of this price movement on a 15 - 20 day import period might be at a level of million dollar just for one shipment.

Another technical barrier to importation is that the distribution companies do not have the right to blend, mix and repair fuels according to the Oil Market Law number 5015. Especially during products technical specifications changing periods, it is possible to expand the supply range by blending two different types of fuels and produce more economical solutions. While such processes are considered as a natural component of the sector in adjacent countries and in the EU, it is not possible for the distributors to carry out this process in Turkey is an important operational barrier. Consequently, distributors are faced with important cost elements caused from technical barriers to importation, certificate fees taken from throughput agreements between distributors, technical regulations,...,etc. and that do not provide benefits for the formation of a competitive structure in the sector and causes cost overruns in the national economy. In addition, another issue requiring emphasis is that *it is required to obtain permission for trade between distributors, according to the regulations of Energy Market Regulatory Authority, and to pay fee to the Authority for this operation*. Since the fee demanded by the Energy Market Regulatory Authority is a fixed amount and this amount is relatively high, small

distribution companies are faced with an important barrier in terms of competition and an element of extra cost.

ii. Negative perceptions concerning the Pricing Regulations and the process of Liberalization in Oil Sector::

The Pricing Act, issued by the Energy Market Regulatory Authority in 2008, created the impression that the liberal structure in the oil market was being destroyed and there is an intervention at the competition . The oil market is a very important sector, as being the initiator of liberalism in Turkey's energy markets and free market practices. The liberal structure of the oil market and the direct as well as indirect contributions made by this structure are significant for the energy markets in Turkey. It is necessary to encourage domestic and foreign investors to carry out larger investments that are required to be made within the next 20-30 years in the fields of energy markets, pipelines, natural gas and electricity markets in Turkey. In other words, it is important to create a free market structure in these markets in order to establish an environment agreeable to the large-scale energy investments, which will be needed in Turkey's energy markets in the years ahead. With this in mind, the success of the model in the oil market, which will create a successful liberalization, a free market model in the energy sector, and continuity of this success are critically important. However, high oil prices in 2008, an unfavorable environment created by the global economic crisis, which started suddenly, and the Pricing Act issued by the Energy Market Regulatory Authority, led people to think that the free market approach was being weakened in the sector. Besides, the fact that the government is active in the fuel distribution market, affects this impression negatively. It is believed that these developments carries critical importance in encouraging new investments in the field of energy when evaluated, together with the serious global economic crisis.

iii. National Marker implementation and technical /operational problems;

In spite of the technical difficulties experienced at the beginning, the National Marker practice started in 2007 and made progress by the support of the sector. The National Marker contributed in reducing unregistered activities. On the other hand, in the Oil Market Law, "*Illegal Fuel*" is described as "*fuel that does not contain the national marker level designated by the Authority*". According to this description, even legal fuel, where technical specifications are also compliant with the regulations, may be defined as illegal fuel because of reasons like various technical issues, measuring errors or incompatibility between devices. Because of this definition, a great number of fuel dealers, distribution companies and storage establishments are faced with smuggling investigations.

The National Marker is included in the Law number 5015. We think that the reason for this is to be able to carry out the preliminary examinations rapidly for determining whether the fuel is legal or illegal. Thus, the Ministry of Industry and Trade of the Republic of Turkey conducted approximately 5600 marker audits in stations and terminals in 2008 and obtained 99% positive results. At least half of the evaluations, which were negative at the first stage, were approved during the second stage tests. Therefore, the results obtained from these audits are the indicators of the sector's attention to this issue.

All of these examples indicate that it is not possible to determine if the fuel is illegal or not just by using National Marker level measurements and without any other proofs (stock movements, accounting records etc.). In order to protect the commercial credibility of any company, certain negative experiences caused by wrong marker measurements lacking sufficient number of supports, the definition of "illegal oil" in the Law should be changed to: a company can be accused of smuggling only after additional examinations and/or analyses have been carried out to strengthen the marker level differences, which might arise from the technical issues stated above along with other concrete evidence.

