

2019



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2016 SECTOR REPORT

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MESSAGE FROM THE CHAIRMAN



Esteemed Stakeholders in the Sector,

2016 was a special year for PETDER as the 20th anniversary and we celebrated it with a special organization. PETDER started this journey 20 years ago, not only as a reliable and objective source of information but also as an efficient and effective supporter with the vision of enhancing the reputation and standards of the fuel sector and representing the sector.

Today PETDER, representing almost 85% of the sector with its 15 members, continues to work intensively in cooperation with stakeholders in order to provide better fuel, service and products to over 20 million vehicles across Turkey, and to raise the economic and social welfare of almost 80 million Turkish citizens.

We, as one of the largest sectors in terms of volume and contribution to national economy, are present in all aspects of life and provide high quality fuel in compliance with technical specifications to all industries, particularly to transportation, construction, infrastructure and industry.

As can be remembered, Turkish fuel sector was a completely regulated market with few players in the 90s. Within the last 20 years, thanks to the efforts of all sector representatives and government officials, and especially EMRA's support, great progress has been made. In this respect, we would like to express our gratitude to all public institutions and organizations and particularly to upper management and department heads and experts of EMRA.

Some of the important developments impacting transformation of the sector in this period:

- 2001: EMRA was established.
- 2003: Petroleum Market Law was enacted and the market attained a free structure.
- after 2003: Competition between the players improved the quality of the fuel stations and the services provided. Claiming that the standards of the fuel stations in Turkey are well above those in Europe would not be an exaggerated comment.
- 2011 and 2013: With the automation system and national marker practice, the amount of illegal fuel has had a downward trend and its disrupting impact on the market has been eliminated.

There have been various fluctuations in all value chains in this period due to intensive regulations, price cap practices, 5 year limitation of contract terms and new competition rules such as promotion restrictions. However, the sector has managed to overcome these difficulties thanks to open communication with the public and relevant parties and commitment to improve consumers' standards.

PETDER's main objective is to support and maintain a sustainable fuel sector in order to guarantee a business and investment environment that will ensure;

- continuous investment flow into the oil industry which is a growing strategic sector,
- that regulations add value to the sector by meeting various requirements in the best ways possible,
- aiming for a continuous increase in productivity in the sector,
- improvement of the already high quality of the products and services that will meet the needs and preferences of consumers.

2016 has been a year of recovery after the harsh conditions in 2014 and 2015; sector growth reached 7%, exceeding the growth in national economy. In 2016, PETDER continued to work towards mitigating the adverse impacts of practices and regulations on various platforms and contribute to the development of the sector as a competitive free market and to represent the sector.

PETDER Sector Reports, published annually, provide information on PETDER activities as well as summarizing the main issues which the industry focuses on through the year and present statistical data in the industry. I express my thanks to PETDER staff who contributed to the preparation of 2016 report and I hope this report will be beneficial to the sector and the public.

Martin THOMSEN
PETDER Chairman





FROM THE SECRETARY GENERAL



Esteemed Stakeholders in the Sector,

As of 2016, the fuel distribution sector operates with its 87 distributors, 107 storage facilities, approximately 13.000 dealers and more than 250,000 employees, providing 7/24 high quality service to millions of customers across the country. Petroleum Industry Association represents 85% of this large sector which plays a significant role in Turkey's development and economy.

Annual sector reports by PETDER provide an important source followed by the sector and the public, presenting developments in the industry and statistical data together. I hope 2016 Sector Report will be beneficial to all stakeholders and public.

As PETDER, we keep the sector and the public informed on the developments and issues through this Sector Report, our web site, smart phone application, Waste Motor Oil Collection Project Annual Activity Report, our monthly petroleum bulletins and press releases.

- The total automotive fuel consumption increased by 7.3% compared to the same period of the previous year and reached 35 million m³ in 2016.
- The total financial magnitude of the fuel sector in 2016 reached 123.3 billion TL with an increase rate of 7.9% compared to 2015.
- According to calculations based on consumption data, the indirect taxes collected from these sectors in 2016 reached 77.9 billion TL.

As we had stated in our 20th Anniversary film, we need energy to live life to the fullest. We will continue to work towards meeting the energy demand as we have been doing for the last 20 years. As Petroleum Industry Association, we will make our best efforts to continue our activities as a reliable, efficient, reputable, leading and professional non-governmental organization. We will continue to meet the fuel demand in Turkey with cleaner and higher quality energy because we have been working for Turkey, producing for Turkey and serving our country for the last 20 years.

All together, acting in unison!

Niyazi İLTER
Secretary General



1. EXECUTIVE SUMMARY

SECTORAL DEVELOPMENTS

Constitutional Court's Cancellation of Several Provisions under Articles 19 of Law no.5015

The Constitutional Court has decided for cancellation of several provisions under Articles 19 of the Petroleum Market Law no.5015 with the decision dated 7.4.2016 and numbered 2016/28 and determined the date of enforcement as 9 months after the publication of the decision in the Official Gazette. Article 19 regulates administrative fines and the industry has been facing with severe sanctions and fines. EMRA evaluated the subject with a positive approach at several meetings with the industry in 2016 and prepared a draft with a broader vision, including revision of the whole article and not only the provisions cancelled by the Constitutional Court.

Draft Regulation on Control of Volatile Organic Compound Emissions

"The Draft Regulation on Control of Volatile Organic Compound Emissions Resulting from the Storage and Distribution of Gasoline and Naphtha" was published and opened for review by the Ministry of Environment and Urbanization General Directorate for Environmental Management.

More Flexibility for Unloading

In accordance with the safety measures implemented by the Ministry of Transport, Maritime Affairs and Communications within the scope of Anti-Terror Measures, oil products shall not be kept around fuel stations or tanks and shall be unloaded until midnight. However, in order not to encounter any supply problems, the Ministry issued a new letter bringing flexibility to the practice.

Extension Granted for Several Articles of the Regulation on Prevention and Mitigation of Effects of Major Industrial Accidents

The regulation changing the date of entry into force of several articles of the Regulation

on Prevention and Reducing the Effects of Major Industrial Accidents was published in the Official Gazette dated August 2, 2016 and numbered 29789 and entered into force.

Communiqué on Tracking LPG Cylinders in the Market

The Communiqué on Tracking LPG Cylinders in the Market has entered into force after being published in the Official Gazette dated October 15, 2016. Pursuant to the Communiqué, it is compulsory for distributors to set up a square code tracking system in order to track LPG cylinders at all stages from filling to delivery to end users.

ADR Legislation Amendments

"The Regulation Amending the Regulation on Carriage of Dangerous Goods by Road", drafted by The Ministry of Transport Directorate General for Dangerous Goods and Combined Transport Regulation, entered into force after being published in the Official Gazette dated 30 December 2016.

PETDER Celebrates 20th Year

20th year of PETDER, established on 23 September 1996, was celebrated at Ankara JW Marriott Hotel on 25 October 2016. Ministry of Energy and Natural Resources Undersecretary Fatih Dönmez, Energy Market Regulatory Authority President Mustafa Yılmaz, senior executives of PETDER member fuel distribution companies and executives of other companies and non-governmental organizations in the sector attended the organization.

Public Service Announcement on Risks of Using Number 10 Oil as Fuel Substitute

The public service announcement on "Risks of Using Number 10 Oil as Fuel Substitute", prepared by PETDER and the Ministry of Environment and Urbanization was approved by the Radio and Television Supreme Council and began to be broadcast on all national television channels.

PETDER Smart Phone Application

PETDER Smart Phone Application for the purpose of facilitating waste motor oil notifications is now available in AppStore and Google Play Store.

PROJECTS

Within the framework of “waste motor oil collection” activities that have been carried out by PETDER since 2004 in accordance with the Regulation on the Control of Waste Oils, 155,197 trips have been made to 15,636 waste motor oil generators in 81 cities and the amount of waste motor oil collected has totaled 197,089 tons in the last 12 years.

In 2016, 14,651 trips were made to waste motor oil generators by PETDER and 19,185 tons of waste motor oil was collected.

Within the framework of “One Barrel One Tree Social Responsibility Project” financed by PETDER, “by planting one tree for each barrel of waste motor oil collected from state institutions”, 81,500 trees, 10,000 of which were planted in 2016, have been planted.

SECTOR STATISTICS

Developments in Crude Oil and Fuel Prices

The fluctuations in world oil prices continued in 2016 and as a result of these fluctuations, fuel pump prices remained on the public agenda.

Brent oil started 2016 with \$37 per barrel in the international markets, dropped to \$29 in January and increased to \$56, its highest level in 2016. The average price of Brent Oil in 2016 was \$45.

The changes in crude oil prices directly affected the price of fuel products in the Mediterranean markets, and the highest price for gasoline was 561 \$/ton and the lowest was 359 \$/ton, the highest price for diesel was 497 \$/ton and the lowest was 275 \$/ton.

Indirect Taxes and Price Components

The total amount of the indirect taxes collected from fuel and LPG sectors has continuously increased every year with the increase in consumption. According to calculations based on consumption data, the indirect taxes collected from the oil sector in 2016 reached 77.9 billion TL. It is estimated that the indirect taxes collected from the Oil Sector since 2010 have totaled 409.9 billion TL.

Oil and LPG Sector Statistics

As of the end of 2016, there were 4 refineries (6 licensed refineries), 91 distributor companies, 12,638 fuel stations operating in the petroleum market with EMRA licenses. In the Liquefied Petroleum Gas (LPG) market, 87 distributor companies, 10,651 autogas stations were operating with EMRA licenses.

The total financial magnitude of the fuel sector in 2016 reached 123.3 billion TL with an increase rate of 7.9% compared to 2015, as a result of an increase in consumption and taxes.

The total automotive fuel consumption increased by 7.3% compared to the same period of the previous year and reached 35 million m³ in 2016. Among the automotive fuels, the share of diesel increased while the shares of gasoline and LPG Autogas in total consumption decreased. Total fuel consumption totaled approximately 25.1 million tons in 2016 with an increase of 7.9%.

Number of Vehicles

Based on data from Turkish Statistical Institute, the total number of vehicles registered as of the end of 2016 was 21,090,424 and the shares were divided as follows; 53.7% automobiles, 16.3% vans, 14.2% motorcycles, 8.4% tractors, 3.9% trucks, 2.2% minibuses, 1.0% buses, and 0.2% special purpose vehicles.

In 2016, there was a 3.5-4% increase in the number of gasoline and autogas LPG powered vehicles while the number of diesel powered vehicles increased by 14% in the same period.