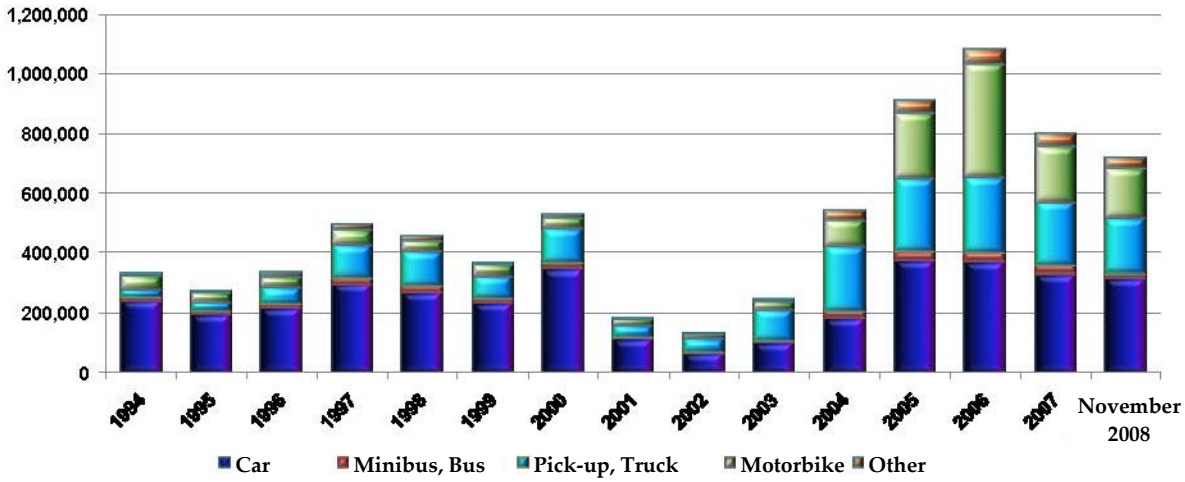
c) The growth rate of the oil market in 2008, its relations with other sectors and unregistered activities:

The growth rate of the oil market, increased more than the total economic growth of the country, during the period following the Oil Market Law, then decreased seriously in this period for the first time. The automotive fuels section (gasolines, diesels and auto LPG) shrunk by 0.3% compared to the previous year; on the other hand diesels, which is directly connected to the industrial consumption and national economy, expanded only by 0.9%. These two important indicators show that individual consumption is decreasing and that consumers prefer auto LPG to fuel. Reasons for this important slowing-down trend in the fuel sector include the high fuel prices and the slowing-down of Turkey's economy compared to the previous years. Besides, increases in fuel prices, taxes and unregistered activities, that showed an upward trend even for a certain period, also have effects on the slowing-down of the fuel market's growth.

Illegal market activities conducted under the name of **"Grade 10 Lubricant"**, which started around mid-2007 in the diesel market, became the most important problem in the sector at the beginning of 2008. Special Consumption Tax amounts, applied to the base oils and lubricants, were increased by the **Special Consumption Tax Regulation** issued by the Republic of Turkey's Ministry of Finance on July 2, 2008; the difference is decreased between the tax applied to the base oils and lubricants and the tax applied to the fuel. It is obvious that negative market activities, like grade 10 lubricant, were significantly reduced thanks to this regulation. This and similar experiences show that unregistered activities are directed towards garages and similar locations rather than stations, which are licensed activity areas for the oil market.

According to the legal records of the Turkish Statistical Institute, 794,156 vehicles were registered and records of 75,674 vehicles were deleted during the 2008 January-November period. Compared to 2007, the total **number of the vehicles** in traffic, **which normally increases, decreased by 2%** and became **718,482**. As of the end of November, 49.4% of 13,741,427 registered vehicles were cars, 15.8% were motorbikes, 15% were pick-ups, 9.9% were tractors, 5.4% were trucks, 2.8% were minibuses, 1.4% were buses and 0.3% were registered as special purpose vehicles.

The "Net" changes by year in Turkey's vehicle park in the graph below



In this graph, the increase in Turkey's vehicle park recorded in the last four-five years is remarkable. It is seen that this increase also continued in 2008; however, the significant impacts of the global crisis in November and December, slowed down the total annual amount a little. This change in Turkey's vehicle park reflected positively on automotive fuel consumption in 2005-2008. However, in 2008, similar reflections in automotive fuels were not recorded due to high oil prices and the effects of the economic crisis.

V – PETDER (Association of Oil Industry) Social Responsibility Projects:

a) Efforts towards the "Pay Attention in Traffic the Aim is 10 Thousands of Lives" campaign continue.

The Campaign of "Pay attention in traffic, the aim is 10 thousands of lives" started in April 2008 under the conservation of the President and is supported by PETDER members' social responsibility understanding towards health, safety, environment and security issues. The Oil Industry Association and its members continue their efforts, which are carried out on different platforms, to provide for and support these campaigns so they are successful in reducing the number of deaths and monetary losses.

b) PETDER waste motor oil management and recycling activities:

The old regulations, relating to waste oil management, were abolished and the new "**Waste Oil Management Regulation**" was enforced on July 30, 2008.

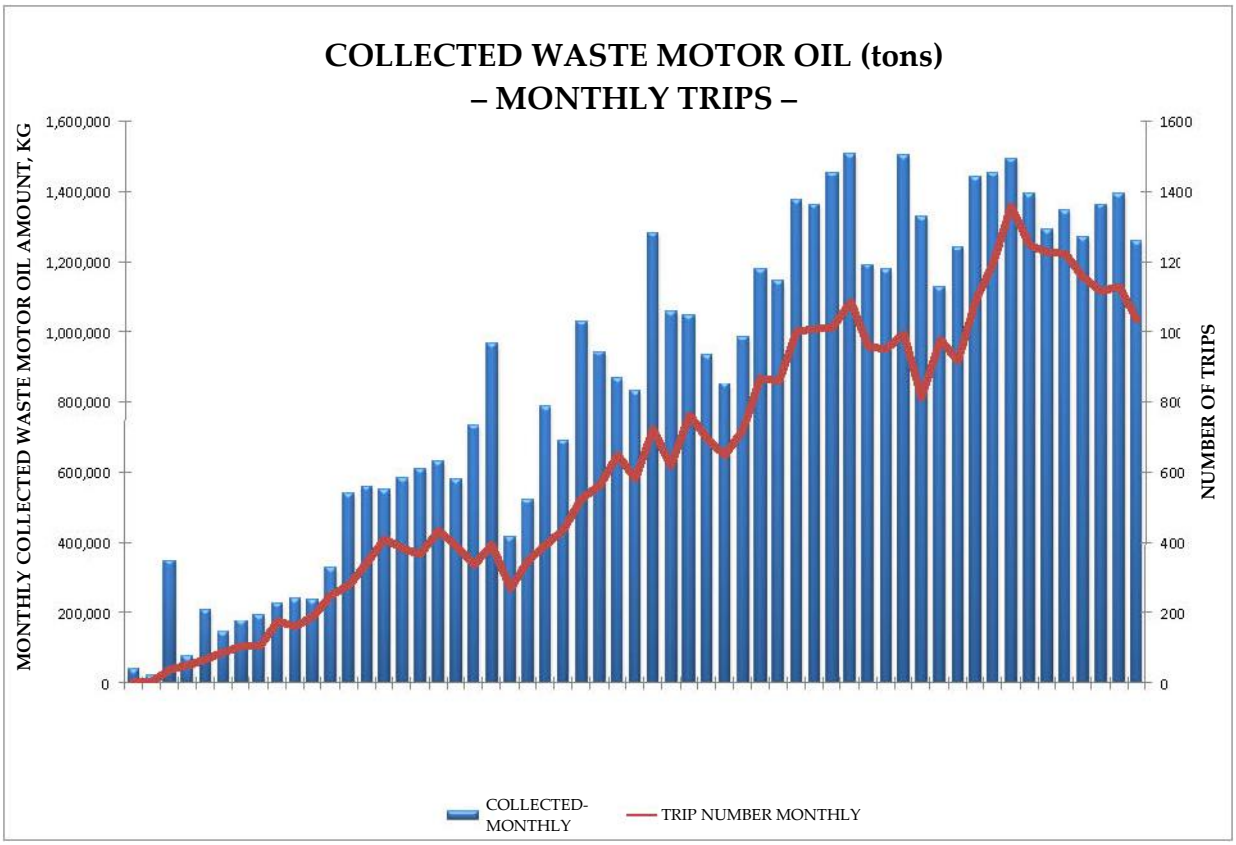
According to the new regulations, waste motor oils will only be collected by the "Motor Oil Manufacturers" or "Authorized Institutions" and be delivered to the "Licensed Institutions" for processing by categories. In accordance with the Regulation, persons and institutions, other than the ones mentioned above, are prohibited to collect the waste motor oils.