figure 1 Product and Year Based Tax Breakdown

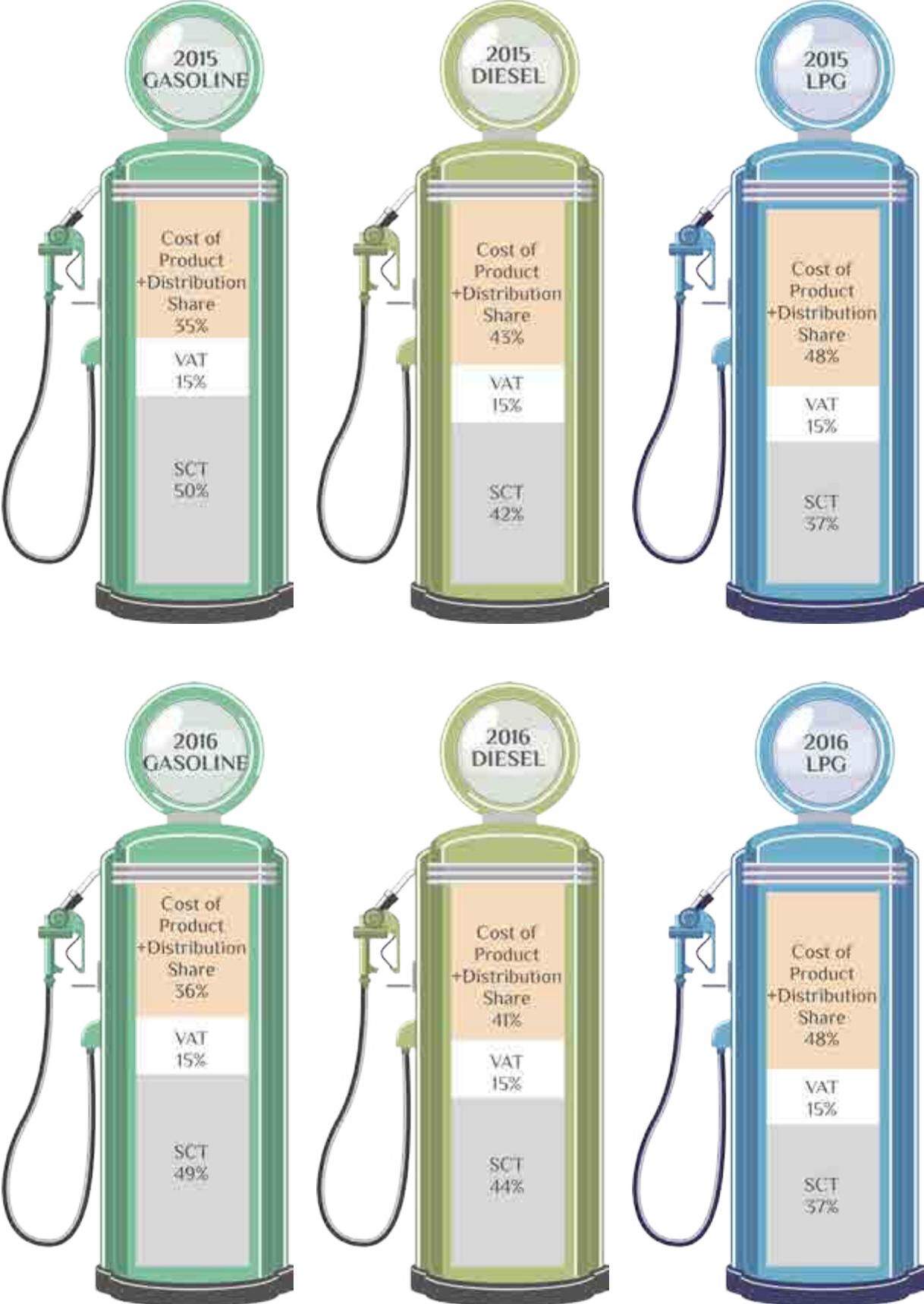


table 1

CONSUMPTION OF OIL PRODUCTS IN 2016				
A)	Petroleum Products (m ³)	2015	2016	Change
	95 Octane (with additives)*	2.614.258	2.775.368	6,2%
	Unleaded 97 and Higher Octane*	193.302	215.321	11,4%
	Total Gasoline (m³)	2.807.561	2.990.689	6,5%
	Diesel*	17.273.595	18.538.407	7,3%
	Diesel (Other)*	7.414.103	8.259.401	11,4%
	Total Diesel (m³)	24.687.697	26.797.808	8,5%
	Autogas* (m ³)	5.480.752	5.610.593	2,4%
	Total Automotive Fuels* (m³)	32.976.058	35.399.097	7,3%
B)	LPG Products** (tons)			
	Bulk*	176.105	141.010	-19,9%
	Bottled*	815.547	820.412	0,6%
	Autogas*	3.069.221	3.141.932	2,4%
	Total LPG (tons)	4.060.873	4.103.354	1,0%
C)	Lubricants (tons)			
	Vehicle Oils	210.807	232.779	10,4%
	Industrial Oils	175.730	188.884	7,5%
	Marine Oils and Greases	45.303	42.821	-5,5%
	Total Lubricants (tons)	431.840	464.485	7,6%
D)	Vehicle Identification System Sales (m ³)			
	Gasoline	119.419	122.331	2,4%
	Diesel	2.445.968	2.496.091	2,0%
	Total Vehicle Identification System Sales (m³)	2.565.387	2.618.421	2,1%

*Calculated based on EMRA Oil and LPG Sector Report figures and PETDER data. Fuel data are consolidated from 14, lubricants data are collected from 8 distributor companies on a voluntary basis. Reflects the country total.

** Excluding standard LPG

table 2

2016 AUTOMOTIVE FUELS TAX/PRICE INFORMATION				
A)	Turkey Pump Prices (TL/lt)*	2015	2016	Change
	Taxed Gasoline (95 Octane)	4,91	4,48	-8,8%
	Taxed Diesel (Standard 10ppm)	4,35	3,80	-12,5%
	Taxed Autogas (LPG)	2,78	2,42	-13,0%
	Gasoline without tax (95 Octane)	1,98	1,62	-18,2%
	Diesel without tax (Standard 10ppm)	2,09	1,63	-22,0%
	Autogas without tax (LPG)	1,47	1,17	-20,6%
B)	Price of Petroleum and Products in International Markets**			
	Brent (USD/Barrel)	53,7	45,0	-16,2%
	Brent (TL/ Barrel)	146,4	136,0	-7,1%
	Gasoline, CIF Med (TL/1000lt)	1.553,7	1.424,4	-8,3%
	Diesel, CIF Med (TL/1000lt)	1.388,6	1.225,0	-11,8%
	LPG, CIF Med (TL/1000lt)	1.078,7	1.037,9	-3,8%
C)	Total Indirect Taxes (Billion TL)***			
	Fuel SCT	45,70	51,28	12,2%
	Fuel VAT	16,46	17,75	7,9%
	LPG SCT	6,04	6,75	11,7%
	LPG VAT	1,99	2,09	5,0%
	Total Indirect Taxes	70,2	77,9	10,9%

* Calculations based on data from 8 fuel companies (Istanbul European Side) published on EMRA website.

** Source: Argus Monthly Report

*** Calculations based on total consumption data from EMRA. (For fuels, white and black products are included, lubricant is excluded)



2. DEVELOPMENTS IN THE WORLD

2.1 EVALUATION OF INTERNATIONAL ENERGY AGENCY

“World Energy Outlook” Report contains the latest forecasts for today and the next 25 years in global energy markets, projections on global climate change, policy developments and recent analyses supported by the learnings of the previous year. “World Energy Outlook” includes the latest supply and demand projections according to a variety of scenarios, countries, industries and fuel types. The report includes important analyses on how the energy system might be transformed in the medium and long term.

The Paris Agreement on climate change, which entered into force in November 2016, is at its heart an agreement about energy.

Transformative change in the energy sector, the source of at least two-thirds of greenhouse-gas emissions, is essential to reach the objectives of the Agreement. The changes already underway in the energy sector, demonstrating the promise and potential of low-carbon energy, in turn lend credibility to meaningful action on climate change. Growth in energy-related CO₂ emissions stalled completely in 2015. This was mainly due to a 1.8% improvement in the energy intensity of the global economy, a trend bolstered by gains in energy efficiency, as well as the expanded use of cleaner energy sources worldwide, mostly renewables. An increasing slice of the roughly \$1.8 trillion of investment each year in the energy sector has been attracted to clean energy, at a time when investment in upstream oil and gas has fallen sharply. The value of fossil-fuel consumption subsidies dropped in 2015 to \$325 billion, from almost \$500 billion the previous year, reflecting lower fossil-fuel prices but also a subsidy reform process that has gathered momentum in several countries.

The renewables-led transformation of the power sector has given focus to a new debate over power market design and electricity

security, while traditional energy security concerns have not gone away.

Adding in issues of energy access, affordability, climate change and energy-related air pollution, as well as problems with public acceptance for different types of energy projects, there are many trade-offs, co-benefits and competing priorities that need to be untangled across the energy sector. This is the task that the World Energy Outlook (WEO) takes up in different scenarios and case studies, with the additional opportunity in 2016 to provide the first comprehensive examination of the new era opened up by the Paris Agreement. All the Paris climate pledges, covering some 190 countries, have been examined in detail and incorporated into our main scenario. More stringent decarbonisation options examined in WEO-2016 include not only the 450 Scenario (consistent with a 50% chance of limiting global warming to 2 °C) but also a first examination of pathways that could limit warming further.

THE WORLD'S ENERGY NEEDS CONTINUE TO GROW, BUT MANY MILLIONS ARE LEFT BEHIND

In our main scenario, a 30% rise in global energy demand to 2040 means an increase in consumption for all modern fuels, but the global aggregates mask a multitude of diverse trends and significant switching between fuels. Moreover, hundreds of millions of people are still left in 2040 without basic energy services.

Globally, renewable energy – the subject of an in-depth focus in WEO-2016 – sees by far the fastest growth. Natural gas fares best among the fossil fuels, with consumption rising by 50%. Growth in oil demand slows over the projection period, but tops 103 million barrels

per day (mb/d) by 2040. Coal use is hit hard by environmental concerns and, after the rapid expansion of recent years, growth essentially grinds to a halt. The increase in nuclear output is spurred mainly by deployment in China. With total demand in OECD countries on a declining path, the geography of global energy consumption continues to shift towards industrialising, urbanising India, Southeast Asia and China, as well as parts of Africa, Latin America and the Middle East. China and India see the largest expansion of solar photovoltaics (PV); while by the mid-2030s developing countries in Asia consume more oil than the entire OECD. Yet, despite intensified efforts in many countries, large swathes of the global population are set to remain without modern energy. More than half a billion people, increasingly concentrated in rural areas of sub-Saharan Africa, are still without access to electricity in 2040 (down from 1.2 billion today). Around 1.8 billion remain reliant on solid biomass as a cooking fuel (down by a third on today's 2.7 billion); this means continued exposure to the smoky indoor environments that are currently linked to 3.5 million premature deaths each year.

A NEW DIVISION OF CAPITAL

A cumulative \$44 trillion in investment is needed in global energy supply in our main scenario, 60% of which goes to oil, gas and coal extraction and supply, including power plants using these fuels, and nearly 20% to renewable energies. An extra \$23 trillion is required for improvements in energy efficiency.

Compared with the period 2000-2015, when close to 70% of total supply investment went to fossil fuels, this represents a significant reallocation of capital, especially given the expectation of continued cost declines for key renewable energy technologies. The main stimulus for upstream oil and gas investment is the decline in production from existing fields. In the case of oil, these are equivalent to losing the current output of Iraq from the global balance every two years. In the power sector, the relationship between electricity supply

and generating capacity is changing. A large share of future investment is in renewables-based capacity that tends to run at relatively low utilisation rates, so every additional unit of electricity generated is set to necessitate the provision of 40% more capacity than during the period 1990-2010. The increased share of spending on capital-intensive technologies is balanced in most cases by minimal operational expenditures, e.g. zero fuel costs for wind and solar power.

CLIMATE PLEDGES AND CLIMATE GOALS

Countries are generally on track to achieve, and even exceed in some instances, many of the targets set in their Paris Agreement pledges; this is sufficient to slow the projected rise in global energy-related CO₂ emissions, but not nearly enough to limit warming to less than 2 °C.

China's transition to an economic model oriented towards domestic consumption and services plays a critical role in shaping global trends. The build-up of China's infrastructure in recent decades relied heavily on energy-intensive industrial sectors, notably steel and cement. However, energy demand from these sectors is now past its high point, with the projected decline to 2040 bringing down China's industrial coal use in its wake. Almost all the growth in China's power generation comes from sources other than coal, whose share in the power mix falls from almost three-quarters today to less than 45% in 2040. China's energy-related CO₂ emissions plateau, only slightly above current levels. In India, coal's share in the power mix drops from 75% to 55% over the period to 2040, a major shift in a country that sees electricity demand more than triple (compared with a "mere" 85% rise in China). Among the main developed economies, the United States, the European Union and Japan look to be broadly on track to meet their climate pledges, although delivering on further improvements in energy efficiency will be vital. With a continued focus on full and timely implementation, the pledges are sufficient in aggregate to limit the increase in

global CO₂ emissions to an annual average of 160 million tonnes. This is a marked reduction compared with the average annual rise of 650 million tonnes seen since 2000. But continued growth in energy-related CO₂ emissions, to 36 gigatonnes in 2040, self-evidently means that these pledges do not deliver the Paris Agreement's goal to reach a peak in emissions as soon as possible.

EFFICIENCY IS THE MOTOR OF CHANGE

A step-change in the pace of decarbonisation and efficiency improvement is required in the 450 Scenario, underlining the importance of the five-year review mechanism, built into the Paris Agreement, for countries to increase the ambition of their climate pledges.

The frontlines for additional emissions reductions are in the power sector, via accelerated deployment of renewables, nuclear power (where politically acceptable) and carbon capture and storage; a strong push for greater electrification and efficiency across all end-uses; and a robust and concerted clean energy research and development effort by governments and companies.

With regard to efficiency, we highlight in WEO-2016 the potential for further improvement in the performance of electric motor systems, which account for more than half of today's electricity consumption in a range of end-use applications (e.g. fans, compressors, pumps, vehicles, refrigerators).

In the industrial sector alone, additional cumulative investment of around \$300 billion in the 450 Scenario reduces 2040 global electricity demand by about 5% and avoids \$450 billion in investment in power generation. Capturing these energy savings requires a system-wide approach that encompasses not only strict regulation of motors and motor-driven devices, but also larger uptake of variable speed drives and the implementation by operators of other measures to enhance the efficiency of the system as a whole, such as predictive maintenance.

ELECTRIC VEHICLES READY TO MOVE

Electricity takes an ever-larger share of the growth in final energy consumption: from just over one-quarter over the last 25 years, electricity accounts for almost 40% of additional consumption to 2040 in our main scenario and for two-thirds in the 450 Scenario.

Non-OECD countries account for more than 85% of the increase in electricity use in both scenarios, but this is also one of the few energy carriers that gains ground within the OECD. Although a small factor in total power demand, the projected rise of electricity consumption in road transport is emblematic of the broader trend, as electric cars gain consumer appeal, more models appear on the market and the cost gap with conventional vehicles continues to narrow.

The worldwide stock of electric cars reached 1.3 million in 2015, a near-doubling on 2014 levels. In our main scenario, this figure rises to more than 30 million by 2025 and exceeds 150 million in 2040, reducing 2040 oil demand by around 1.3 mb/d. Although battery costs continue to fall, supportive policies – which are far from universal for the moment – are still critical to encourage more consumers to choose electric over conventional vehicles.