In accordance with the new Regulations of the Republic of Turkey's Ministry of Environment and Forestry, PETDER is the "Authorized Institution".

PETDER was designated as the only institution authorized to collect and remove waste motor oils by the Ministry of Environment and Forestry and **in 2008, a total of 16,094 tons of waste motor oil was collected from 3,934 enterprises, 13,696 times in 78 provinces.** Waste Motor Oils, which were collected during an operation, were carried

over 930,000 kilometers "without any accidents" in 2008 and were transported by licensed vehicles to 28 licensed removal plants and used as alternative fuel. Thus, the total waste oil collected in 4 years, within the context of "waste motor oil collecting" efforts, exceeded 50 thousand tons. Since waste motor oils have high energy values, this energy is used in removal institutions, licensed by the Ministry, under special conditions specified, as do many EU countries. PETDER transferred **over 9 million TL** throughout this project, from start to end in 2008; the project, which was implemented entirely for public benefit, aimed to provide free services to all institutions collecting waste motor oil.

PETDER Waste Motor Oil Collection Amounts:



Motor Oil Production Companies Participating in Waste Motor Oil Collection Activities:

Akpet Akaryakıt Dağ.A.Ş., **Anadolu Isuzu Otomotiv San. ve Tic. A.Ş.**, Atak Madeni Yağ Pazarlama San. Ve Tic. A.Ş., **Baylas Otomotiv A.Ş.**, Baytur Motorlu Vasıtalar Tic. A.Ş., **Belgin Madeni Yağlar Tic. ve San. A.Ş.**, BMC San. ve Tic. A.Ş., **Borusan Makina A.Ş.**, Borusan Otomotiv İthalat ve Dağıtım A.Ş., **BP Petrolleri A.Ş.**, Çelik Motor Tic. A.Ş, **Chevrolet Otomotiv Tic. Ltd. Şti.**, Daihatsu Türkiye Motorlu Araçlar A.Ş., **Delta Akaryakıt Tic. A.Ş.**, Doğuş Otomotiv Servis ve Tic. A.Ş., **ENKA Pazarlama İthalat İhracat A.Ş.**, General Motors Türkiye Ltd. Şti., **Golf Med Yapı Turizm San. Ve Tic. Ltd. Şti.**, Hattat Tarım A.Ş., **HMF Makina ve Servis Sanayi ve Ticaret A.Ş.**, Honda Türkiye A.Ş., **Hyundai Assan Otomotiv San. ve Tic. A.Ş.**, İsotlar Grup Ltd. Şti., **John - Deere Makinaları Ltd.Şti.**, Kompet Petro Kimya Ürünleri San.Tic.Ltd.Şti, **Laverda Tarım Mak. San.Tic. A.Ş.**, Mazda Motor Türkiye A.Ş. , **Mobil Oil Türk A.Ş.**, Motana Motorlu Araçlar Pazarlama ve Tic. A.Ş., **Nissan Otomotiv A.Ş.**, Opet Madeni Yağ San. ve Tic. A.Ş., **Orhan Makine san. Tic. Ltd. Şti.**, Petline Petrol Ürünleri Tic. A.Ş., **Petrol Ofisi A.Ş.**, Petronas Madeni Yağlar Tic. Ltd. Şti., **Peugeot Otomotiv Pazarlama A.Ş.**, Prista Oil Yağ San. ve Tic. Ltd. Şti, **Renault Trucks Türkiye Tic. A.Ş.**, Sif İş Makinaları Paz. Ltd. Şti., **Suzuki Otomobil Pazarlama ve Tic. A.Ş.**, Temsa San. ve Tic. A.Ş., **The Shell Company of Turkey Ltd.**, Total Oil Türkiye A.Ş., **Toyotasa Toyota Sabancı Pazarlama ve Satış A.Ş.**, Uzel Makina Sanayi A.Ş., **Volvo Otomobil Tic. Ltd. Şti.**, Würth Otomotiv ve Mont. San Ür. Paz. Ltd.Şti, **Yüce Auto Motorlu Araçlar Tic. A.Ş.**