If these policies, including tighter fuel-economy and emissions regulations as well as financial incentives, become stronger and more widespread, as they do in the 450 Scenario, the effect is to have some 715 million electric cars on the road by 2040, displacing 6 mb/d of oil demand.

RENEWABLES BREAK FREE

The electricity sector is the focus of many Paris pledges: nearly 60% of all new power generation capacity to 2040 in our main scenario comes from renewables and, by 2040, the majority of renewables-based generation is competitive without any subsidies.

Rapid deployment brings lower costs: solar PV is expected to see its average cost cut by a further 40-70% by 2040 and onshore wind by an additional 10-25%.

Subsidies per unit of new solar PV in China drop by three-quarters by 2025 and solar projects in India are competitive without any support well before 2030.

Subsidies to renewables are around \$150 billion today, some 80% of which are directed to the power sector, 18% to transport and around 1% to heat. With declining costs and an anticipated rise in end-user electricity prices, by the 2030s global subsidies to renewables are on a declining trend from a peak of \$240 billion.

Renewables also gain ground in providing heat, the largest component of global energy service demand, meeting half of the growth to 2040. This is mainly in the form of bioenergy for industrial heat in emerging economies in Asia; and solar thermal applications for water heating, already an established choice in many countries, including China, South Africa, Israel and Turkey.

In the 450 Scenario, nearly 60% of the power generated in 2040 is projected to come from renewables, almost half of this from wind and solar PV.

The power sector is largely decarbonised in this scenario: the average emissions intensity of electricity generation drops to 80 grammes of CO₂ per kWh in 2040, compared with 335 g CO₂/kWh in our main scenario, and 515 g CO₂/kWh today.

In the four largest power markets (China, the United States, the European Union and India), variable renewables become the largest source of generation, around 2030 in Europe and around 2035 in the other three countries.

A 40% increase in generation from renewables, compared with our main scenario, comes with only a 15% increase in cumulative subsidies and at little extra cost to consumers: household electricity bills in the 450 Scenario are virtually unchanged from those in our main scenario, thanks also to more efficient energy use.

THE POLICY FOCUS SHIFTS TO INTEGRATION

Cost reductions for renewables, on their own, will not be enough to secure an efficient decarbonisation of electricity supply.

Structural changes to the design and operation of the power system are needed to ensure adequate incentives for investment and to integrate high shares of variable wind and solar power.

The rapid deployment of technologies with low short-run costs, such as most renewables, increases the likelihood of sustained periods of very low wholesale electricity prices.

A careful review of market rules and structures is required to ensure that generators have ways to recover their costs, and that the power system is able to operate with the necessary degree of flexibility.

Strengthening the grid, incentivising system-friendly deployment of wind and solar, and ensuring the availability of power plants ready to dispatch at short notice can efficiently accommodate the variability of wind and solar output, up until they reach a share of around one-quarter in the power mix.

After this point, demand response and energy storage become essential to avoid wind and solar installations having their operations curtailed in times of abundant generation.

In the absence of these additional measures, by the end of the Outlook period in the 450 Scenario curtailment could occur for up to one-third of the time in Europe and around 20% in the United States and India, potentially idling the equivalent of up to 30% of the investment in new wind and solar plants.

The timely deployment in this scenario of cost-effective demand-side and storage measures, as part of a suite of system integration tools, limits curtailment to below 2.5% of annual wind and solar output and paves the way for deep decarbonisation of the power sector.

THE 2°C PATHWAY IS VERY TOUGH: THE ROAD TO 1.5°C GOES THROUGH UNCHARTED TERRITORY

The challenges to achieve the 450 Scenario are immense, requiring a major reallocation of investment capital going to the energy sector.

The division of the \$40 trillion in cumulative energy supply investment in the 450 Scenario (some \$4 trillion less than in our main scenario) moves away from fossil fuels and towards renewables and other low-carbon investments in nuclear and carbon capture and storage.

By 2040, the share going to fossil fuels drops towards one-third. In addition, \$35 trillion is needed for improvements in energy efficiency (an extra \$12 trillion, compared with our main scenario).

The 450 Scenario puts the energy sector on course to reach a point, before the end of this century, when all residual emissions from fuel combustion are either captured and stored, or offset by technologies that remove carbon from the atmosphere. The more ambitious the target for limiting global warming, the earlier this point of net-zero emissions has to be reached. The transformation required for a reasonable chance of remaining within the temperature goal of 1.5 °C is stark.

It would require net-zero emissions at some point between 2040 and 2060 (even if negative emissions technologies can be deployed at scale), thus requiring radical near-term reductions in energy sector CO₂ emissions, employing every known technological, societal and regulatory decarbonisation option.

FOSSIL FUELS AND THE RISKS FROM THE LOW-CARBON TRANSITION

For the moment, the collective signal sent by governments in their climate pledges (and therefore reflected in our main scenario) is that fossil fuels, in particular natural gas and

oil, will continue to be a bedrock of the global energy system for many decades to come, but the fossil-fuel industry cannot afford to ignore the risks that might arise from a sharper transition.

While all fossil fuels see continued growth in our main scenario, by 2040 oil demand returns to the levels of the late 1990s in the 450 Scenario, at under 75 mb/d; coal use falls back to levels last seen in the mid-1980s, at under 3000 million tonnes of coal equivalent per year; only gas sees an increase relative to today's consumption level. A fully fledged policy drive to decarbonise the energy system will have important consequences for future revenues of fossil-fuel companies and exporting countries, but the exposure to risk varies across fuels and across different parts of the value chain. For example, the capital at risk in the coal sector is concentrated in coal-fired power stations (for which carbon capture and storage becomes an important asset protection strategy); the key risk in the mining sector, which is much less capital-intensive, is to employment.

Exporting countries can take steps to reduce vulnerabilities by limiting their dependence on fossil fuel revenue, as Saudi Arabia is doing with its sweeping "Vision 2030" reform programme. In the case of oil, we find no reason to assume widespread stranding of upstream oil assets in the 450 Scenario, as long as governments give clear signals of their intent and pursue consistent policies to that end. Investment in developing new upstream projects is an important component of a least-cost transition, as the decline in output from existing fields is much larger than the anticipated fall in demand. But the risks would increase sharply in the event of sudden policy shifts, stop-and-go policy cycles or other circumstances that lead companies to invest for demand that does not materialise.

OIL MARKETS COULD BE IN FOR ANOTHER BUMPY RIDE

A near-term risk to oil markets could arise from the opposite direction - a shortfall of new

projects- if the cuts in upstream spending in 2015-2016 are prolonged for another year.

In 2015, the volume of conventional crude oil resources that received development approval fell to its lowest level since the 1950s and the data available for 2016 show no sign of a rebound. A lot of attention is focused on the remarkable resilience of US tight oil output through the current downturn and its potential ability, because of a short investment cycle, to respond in a matter of months to movements in price. But there is a threat on the horizon to the “baseload” of oil output, the conventional projects that operate on a different rhythm, with lead times of three to six years from investment decision to first oil. We estimate that, if new project approvals remain low for a third year in a row in 2017, then it becomes increasingly unlikely that demand (as projected in our main scenario) and supply can be matched in the early 2020s without the start of a new boom/bust cycle for the industry.

Over the longer term, oil demand in our main scenario concentrates in freight, aviation and petrochemicals, areas where alternatives are scarce, while oil supply – despite a strong outlook for US tight oil – increasingly concentrates in the Middle East.

There are few substitutes for oil products as a fuel for trucks and planes and as a feedstock for the chemicals industry; these three sectors account for all of the growth in global oil consumption. Total demand from OECD countries falls by almost 12 mb/d to 2040, but this reduction is more than offset by increases elsewhere. India, the largest source of future demand growth, sees oil consumption rise by 6 mb/d. On the supply side, projected US tight oil output has been revised upwards, remaining higher for longer than in last year’s Outlook, although non-OPEC production as a whole still goes into retreat from the early 2020s. OPEC is presumed to return to a policy of active market management, but nonetheless sees its share of global production rising towards 50% by 2040. The world becomes increasingly reliant on expansion in Iran (which reaches 6 mb/d in 2040) and Iraq (7 mb/d in 2040) to balance the market. The focus for oil trade shifts decisively to Asia: the United States all but eliminates net imports of oil by 2040.

A TRULY GLOBAL GAS MARKET IS COMING INTO VIEW

A 1.5% annual rate of growth in natural gas demand to 2040 is healthy compared with the other fossil fuels, but markets, business models and pricing arrangements are all in flux. A more flexible global market, linked by a doubling of trade in LNG, supports an expanded role for gas in the global mix.

Gas consumption increases almost everywhere, with the main exception of Japan where it falls back as nuclear power is reintroduced. China (where consumption grows by more than 400 billion cubic metres) and the Middle East are the largest sources of growth. But questions abound about how quickly a market currently awash with gas can rebalance, especially with another 130 bcm of liquefaction capacity under construction, primarily in the United States and Australia. Our Outlook assumes a marked change from the previous system of strong, fixed-term relationships between suppliers and a defined group of customers, in favour of more competitive and flexible arrangements, including greater reliance on prices set by gas-to-gas competition. This shift is catalysed by the increasing availability of footloose US LNG cargoes and the arrival in the 2020s of other new exporters, notably in East Africa, as well as the diversity brought to global supply by the continued, if uneven, spread of the unconventional gas revolution. Floating storage and regasification units help to unlock new and smaller markets for LNG, whose overall share in long-distance gas trade grows from 42% in 2014 to 53% in 2040. But uncertainty over the direction of this commercial transition could delay decisions on new upstream and transportation projects, posing the risk of a hard landing for markets once the current oversupply is absorbed. Export-oriented producers have to work hard to control costs in the face of strong competition from other fuels, especially in the power sector. In the mid-2020s, in gas-importing countries in Asia, new gas plants would be a cheaper option than new coal plants for base-load generation only if coal prices were \$150/tonne (double the anticipated 2025 price). The space for gas-fired generation is also squeezed by the rising deployment and falling costs of renewables.

COAL: A ROCK IN A HARD PLACE

With no global upturn in demand in sight for coal, the search for market equilibrium depends on cuts to supply capacity, mainly in China and the United States.

There are stark regional contrasts in the coal demand outlook. Some higher income economies, often with flat or declining overall energy needs, make large strides in displacing coal with lower carbon alternatives.

Coal demand in the European Union and the United States (which together account for around one-sixth of today's global coal use) falls by over 60% and 40%, respectively, over the period to 2040. Meanwhile, lower income economies, notably India and countries in Southeast Asia, need to mobilise multiple sources of energy to meet fast growth in consumption; as such they cannot afford, for the moment, to neglect a low-cost source of energy even as they pursue others in parallel.

China is in the process of moving from the latter group of countries to the former, resulting in a decline of almost 15% in its coal demand over the Outlook period.

China is also instrumental to the way that the coal market finds a new equilibrium, after the abrupt end to the coal boom of the 2000s. China is administering a number of measures to cut mining capacity, a move that has already pushed coal prices higher in 2016 (after four straight years of decline).

If, however, the social costs of this transition prove too high, China could ease the pace of supply cuts, raising the possibility of China becoming a coal exporter in order to get rid of surplus output: this would prolong the slump in the international market.

Alongside measures to increase coal-plant efficiency and reduce pollutant emissions, the long-term future of coal is increasingly tied to the commercial availability of carbon capture and storage, as only abated coal use is compatible with deep decarbonisation.

ENERGY AND WATER: ONE DOESN'T FLOW WITHOUT THE OTHER

The inter-dependencies between energy and water are set to intensify in the coming years, as the water needs of the energy sector – and the energy needs of the water sector – both rise.

Water is essential for all phases of energy production: the energy sector is responsible for 10% of global water withdrawals, mainly for power plant operation as well as for production of fossil fuels and biofuels.

These requirements grow over the period to 2040, especially for water that is consumed (i.e. that is withdrawn but not returned to a source). In the power sector there is a switch to advanced cooling technologies that withdraw less water, but consume more.

A rise in biofuels demand pushes up water use and greater deployment of nuclear power increases both withdrawal and consumption levels. On the other side of the energy-water equation, the WEO analysis provides a first systematic global estimate of the amount of energy used to supply water to consumers.

In 2014, some 4% of global electricity consumption was used to extract, distribute and treat water and wastewater, along with 50 million tonnes of oil equivalent of thermal energy, mostly diesel used for irrigation pumps and gas in desalination plants.

Over the period to 2040, the amount of energy used in the water sector is projected to more than double.

Desalination capacity rises sharply in the Middle East and North Africa and demand for wastewater treatment (and higher levels of treatment) grows, especially in emerging economies.

By 2040, 16% of electricity consumption in the Middle East is related to water supply.

Managing energy-water linkages is pivotal to the prospects for successful realisation of a range of development and climate goals.

There are several connections between the new United Nations Sustainable Development Goals (SDG) on clean water and sanitation (SDG 6) and affordable and clean energy (SDG 7) that, if managed well, can help with the attainment of both sets of goals. There are also many economically viable opportunities for energy and water savings that can relieve pressures on both systems, if considered in an integrated manner. Efforts to tackle climate change can exacerbate water stress in some cases, or be limited by water availability. Some low-carbon technologies, such as wind and solar PV, require very little water; but the more a decarbonisation pathway relies on biofuels, concentrating solar power, carbon capture or nuclear power, the more water it consumes. As a result, despite lower energy demand, water consumption in 2040 in the 450 Scenario is slightly higher than in our main scenario.

2.2 EUROPEAN FUEL MARKET

OIL DEMAND IN EUROPE

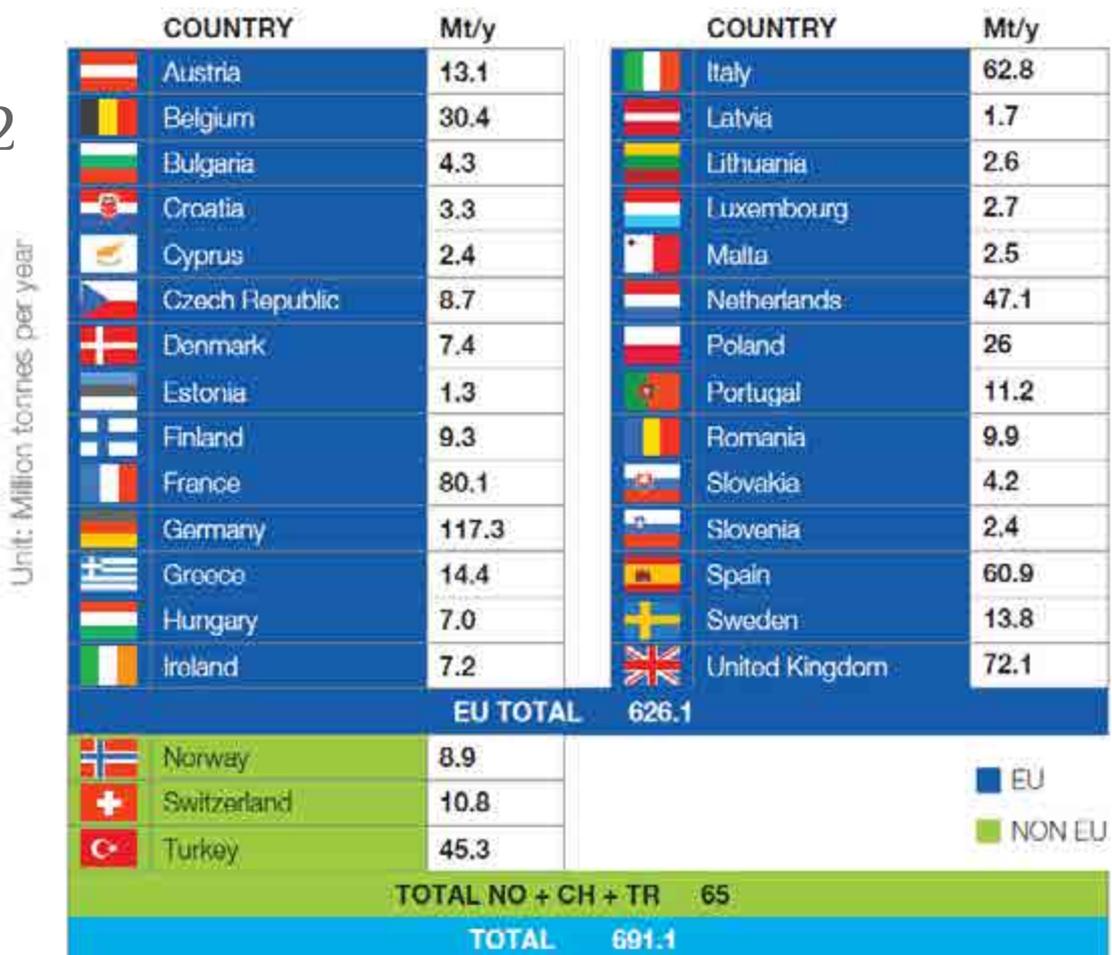
EU total oil demand amounted to 691.1 million tons for 2016.

EU-28 total oil demand amounted to 626.1 million tons for 2016, representing a slight decrease of approximately 1% compared to 2015. Most EU Member States recorded an increase in demand. While the major EU Member States such as Slovakia (5%), Poland

(3.5) and Slovenia (3%) recorded the biggest increase, Czech Republic (-5%), Hungary (-3.7%) and Letonia (-2.5%) faced the biggest fall in oil demand.

Note: Please note that due to rounding, figures may not add up.

figure 2



Oil Demand in Europe (2016)

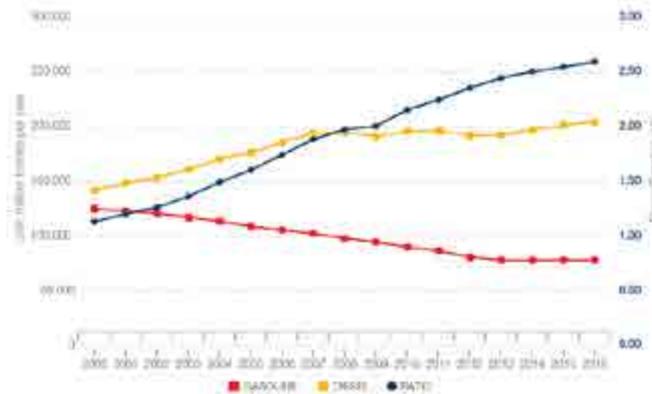
Source: FuelsEurope 2017 Statistical Report - Wood Mackenzie

OIL DEMAND IN EUROPE

The tax-incentivised dieselisation trend has significantly contributed to a fundamental change in the EU’s road fuel demand structure. The shift from gasoline to diesel began some 25 years ago and led to a major demand

decline for gasoline as well as a shortage of diesel production in the EU. Gasoline demand continues to decline while diesel demand is on the rise, currently reaching a 2.6 demand ratio in 2016.

figure 3



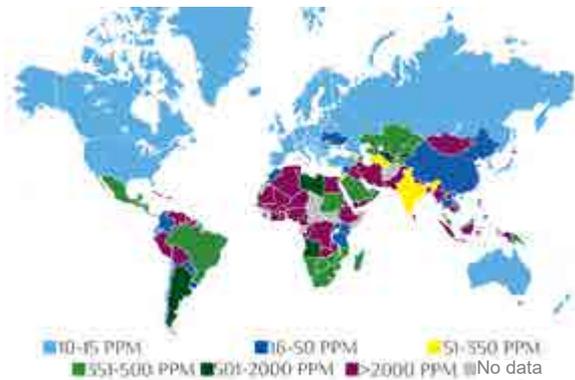
Oil Demand in Europe (2016)

Source: FuelsEurope 2017 Statistical Report - Wood Mackenzie

MAXIMUM ON-ROAD DIESEL SULPHUR LIMITS

Europe together with the USA, Canada, Japan, Australia, Chile and Colombia apply the lowest (10-15 PPM) on-road diesel sulphur limits in the world. Countries may apply lower limits for different grades, regions/cities, or based on average content. Detailed information on limits and regulations can be found at www.stratasadvisors.com.

figure 4



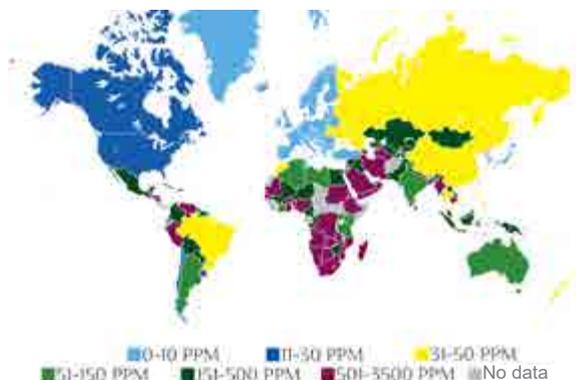
Maximum On-Road Diesel Sulphur Limits
Source: FuelsEurope 2017 Statistical Report, Stratas Advisors, December 2015

MAXIMUM GASOLINE SULPHUR LIMITS

The EU has set the most stringent environmental specifications for sulphur in gasoline worldwide with a maximum level of 10 PPM.

Countries may apply lower limits for different grades, regions/cities, or based on average content. Detailed information on limits and regulations can be found at www.stratasadvisors.com.

figure 5



Maximum Gasoline Sulphur Limits
Source: FuelsEurope 2017 Statistical Report, Stratas Advisors, December 2015

NUMBER OF PETROL STATIONS IN EUROPE

There were over 125,000 petrol stations in the EU, Norway, Switzerland and Turkey operating in 2015, fuelling some 230 million cars and over 30 million trucks on Europe's roads.

figure 6

Unit: Number of petrol stations

COUNTRY	Number of petrol stations	COUNTRY	Number of petrol stations
Austria	2 670	Italy	20 750
Belgium	3 109	Latvia	608
Bulgaria	3 000	Lithuania	822
Croatia	N/A	Luxembourg	236*
Cyprus	305	Malta	80
Czech Republic	3 906	Netherlands	4 184
Denmark	2 028	Poland	6 800
Estonia	510	Portugal	3 046
Finland	1 900	Romania	2 100
France	11 200	Slovakia	890 **
Germany	14 510	Slovenia	553
Greece	6 150	Spain	11 188
Hungary	1 953	Sweden	2 970 ***
Ireland	1 785	United Kingdom	8 476
EU TOTAL		115 729	
Norway	1 575		
Switzerland	3 424		
Turkey	12 521		
TOTAL NO + CH + TR		17 520	
TOTAL		133 249	

EU * Numbers for 2015
 NON EU ** Estimate
 *** Beginning of 2016

Number of Petrol Stations in Europe (2016)
FuelsEurope 2017 Statistical Report



3. DEVELOPMENTS IN TURKEY

EMRA PRESIDENT MUSTAFA YILMAZ HAS BEEN REASSIGNED



After the end of his office term, Mustafa Yılmaz has been reassigned as the President of the Energy Market Regulatory Authority with a Council of Ministers Decree published in the Official Gazette. We congratulate Mustafa Yılmaz and wish him continued success in this position.

CONSTITUTIONAL COURT'S CANCELLATION OF SEVERAL PROVISIONS UNDER ARTICLES 19 AND 20 OF THE LAW NO.5015

The Constitutional Court has decided for cancellation of several provisions under Articles 19 and 20 of the Petroleum Market Law no.5015 with the decision dated 7.4.2016 and numbered 2016/28 and determined the date of enforcement as 9 months after the publication of the decision in the Official Gazette. Article 19 regulates administrative fines and Article 20 regulates administrative sanctions. The industry has been facing with severe sanctions and fines. The decision of the Constitutional Court has provided an opportunity for imposition of more moderate fines. Some of these fines and penalties have been stipulated in order to prevent smuggling and unrecorded activities

and PETDER fully supports the imposition of fines and penalties for such acts.

PETDER has shared its opinion with relevant parties stating that, excluding smuggling and unrecorded activities, the following points should be taken into consideration in the new regulation and presented detailed opinions at the study meetings.

Warning mechanism: The industry faces various sanctions within the scope of the Law no.5015 and secondary legislation. Most of the situations result from simple mistakes or omissions which would not result in public loss and/or serious impacts and which could be solved by a warning without imposing a fine or penalty. Excluding smuggling acts/unrecorded activities, a warning mechanism should be established for such simple mistakes and organizations should be provided with an opportunity to correct the mistake.

Proportionality: The severeness of the punishments imposed on simple mistakes and omissions which would not have serious impacts is not in proportion with the probable impact and extent of omissions or mistakes. Excluding smuggling acts/unrecorded activities, punishments to be imposed on simple mistakes and omissions which would not have serious impacts in the sector and/or cause public loss should be more fair and proportionate.

Sector Opinion: In order not to cause irrevocable and aggravated results in the sector, the regulation directly related to punishments should be finalized after receiving the opinion of the sector.

EMRA evaluated the subject with a positive approach at several meetings with the industry in 2016 and prepared a draft with a broader vision, including revision of the whole article and not only the provisions cancelled by the Constitutional Court.

VEHICLE COMPLIANCE CERTIFICATE MEETING HELD

Directorate General for Dangerous Goods and Combined Transport Regulation hosted a meeting in Ankara on February 16, 2016 on Vehicle Compliance Certificates. Sector representatives attended the meeting. Current situation of the studies on procedures and principles by the Ministry and sector opinions, several statistics under the studies on Situation Reports conducted by TSE and recommendations related to the process were the main items on the agenda.

It was also stated by the Ministry that legislative studies regarding the issue have been initiated and that draft legislation would be presented to sector representatives for feedback after completion of the studies and before enactment of the legislation. Pursuant to the “The Regulation Amending the Regulation on Carriage of Dangerous Goods by Road” that entered into force after being published in the Official Gazette dated December 31, 2015 and numbered 29579, vehicles used for inland carriage of dangerous goods and registered to traffic on the date this Regulation enters into force and not having a Vehicle Compliance Certificate/ADR Compliance Certificate shall obtain their situation report until July 1, 2016 and vehicles manufactured between 2005 and 2014 shall obtain a Vehicle Compliance Certificate or ADR Compliance Certificate until December 31, 2016. It was stated at the meeting that penal action would be taken regarding vehicles for which a Situation Report has not been obtained as of July 1, 2016.