VI. SOURCES:

- The fuel data used in this report was compiled by the independent research firm, Price Waterhouse & Coopers, based on the voluntary statements made by 11 fuel distribution companies with the highest market shares and whose total market shares are over 95%. This data accurately represents 95% of Turkey's total fuel market and it represents the remaining 5% in terms of the estimations made according to the official consumption amounts of the previous years. The significant increases estimated, during the 2007-2008 bracket, were projected to be 5%. The calculations in this report were done with the consideration that the share of this bracket was 5%. When correcting the collected data, based on the total, data from the Energy Market Regulatory Authority was used for Turkey's total consumption after 2005 and data from the Directorate General for Oil Affairs was used for Turkey's total consumption before 2005. LPG figures were supplied from the reports of the Energy Market Regulatory Authority and the Turkish LPG Association.

- Inflation, GNP, CPI, exchange rates, vehicle numbers and total vehicle park values were obtained from the data published by the Turkish Statistics Institute and from the Central Bank's published values for the general public.

- Platts values were used as a source for crude oil prices.

- In the analysis of pump prices, the daily values published on the Engery Market Regulatory Authority's internet website were used.

Fuel and LPG Consumption between 2000-2008

		2000	2001	2002	2003	2004	2005	2006	2007	2008
Unleaded 95 Octane	*m3*	2.014.354	2.305.525	2.160.712	2.260.772	2.436.466	2.607.834	2.884.939	3.047.316	2.542.009
Unleaded 97 and higher Octane	*m3*	0	0	0	16.959	285.489	262.218	123.878	20.180	309.367
Super/Additivated Unleaded	*m3*	1.599.493	1.176.463	1.906.795	1.552.788	1.005.699	625.519	366.890	209.624	107.985
Total Gasolines	*m3*	**3.613.846**	**3.481.988**	**4.067.507**	**3.830.519**	**3.727.653**	**3.495.570**	**3.375.707**	**3.277.120**	**2.959.361**
Kerosene	*m3*	51.353	41.216	37.430	47.977	41.118	34.792	26.077	18.176	13.189
Offroad Diesel	*m3*	9.691.472	9.963.639	11.234.997	11.504.277	12.445.391	12.291.514	12.588.855	12.624.816	12.106.367
Diesel (Low Sulfur)	*m3*	0	0	0	0	248.634	783.791	1.589.643	2.704.326	3.363.193
Total Diesels	*m3*	**9.691.472**	**9.963.639**	**11.234.997**	**11.504.277**	**12.694.025**	**13.075.305**	**14.178.498**	**15.329.142**	**15.469.560**
White Products Total	*m3*	**13.356.671**	**13.486.844**	**15.339.934**	**15.382.773**	**16.462.796**	**16.605.667**	**17.580.282**	**18.624.438**	**18.442.110**
Unleaded 95 Octane	*ton*	1.561.124	1.786.782	1.674.552	1.752.098	1.888.261	2.021.071	2.235.828	2.361.670	1.970.057
Unleaded 98 and higher Octane	*ton*	0	0	0	13.144	221.254	203.219	96.005	15.640	239.759
Additivated Unleaded	*ton*	1.239.607	911.759	1.477.766	1.203.411	779.416	484.777	284.340	162.459	83.688