REGULATION ON CONTROL OF VOLATILE ORGANIC COMPOUND EMISSIONS OPEN FOR REVIEW

“The Draft Regulation on Control of Volatile Organic Compound Emissions Resulting from the Storage and Distribution of Gasoline and Naphtha” was published and opened for review by the Ministry of Environment and Urbanization General Directorate for Environmental Management. The Regulation was prepared for compliance with the Directive 94/63/E

on the “Control of Volatile Organic Compound Emissions Resulting from the Storage of Petrol and its Distribution from Terminals to Service Stations” and the Directive 2009/126/EC on “Control of Volatile Organic Compound Emissions During Refueling of Motor Vehicles at Service Stations” within the scope of European Union Membership studies. Implementation of the Regulation, which will require substantial investment and operation costs, necessitate cooperation and coordination between several Ministries and relevant institutions. On the other hand, as issues on Volatile Organic Compound Emissions will be addressed within the scope of this regulation at fuel facilities and stations, it has been recommended that articles related to the sectors under the Regulation on Control of Industrial Air Pollution be repealed.

STUDY GROUP ESTABLISHED TO REVISE TS 12820 STANDARD

A study group was established for revision of “TS 12820 Fuel Stations – Safety Requirements” Standard. The first meeting of the study group was held on 30 March 2016 with the participation of sector representatives including Petroleum Industry Association (PETDER), Turkey Fuel Dealers Petroleum and Gas Companies Employers Association (TABGIS) and LPG and Natural Gas Equipments Association (ALDED) as well as officials from the Ministry of Science, Industry and Technology, Energy Market Regulatory Authority (EMRA) and TSE Directorate of Examination and Surveillance Center.

GÖKHAN TEZEL ELECTED CHAIRMAN OF TOBB LPG COUNCIL

TOBB Turkey Liquefied Petroleum Gas (LPG) Council convened in Ankara under the chairmanship of TOBB Board Member Yahya Toplu for electing the Chairman of the Council and general evaluation of the sector.

Turkey LPG Association Board Member and Aygaz General Manager Gökhan Tezel was elected as the Chairman of the Council by unanimous vote.

SECTOR REPRESENTATIVES CONVENED IN ANTALYA

EMRA – Petroleum Market Evaluation Meeting was held at Antalya Belek Regnum Hotel between April 14-16, 2016. EMRA officials and PETDER, ADER, AKADER, PÜİS, TABGİS and TÜPRAŞ representatives attended the sessions chaired by EMRA President Mustafa Yılmaz.

PETDER Chairman Martin Thomsen underlined that the sector should progress towards free competitive market conditions for maximum customer benefit, greater investment and employment.

PETDER Secretary General Niyazi İter expressed his opinions on legislative amendments and highlighted that impact analyses should be conducted in collaboration with the Ministry, NGOs and the private sector, prior to new regulations. İter stated that it is necessary to make legislative amendments that will ensure free market and competition in the fuel sector, eliminate unnecessary costs, increase productivity and attract more national and international investment. İter expressed that it should be possible to convert “ticketing” products to each other and use alternatives in national stock and added that coordination among organizations with regard to new regulations is of great importance.

PROBLEMS FACED IN THE ENERGY MARKET DISCUSSED

The panel titled “Problems Faced by Manufacturers and Consumers within the Framework of the Latest Regulations” organized by Istanbul Bar Association Energy Law Commission was held at Istanbul Palace of Justice Conference Room on April 13, 2016 at 14.00. The panel session was chaired by Att. Beril Doğan Berk. The first presentation was delivered by PETDER Secretary General Niyazi İter. İter provided a general outlook of the sector and explained the fuel distribution sector’s connections to EMRA and relevant ministries. İter also informed the attendees on the Petroleum Law and made remarks on price formation and factors relating to oil products.

BRIEFING MEETING ON THE LAW ON PROTECTION OF PERSONAL DATA

A briefing meeting on the Law no.6698 on Protection of Personal Data enacted on 26 March 2016 was held with BTS & Partners for PETDER members. Attn. Yasin Beceni and Attn. Naz Değirmenci made a presentation on how business life will be affected by the Law, the purpose of which is to protect the fundamental rights and freedoms, especially the right to privacy, of data subjects as well as to stipulate the obligations of natural and legal persons processing data and the procedures and principles to be followed.

MORE FLEXIBILITY FOR UNLOADING PROCESS

In accordance with the safety measures implemented by the Ministry of Transport, Maritime Affairs and Communications within the scope of Anti-Terror Measures, oil products shall not be kept around fuel stations or tanks and shall be unloaded until midnight. However, in order not to encounter any supply problems, the Ministry issued a new letter bringing flexibility to the practice.

EXTENSION GRANTED FOR ARTICLES OF THE REGULATION ON PREVENTION AND MITIGATION OF EFFECTS OF MAJOR INDUSTRIAL ACCIDENTS

The regulation changing the date of entry into force of several articles of the Regulation on Prevention and Reducing the Effects of Major Industrial Accidents was published in the Official Gazette dated August 2, 2016 and numbered 29789 and entered into force. With the amendment, the date of entry into force of the Regulation Article 10 on “Prevention of Major Accidents Policy Paper” and Article 11 on “Safety Report” was extended until December 31, 2016. In addition, the dates of entry into force of the Regulation Article 9 on “The Highest Level of Precaution Possible” and subparagraph 2 of Article 14 on “External Emergency Plan” were postponed until July 1, 2017.

SCT OF GASOLINE, DIESEL AND AUTOGAS INCREASED FOR 20 KURUS

As the result of the “Decision Amending the Decision on the Determination of Value-Added Tax Ratios to be implemented for Products and Services and Decision on the Determination of Special Consumption Tax Implemented in Some Products in the Attached List No. 1 in the Special Consumption Tax Law No. 4760” published in the Official Gazette dated September 8, 2016 No. 29825, the SCT of gasoline, diesel and autogas increased for 20 kurus.

Product	SCT before September 8, 2016 (TL/lt)	SCT after September 8, 2016 (TL/lt)	Difference (TL/lt)
Gasoline	2,1765	2,3765	0,2000
Diesel	1,5945	1,7945	0,2000
Kerosene	0,9367	1,1367	0,2000
LPG Autogas	0,8837	0,9957	0,1120
Cylinder LPG	0,6776	0,6776	-
Bulk LPG	0,6776	0,6776	-

COMMUNIQUE ON TRACKING LPG CYLINDERS IN THE MARKET ISSUED

The Communiqué on Tracking LPG Cylinders in the Market has entered into force after being published in the Official Gazette dated October 15, 2016. Pursuant to the Communiqué, it is compulsory for distributors to set up a square code tracking system in order to track LPG cylinders at all stages from filling to delivery to end users.

While distributors will be responsible for integration of their own facilities, the facilities from which they receive filling, repair and maintenance services and contracted LPG cylinder dealers to the tracking system to be established, LPG cylinder dealers will be responsible for implementation of the tracking system set up by their distributors in accordance with the Communiqué and provision of the infrastructure necessary for setting up the system. Distributors are obliged to set up the tracking system within eighteen months at the latest starting from October 15, 2016. It is prohibited to keep, fill or sell LPG cylinders without identification or square codes at the filling facilities.

ADR LEGISLATION AMENDMENTS ENTERED INTO FORCE

“The Regulation Amending the Regulation on Carriage of Dangerous Goods by Road”, drafted by The Ministry of Transport Directorate General for Dangerous Goods and Combined Transport Regulation, entered into force after being published in the Official Gazette dated 30 December 2016. With this amendment, the article on the deadlines for obtaining a compliance certificate was amended as follows: “The owners of the vehicles used for the domestic carriage of dangerous goods and operating without a Vehicle Compliance Certificate/ADR Compliance Certificate at the date of effect of the Regulation, but have obtained a Vehicle Assessment Certificate by applying to an agency/institution authorized by the Ministry, shall be obliged to obtain the Vehicle Compliance Certificate/ADR Compliance Certificate from the Ministry or an agency/institution authorized by the Ministry, in accordance with the procedures and principles specified by the Ministry until the dates listed below:

- until 1/7/2017 for 2014 vehicles,
- until 31/12/2017 for 2013 vehicles,
- until 1/7/2018 for 2012 vehicles,
- until 31/12/2018 for 2009-2011 vehicles,
- until 1/7/2019 for 2005-2008 vehicles,
- until 31/12/2019 for 2004 and older vehicles.”

Moreover, provided that they meet the technical criteria specified under the procedures and principles issued by the Ministry, upper structures of the completed vehicles which do not meet ADR requirements and which were manufactured in 2014 or before and which have a Situation Report/Vehicle Compliance Certificate, can be transferred to vehicles manufactured in compliance with ADR in 2015 or later. “The Directive relating to Examination and Certification of Old Vehicles and Upper Structures Carrying Dangerous Goods” was published on the website by the Directorate General and entered into force on the same date. The Directive specifies the safe transportation criteria, examination and certification procedures for the upper structures and vehicles carrying dangerous goods and manufactured in or before 2014.



SECTOR EVENTS

PUBLIC SERVICE ANNOUNCEMENT ON RISKS OF USING NUMBER 10 OIL AS FUEL SUBSTITUTE BEING BROADCAST

The public service announcement on “Risks of Using Number 10 Oil as Fuel Substitute”, prepared in 2015 by Petroleum Industry Association (PETDER) and the Ministry of Environment and Urbanization in order to raise



public awareness was approved by the Radio and Television Supreme Council and began to be broadcast on television channels.

The public service announcement is expected to raise public awareness on the subject matter and contribute to Turkish economy by helping to put an end to use of Number 10 Oil and to activities for preventing the damages it causes on property, and more importantly, on human life.

PETDER SMART PHONE APPLICATION IN USE



PETDER Smart Phone Application developed by PETDER (Petroleum Industry Association) for the purpose of facilitating waste motor oil notifications is now available in AppStore and

Google Play Store. The application aims to facilitate communication between waste motor oil generators and PETDER.

Users who download the application to their smart phones will be able to

- Send a notice through “Waste Oil Notification” page,
- Call PETDER by clicking on the phone number 44 44 924,
- View the plate and license numbers of licensed waste motor oil collection vehicles in their city,
- Be informed about announcements made by PETDER.



EMRA AND LPG SECTOR MEETING HELD IN ANTALYA

EMRA and LPG Sector Meeting was held in Antalya on May 26-27.

EMRA officials and representatives from PETDER, Turkish LPG Association, Anatolia LPG Association, MÜSLPG, ADER, TÜPRAŞ, TABGIS and PUIS attended the meeting chaired by EMRA President Mustafa Yılmaz. EMRA President delivered the opening remarks and stated that the quality improvement and growth in the LPG sector continues and annual LPG consumption has exceeded 4 million tons. Yılmaz highlighted that Turkey has a leading role in the world autogas market and remarked that the LPG sector is also successful in terms of consumer satisfaction.

At his speech, PETDER Secretary General Niyazi İter stated that significant studies have been conducted until now relating to Article 17 of the LPG Law and they are almost finalized. İter claimed that not having an impermeability report should be considered as Gross Negligence and underlined that current practice considering it as Slight Negligence increases the risks in vehicles. İter also expressed the opinions on equalizing the taxes on Autogas-LPG and licensing procedures.

ECONOMY AND LOGISTICS SUMMIT

The “Economy and Logistics Summit”, hosted by Uta Logistics Journal and supported by the Ministry of Development, Ministry of Economy, Ministry of Customs and Trade and sectoral associations, was held at Bomonti Hilton Hotel Istanbul on 12 May 2016. The session on Logistics of Hazardous and Chemical Substances and ADR was chaired by PETDER Secretary General Niyazi İter. The speakers at the session were İzzet Işık (Director General for Dangerous Goods and Combined Transport), Hüseyin Doğanay (Dangerous Goods Coordinator for Mediterranean and Africa Cluster), Özgür Barışkan (BP Castrol Turkey and Central Asia Logistics Manager), Cem Aydın (Linde Gaz Türkiye Purchasing Director) and Alper Özel (UND Vice Chairman

of Executive Committee and International ADR/RID Consultant). During his presentation on Transportation and Practices relating to Dangerous Goods in Turkey, Director General for Dangerous Goods and Combined Transport İzzet Işık explained the ongoing and planned studies by the Ministry of Transportation, Maritime Affairs and Communications. Işık stated that criteria for Vehicle Conformity Certificates would be further determined in collaboration with the sector and that it was planned to complete the process by the end of 2018.

81 CITIES TOGETHER FOR WASTE MOTOR OIL MANAGEMENT

Petroleum Industry Association Waste Motor Oil Management Project Briefing and Consultation Meeting was held in Antalya on May 17-18, 2016 with the participation of representatives from the Ministry of Environment and Urbanization General Directorate for Environmental Management, PETDER, OMSAN, TAYSPED, SE Petrol and Provincial Directorates for Environment and Urbanization from all cities in Turkey. Ministry of Environment and Urbanization General Director for Environmental Management Muhammet Ecel delivered the opening speech and stated that the number of motor vehicles in Turkey, which was approximately 8 million 2002, exceeded 20 million as of May 2016 and the amount of waste motor oil has increased accordingly. Ecel reminded that waste oil generated by motor vehicles was sometimes used for unlawful purposes in heating and motor vehicles and stated that use of waste oil as illegal fuel causes significant tax loss.



After the opening remarks, the first presentation of the meeting was delivered by Chemist Volkan Yanmaz, Ministry of Environment and Urbanization Waste Management Department Expert. Yanmaz gave information on generation of waste oil, its impacts on environment, obligations of waste oil generators and operators and development of refining technologies.



At the second part of the meeting, where PETDER Waste Motor Oil Management Project Team was present, PETDER Secretary General Niyazi İlder delivered a presentation on Turkish lubricant and waste oil market, waste motor oil collection organization, results of waste motor oil collection operations and the problems encountered in the process. İlder stated that 17,801 tons of waste motor oil was collected by PETDER in 2015 and added that use of waste oil in illegal fuel activities hindered the



efforts to increase the amount collected. İlder underlined that it would not be easy to increase the amount of waste oil collected unless the recommendations relating to inspections and sanctions and/or publicly approved additional measures are put into practice. In the final part of the meeting, where PETDER Secretary General Niyazi İlder, Head of Waste Management Department Ahmet Varır, Director of Special Wastes Management Department Gökhan Şentürk, Chemist Volkan Yanmaz and PETDER Operations Manager Volkan Sığınç were present, all participants exchanged opinions and evaluated the problems and recommendations.

ITO FUEL PROFESSIONAL COMMITTEE GROUP MEETING



The Group Meeting titled “Problems in the Fuel Sector and Solution Recommendations” was held by İTO Fuel Professional Committee No.27 at the Council Chamber of İstanbul Chamber of Commerce on May 26, 2016.

The opening remarks of the meeting were delivered by İsmail Aytemiz and Atif Ketenci. PETDER attended the meeting chaired by Head of Fuel Profession Committee Mehmet Şakir Can. Competent figures answered the participants’ questions and the problems of the sector were discussed at the meeting.

Participants stated that national marker should not be the only criteria in determination of smuggling and reminded that additional measures are required.

ENVIRONMENT SECTOR MEETING HELD IN İZMİR



Environment Sector Meetings were organized by İzmir Governorship Provincial Directorate of Environment and Urbanization at İzmir Tepekule Congress and Business Center on June 2-3, 2016 within the scope of Environment Day and Week.

PETDER attended the activities with a stand. Visitors were informed about the Waste Motor Oil Management Project. The public service announcement on the risks of using “Number 10 Oil” as fuel substitute, prepared by the Ministry of Environment and Urbanization and PETDER, was broadcast. The exhibition attracted a great deal of interest from the environment sector and visitors were informed at the panels held.

8th OIL FORUM IN BELGRAD

8th Oil Forum was held in Belgrad on September 28-29, 2016. The Minister of Mining and Energy of Serbia, Aleksandar Antic opened the forum.

National oil stocks was the primary item on the agenda of the forum chaired by Massimo Lombardini representing the European Commission.

In addition to presentations including good practices and examples from countries' national stock legislations, information on stock agreement was also provided.

PETDER BRIEFING MEETING HELD IN TEKIRDAG

PETDER Briefing Meeting was held in Tekirdağ on July 13, 2016. Provincial Directorate of Environment and Urbanization provided waste generators with information on legislation and PETDER presented information on waste motor oil collection activities. Participants' problems and suggestions were discussed in the final session of the meeting.



23rd WORLD ENERGY CONGRESS HELD IN İSTANBUL BETWEEN 9 – 13 OCTOBER

23rd World Energy Congress was held at Istanbul Congress Center and Lütfi Kırdar Congress Center between 9 – 13 October 2016. The plenary sessions held during the congress aimed to facilitate communication between the representatives of business and finance sectors and scholars in search of opportunities to provide sustainable energy at a national, regional and global level. PETDER attended the 23rd World Energy Congress with a stand.

ECONOMIC STRUCTURE WORKSHOP

PETDER attended the Environmental Plan Revision workshop hosted by Istanbul Metropolitan Municipality at the Marmara Hotel on September 29, 2016. The workshop was organized with the vision of Istanbul with a high quality of life, developing in line with environmental, social and economic sustainability principles while preserving its authentic cultural and natural identity.

TURKEY ENERGY SUMMIT HELD IN ADANA

Turkey Energy Summit, organized by Enerji Fuarçılık in a different Turkish city every year, was held in Adana between 23-26 November 2016. PETDER attended the summit with a stand. At the plenary session on the first day of the summit, Minister of Energy and Natural Resources Berat Albayrak answered the questions and evaluated several issues and recent developments which were of particular concern to the energy sector.



At the session titled “Future Projections and Road Map in Fuel Markets” on the second day of the summit, PETDER Chairman Martin Thomsen stated that it was necessary to make an effort towards a more competitive and more efficient fuel sector prioritizing consumer preferences.

Thomsen also highlighted that public and private sector should work in coordination and cooperation with the NGOs in the sector. At the session titled “Expectations of the LPG Market from the Regulatory Authority”, PETDER Secretary General Niyazi İlater stated that Compulsory National Stock System should be improved to be more effective and efficient. At his speech, İlater summarized the sector expectations as coordination and cooperation, using impact analysis for evaluating the positive and negative impacts of proposed legislation on the sector and a simple and efficient legislation that will achieve its purpose without burdening the sector with additional costs.

FUNCTIONAL CONNECTIONS FOCUS GROUP MEETING HELD

PETDER attended the meeting hosted by Istanbul Metropolitan Municipality on September 1, 2016 for the purpose of providing information and receiving feedback, requests and evaluations related to İstanbul’s current transportation and logistics infrastructure as the Functional Connections (Transportation and Logistics) group, in order to provide a basis for the Environmental Plan Revision Scaled 1/100,000 and the Land Use Plan Scaled 1/25,000.

29th WORLD LPG FORUM AND 2016 AEGPL CONGRESS HELD

29th World LPG Forum and 2016 AEGPL Congress was held in Florence between 15-17 November 2016. The opening speech of the organization bringing together LPG representatives was delivered by Yağız Eyüboğlu, Chairman of World LPG Association and Head of Koç Holding Energy Group. PETDER attended the meetings on the position of LPG in the world markets and creating different areas of use and the meetings were held concurrently with the exhibition visits and presentations.

“PETDER WASTE OIL MANAGEMENT PROJECT PARTICIPANTS BRIEFING MEETING”

The Evaluation Meeting for PETDER (Petroleum Industry Association) Waste Motor Oil Collection Activities in 2015 was held at Istanbul Point Hotel on 1 December 2016. Besides the project participants, representatives of PETDER’s business partners OMSAN and TAYSPED attended the meeting. With his opening remarks, PETDER Secretary General Niyazi İlater stated that PETDER celebrated its 20th year in 2016 and added that acting as an impartial and reliable voice for the sector it has represented for 20 years should be regarded as a success for a non-governmental organization. The Introduction Film for PETDER’s 20th Year was shared with the participants at the beginning of the meeting.



Operations Manager Volkan Siğinç provided the attendees with detailed information on activities. Siğinç stated that 177,904 tons of waste motor oil has been collected and recovered as raw material or energy or disposed at licensed facilities in the last 11 years within the scope of the activities carried out by PETDER since 2004 within the framework of the Regulation on Control of Waste Oils. Siğinç also reminded that PETDER is the only “Authorized Institution” before the Ministry of Environment and Urbanization for collection of waste motor oil in Turkey. Siğinç remarked that part of waste motor oil is still being used as Number 10 Oil in Turkey and highlighted that Number 10 Oil, which is a non-standard fuel, absolutely damages the vehicle and causes serious accidents some of which result in loss

of life. Siğinç listed PETDER’s suggestions towards increasing the amount of waste motor oil collected.

After Siğinç’s speech, PETDER Corporate Communications Executive Yasemin Dağ shared the results of the “Participant Satisfaction Survey” conducted online. It was observed that the level of satisfaction was high in general. Dağ also stated that all feedback received was reviewed and necessary actions were taken. After the presentations, PETDER Secretary General Niyazi İter conducted a workshop to discuss the problems encountered during collection of waste motor oil and the solution suggestions with the participants.

The participants actively participated in the workshop and the topics highlighted to increase the amount of waste motor oil collected were;

- extending inspections and controls,
- enhancing collaboration between relevant institutions,
- raising public awareness.

İter stated that the foregoing suggestions have been shared with the relevant institutions and necessary actions will be taken and added that the participants’ suggestions would also be taken into consideration.





4. SECTOR STATISTICS

4.1 DEVELOPMENTS IN CRUDE OIL AND FUEL PRICES

The fluctuations in world oil prices continued in 2016 and as a result of these fluctuations, fuel pump prices remained on the public agenda.

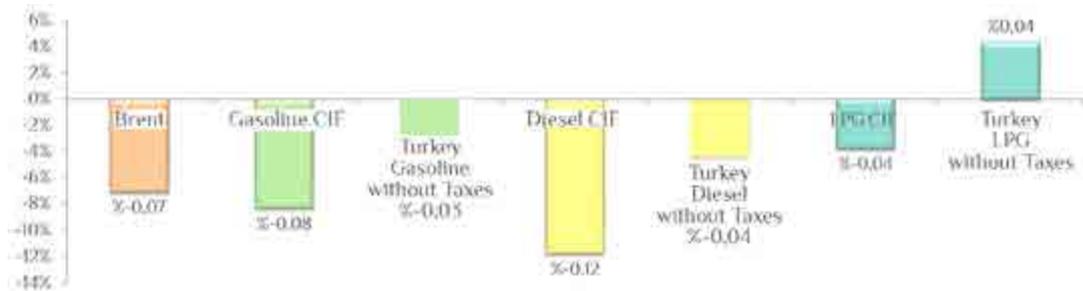
Brent oil started 2016 with \$37 per barrel in the international markets, dropped to \$29 in January and increased to \$56, its highest level in 2016. The average price of Brent Oil in 2016 was \$45. The changes in crude oil prices directly affected the price of fuel products in the Mediterranean markets, and the highest price for gasoline was 561 \$/ton and the lowest was 359 \$/ton, the highest price for diesel was 497 \$/ton and the lowest was 275 \$/ton, while the

highest price for LPG autogas was 373 \$/ton and the lowest was 259 \$/ton.

When 2015 and 2016 averages are compared, it is observed that Brent oil price which was 53.7 \$/ton decreased to 45 \$/ton and decreased by 7.1% in TL currency (from 146.4 TL/ton to 136.0 TL/ton).

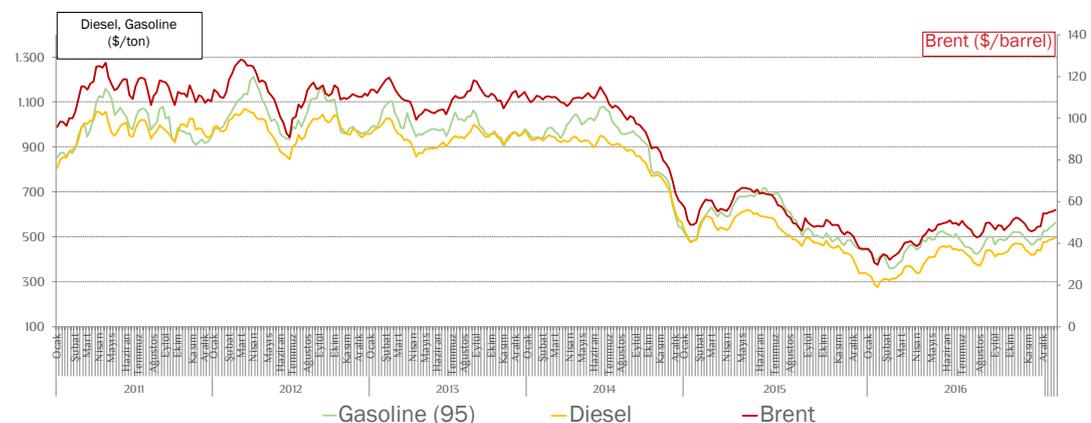
As a result of this change, it is calculated that in 2016, the average decrease in gasoline, diesel and LPG CIF prices in the Mediterranean markets in TL currency was 8.3%, 11.8% and 3.8% respectively compared to 2015 average.

figure 7



Change rates in the Mediterranean markets and Turkey pump prices (TL) in 2016 (% , compared to the same period of the previous year) (Source: Platts, Sonatrach, EMRA)

figure 8



Changes in the average prices of Brent crude oil, diesel and gasoline in the Mediterranean markets (Source: Argus; Platts)

4.1.1 Impacts of Crude Oil Price Changes on Pump Prices

Whether the ongoing fluctuations in global crude oil prices were passed through to fuel prices has been one of the widely discussed topics on public agenda both in Turkey and the world since 2015.