Total Gasolines	*ton*	**2.800.731**	**2.698.541**	**3.152.318**	**2.968.652**	**2.888.931**	**2.709.067**	**2.616.173**	**2.539.768**	**2.293.505**
Kerosene	*ton*	41.082	32.973	29.944	38.382	32.894	27.834	20.862	14.541	10.551
Offroad Diesel	*ton*	8.189.294	8.419.275	9.493.572	9.721.114	10.516.355	10.386.329	10.637.582	10.667.970	10.229.880
Diesel (Low Sulfur)	*ton*	0	0	0	0	210.096	662.304	1.343.248	2.285.155	2.841.898
Total Diesels	*ton*	**8.189.294**	**8.419.275**	**9.493.572**	**9.721.114**	**10.726.451**	**11.048.633**	**11.980.831**	**12.953.125**	**13.071.778**
White Products Total	*ton*	**11.031.107**	**11.150.789**	**12.675.834**	**12.728.148**	**13.648.277**	**13.785.533**	**14.617.865**	**15.507.434**	**15.375.834**
Heating Oil	*ton*	1.309.576	1.397.577	987.773	951.716	720.482	612.175	482.942	390.777	375.318
Fuel Oil No. 6	*ton*	3.813.166	2.714.688	3.888.676	3.784.642	3.746.051	3.399.622	2.461.617	2.163.418	2.346.240
Black Products Total	*ton*	**5.122.742**	**4.112.265**	**4.876.449**	**4.736.359**	**4.466.533**	**4.011.797**	**2.944.559**	**2.554.195**	**2.721.558**
Total Fuel	*ton*	**16.153.849**	**15.263.054**	**17.552.283**	**17.464.507**	**18.114.810**	**17.797.330**	**17.562.424**	**18.061.629**	**18.097.392**
LPG Gas Cylinder	*ton*							1.491.580	1.302.434	1.169.959
LPG Bulk	*ton*							475.454	216.470	169.500
LPG Auto-gas	*ton*							1.550.605	2.006.263	2.096.433
LPG (gas cylinder, bulk, auto-gas)*	*ton*	**4.546.884**	**3.851.176**	**3.500.383**	**3.551.623**	**3.943.484**	**4.156.506**	**3.517.639**	**3.525.167**	**3.435.892**
Total Automotive (White Product+Auto-gas)	*ton*	**12.918.525**	**13.336.964**	**14.238.463**	**13.855.918**	**15.005.116**	**15.286.964**	**16.143.522**	**17.513.697**	**3.774.634**

* The total LPG consumption figures are official figures were obtained from the report issued by the Directorate General for Oil Affairs. Gas cylinder, bulk, and auto-gas values were obtained from the Energy Market Regulatory Authority's report. There may be differences in the total amounts.

Fuel and LPG Consumption between 2000-2008

VII. CONTACT AND MEMBER INFORMATION:

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Waste Motor Oil Information Hotline: 0 212 220 39 99
info@petder.org.tr petder@petder.org.tr www.petder.org.tr

Altınbaş Petrol ve Ticaret A.Ş.	ALPET	Mobil Oil Türk A.Ş.	ExxonMobil
Belgin Madeni Yağlar San. ve Tic. A.Ş.	BELGIN	Petrol Ofisi A.Ş.	PO
BP Petrolleri A.Ş.	bp	Shell & Turcas Petrol A.Ş.	
BP Gaz A.Ş.	bp	Shell Gaz Ticaret ve Sanayi A.Ş.	Shell Gas (LPG)
DELTA Akaryakıt Tic.A.Ş.	Delta	Total Oil Türkiye A.Ş.	TOTAL
ERK Petrol Yatırımları A.Ş.	ERK	Turcas Petrol A.Ş.	TURCAS

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In the past five years we have recycled over fifty tons of waste motor oil into energy

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