Global Brent crude oil prices increased by 52.4% between January 1 and December 31 2016, leading to an increase in gasoline prices by 28.6% (Figure 4, Chart 3) and diesel prices by 53.3% (Figure 5, Chart 3) in international markets.

As can be seen, the changes in product prices in the international markets were not the same; while diesel prices increased slightly, gasoline prices decreased significantly.

As is the case in the world, it is also not possible to reflect the changes in crude oil prices to product prices and to the pump prices at the exact same rate in Turkey.

FuelsEurope has prepared a film on the issue to inform the public. Our association had the film translated into Turkish in cooperation with FuelsEurope and brought to public attention. The film is available at our association's website (www.petder.org.tr).

The primary reasons preventing reflection of the changes in crude oil prices to fuel prices at the exact same rate are explained below:

- Crude oil is the raw material for various fuel (and petrochemical) products, going through production and raffination processes requiring large scale investments and costs to be turned into fuel. Then it goes through several stages such as distribution and storage until it is offered to consumers at the pump. In addition to investment and other costs in the process, additional taxes lead to different price formations.

- Crude oil and products are traded in separate markets based on their own supply and demand. In this respect, while crude oil prices fall in international markets, product prices may not fall at the same rate or may sometimes increase.

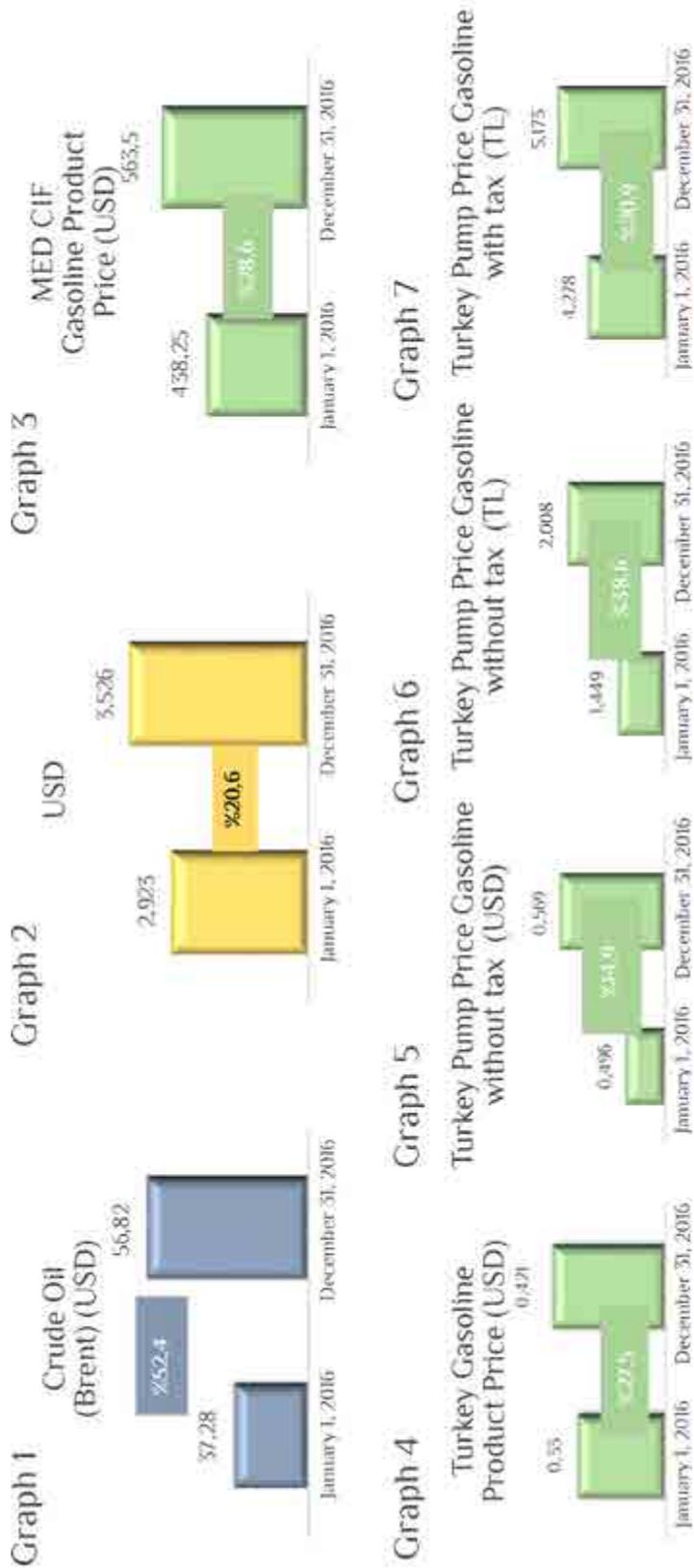
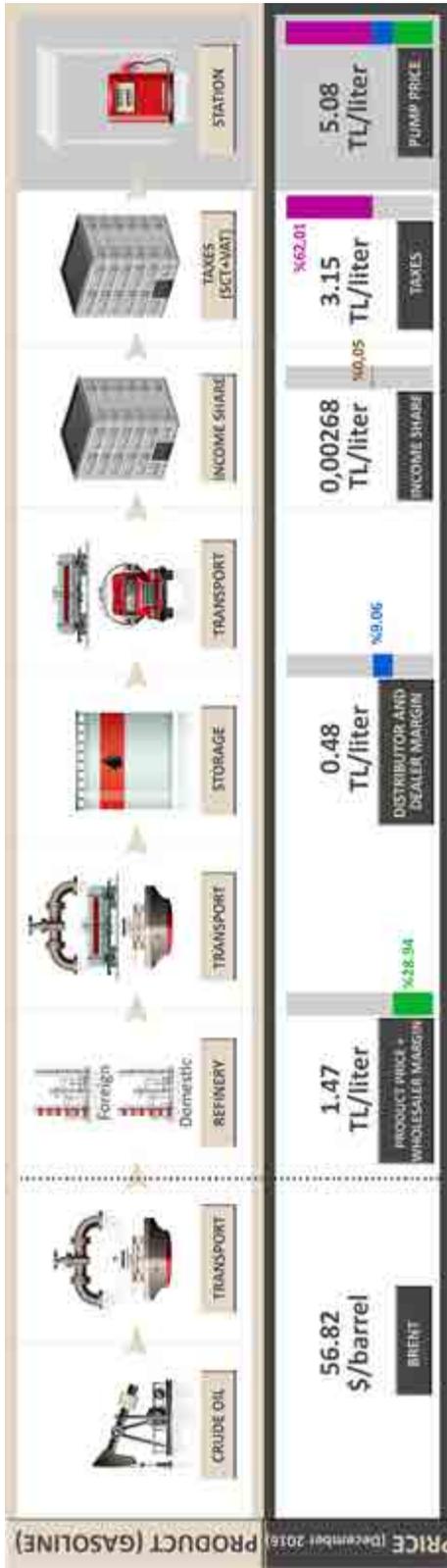
- In Turkey, most crude oil and fuel products are purchased in US Dollars and sold in Turkish Liras, resulting in an exchange rate effect. Therefore, if the exchange rates increase despite the decrease in crude oil and product prices, fuel prices either change slightly or do not change based on the exchange rates, or may even increase. Foreign currency exchange rate increased by 20.6% in Turkey between January 1 and December 31.

- Another important factor is the share of the product price within fuel pump prices. In Turkey, taxes constitute the largest part of the fuel prices as is the case in most of the countries; the share of product prices is between 24-27%. (Figure 4 Gasoline and Figure 5 Diesel). This is the share that is subject to change in international markets.

Due to the foregoing, the impact of the decrease in crude oil prices on the pump prices is very limited. Consequently, for instance a 50% decrease in crude oil prices may be reflected onto the pump prices as a 15% decrease.

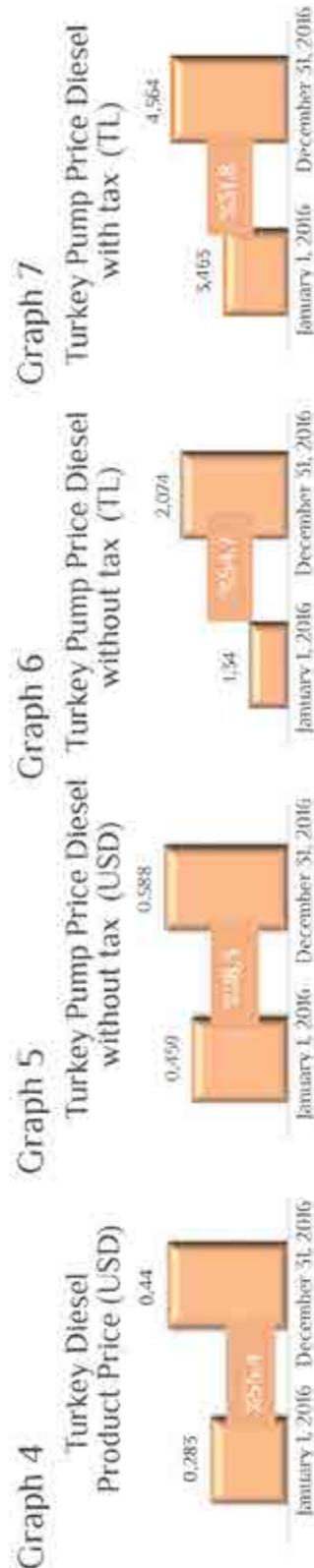
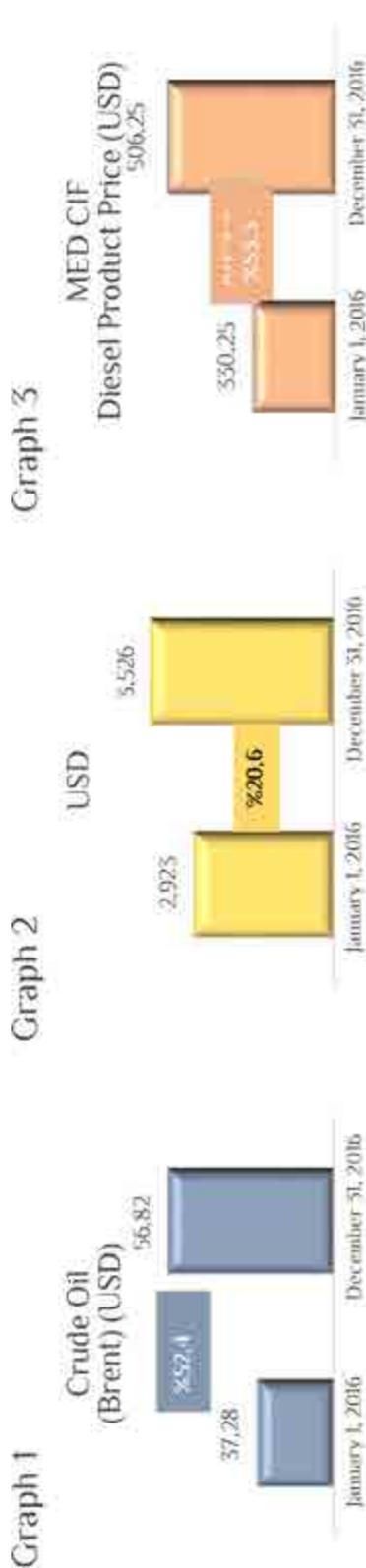
As can be seen in Figure 4 and Figure 5, crude oil prices increased by 52.4% between January 1 and December 31, 2016, leading to an increase in gasoline prices by 28.6% and diesel prices by 53.3% in international markets. In Turkey, the increase in gasoline prices was 27.5% and the increase in diesel prices was 55.4% in US Dollars in the same period. As can be seen, the increase in product prices in Turkey was parallel to the increase in the global market. The increase in gasoline pump prices was 20.9% and the increase in diesel pump prices was 31.8% (especially due to the increase in exchange rates and the limited share of the product price within the pump price as has been explained above).

figure 9 Gasoline Price Formation*



* Calculated by PETDER based on EMRA Dealer Sales Bulletin, Pricing Reports and Central Bank of Turkey foreign currency selling rates.

figure 10 Diesel Price Formation*



* Calculated by PETDER based on EMRA Dealer Sales Bulletin, Pricing Reports and Central Bank of Turkey foreign currency selling rates.

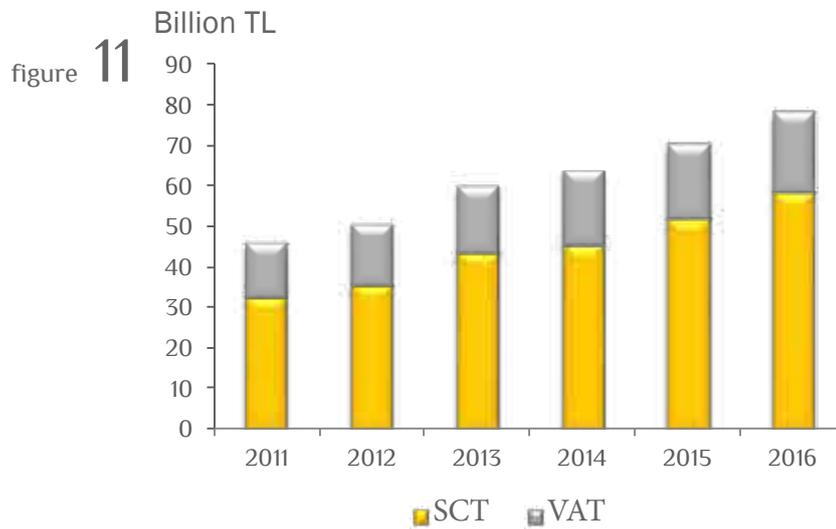
4.2 INDIRECT TAXES AND PRICE COMPONENTS

4.2.1 Indirect Taxes

The total amount of the indirect taxes collected from fuel and LPG sectors has continuously increased every year with the increase in consumption. According to calculations based on consumption data, the indirect taxes collected from the oil sector in 2016 reached 77.9 billion TL.

Indirect taxes collected from diesel fuel constitute the largest share among the indirect taxes collected. This is a result of the increase in diesel consumption as well as the shift from gasoline to LPG due to lower tax rates.

It is calculated that the indirect taxes collected from the Oil Sector since 2010 have totaled 409.9 billion TL.



Indirect Taxes Collected from Fuel and LPG over the years (Source: EMRA, PETDER, TCMB)

4.2.2 Price Components

The total percentage of the indirect taxes in the pump prices has changed over the years due to oil prices, amount of SCT applied and exchange rates. Among all automotive fuels, the highest tax was applied to gasoline in terms of both amount and percentage and the lowest tax was applied to autogas LPG. As of 08.09.2016, average SCT amounts applied increased as follows: from 2.1765 TL/lt to 2.3765 TL/lt for gasoline, from 1.5945 TL/lt to 1.7945 TL/lt for diesel, and from 0.8837 TL/lt to 0.9957 TL/lt for LPG autogas.

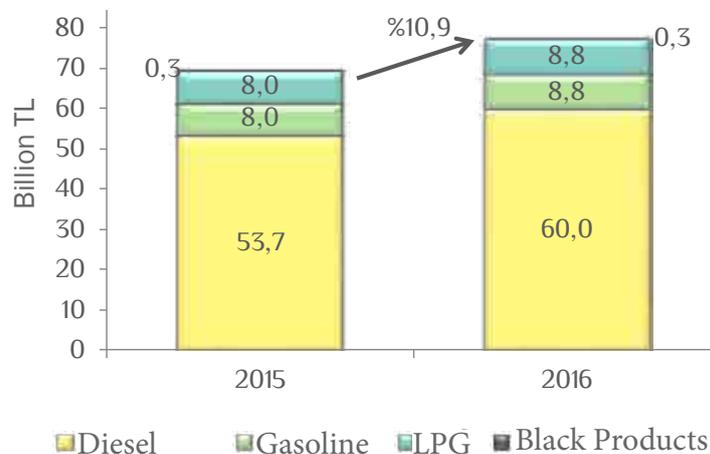
In 2016, indirect taxes imposed on gasoline pump prices have been 2.93 TL/lt (65.0% of the pump price). This amount was 2.24 TL/lt for diesel (58.9% of the pump price), 1.30 TL/lt for autogas LPG (51.7% of the pump price). Indirect taxes collected from oil products increased by 10.9% compared to the previous year and reached 77.9 Billion TL. 60.0 Billion TL of this sum collected in 2016 was collected from diesel, 8.8 Billion TL from gasoline and 8.8 Billion TL from LPG.

figure 12



Pump Price Components (Source: EMRA)

figure 13



Breakdown of Indirect Tax Revenue Collected from Automotive Fuels in 2015 and 2016 (Source: EMRA, PETDER, TCMB)

4.2.3 Margins

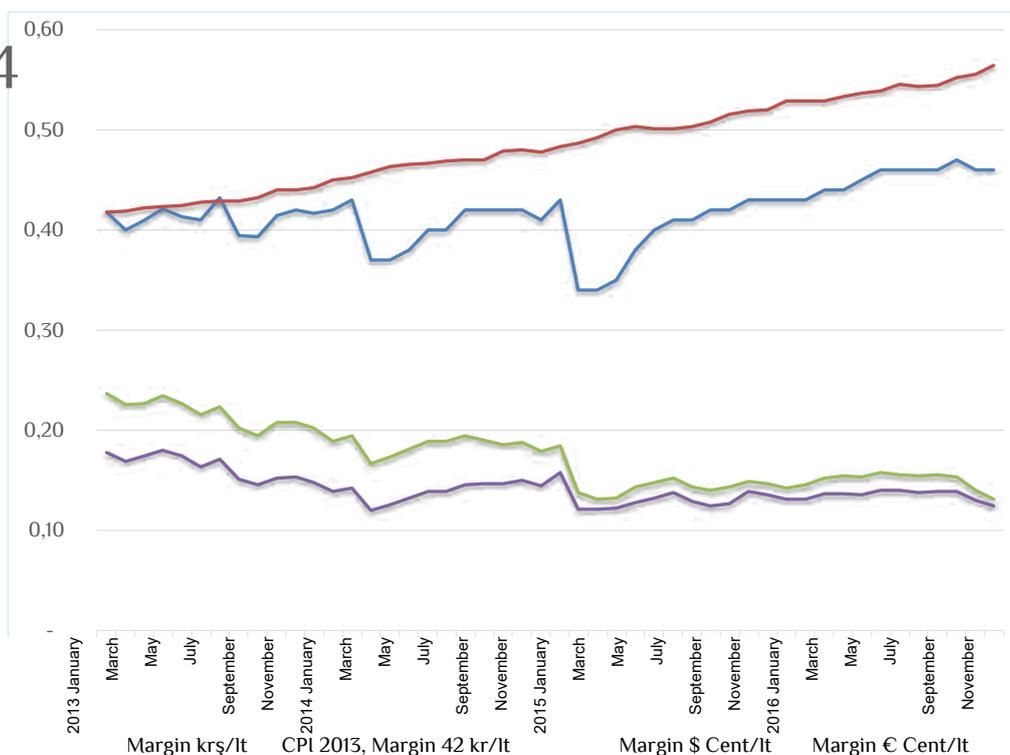
Gasoline

Figure 12 displays the monthly gasoline margins in 2013 and 2016, the margins that would be expected (based on January 2013 rates) taking into consideration the inflation rates in the following months and monthly margins in € and \$ currencies.

Gasoline market margins had a downward trend in terms of € and \$ currencies. The € and \$ gasoline margins that were 18 €cents and 24 \$cents respectively in January 2013 decreased to 12 €cents and 13 \$ cents in December 2016. There was a sharp fall in March 2014 and February 2015 due to the price ceiling practice and this affected the trend in 2014 and 2015.

On the other hand, when the inflation is taken into consideration, the industry also suffered as a result of the inflation rates in 2016. When the sector margins expected with only the inflation factor based on January 2013 rates and the reel gasoline market margins are compared, it is observed that the reel gasoline margins that had a steady trend despite the increases and the decreases in 2013 fell far below the margin expected in January 2013 based only on the inflation factor due to the price ceiling implementation and this trend continued until the end of 2016. This situation, as has been stated in the previous sections, caused the industry to close 2014 and 2015 with a loss.

figure 14



2013-2016 Monthly Gasoline Margins
(Source: EMRA, BÜMKO Average Exchange Rates, PETDER)

4.2.3 Margins

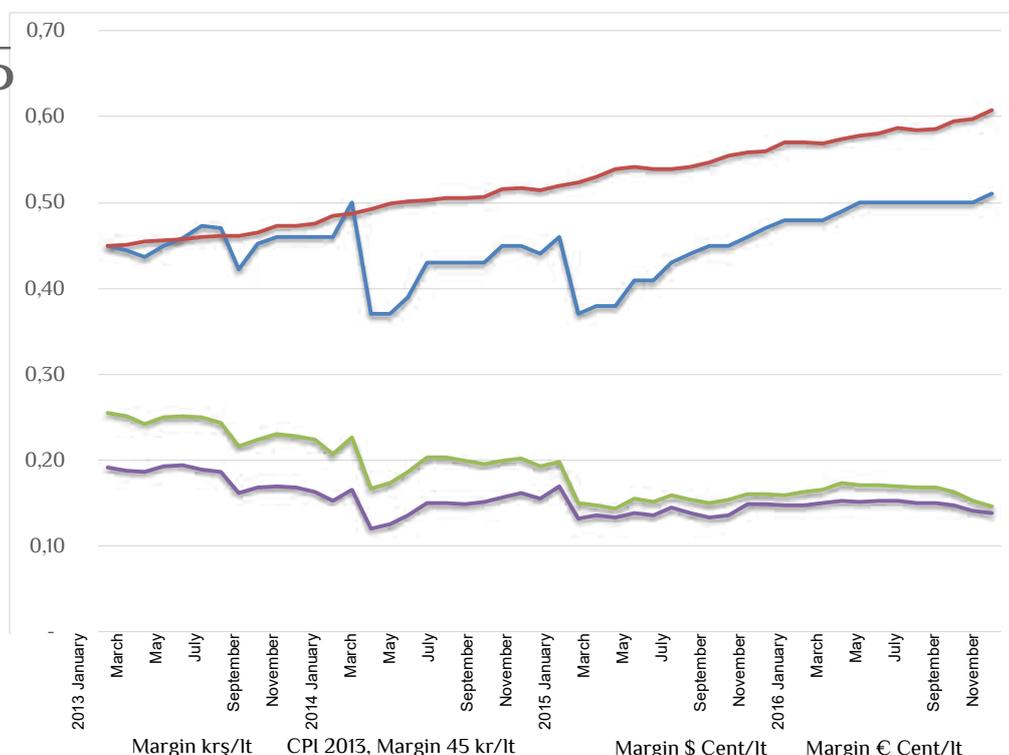
Diesel

The figure below displays the monthly diesel margins in 2013 and 2016, the margins that would be expected based on January 2013 rates, taking into consideration the inflation rates in the following months and monthly margins in € and \$ currencies. As can be seen, diesel market margins had a downward trend in terms of € and \$ currencies. The € and \$ diesel margins that were 19 €cents and 25 \$cents respectively in January 2013 decreased to 14 €cents and 15 \$ cents in December 2016. There was a sharp fall in March 2014 due to the price ceiling practice and this affected the trend in 2014 and 2015.

On the other hand, when the inflation is taken into consideration, the industry also suffered as a result of the inflation rates. When the sector margins expected with only the inflation factor based on January 2013 rates and the reel diesel market margins are compared, it is observed that the reel diesel margins that had a steady trend despite the increases and the decreases in 2013 fell far below the margin expected in January 2013 based only on the inflation factor due to the price ceiling practice and this trend continued until the end of 2016.

This situation, as has been stated in the previous sections, caused the industry to close 2014 and 2015 with a loss.

figure 15



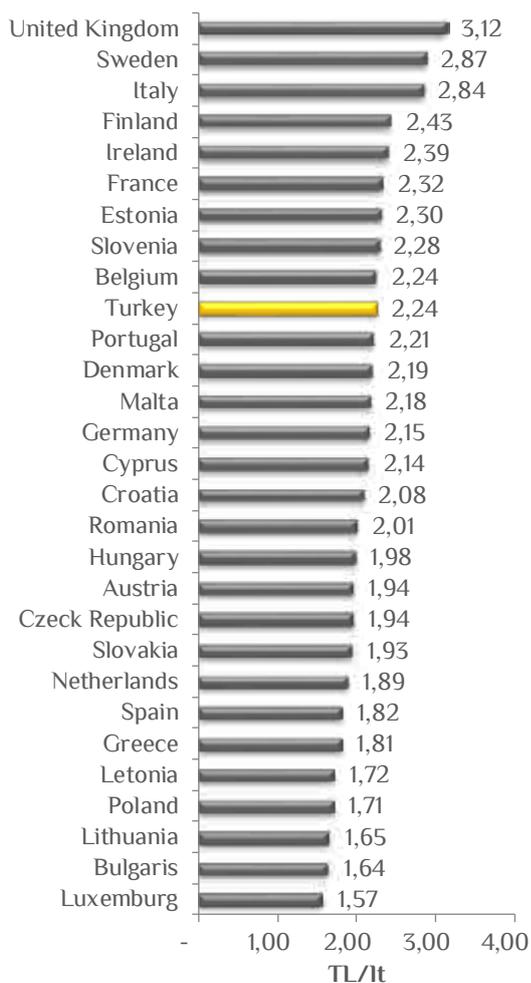
2013-2016 Monthly Diesel Margins
(Source: EMRA, BÜMKO Average Exchange Rates, PETDER)

4.2.4 Situation in EU Countries and the Factors Affecting Price Comparisons

Indirect taxes have the largest share in fuel prices in Turkey and generally in the EU. Although there were fluctuations in 2016, in average share of taxes Turkey was ranked as the ninth country after Estonia, Italy, Greece, Sweden, the UK, Portugal, Finland and Denmark in 95

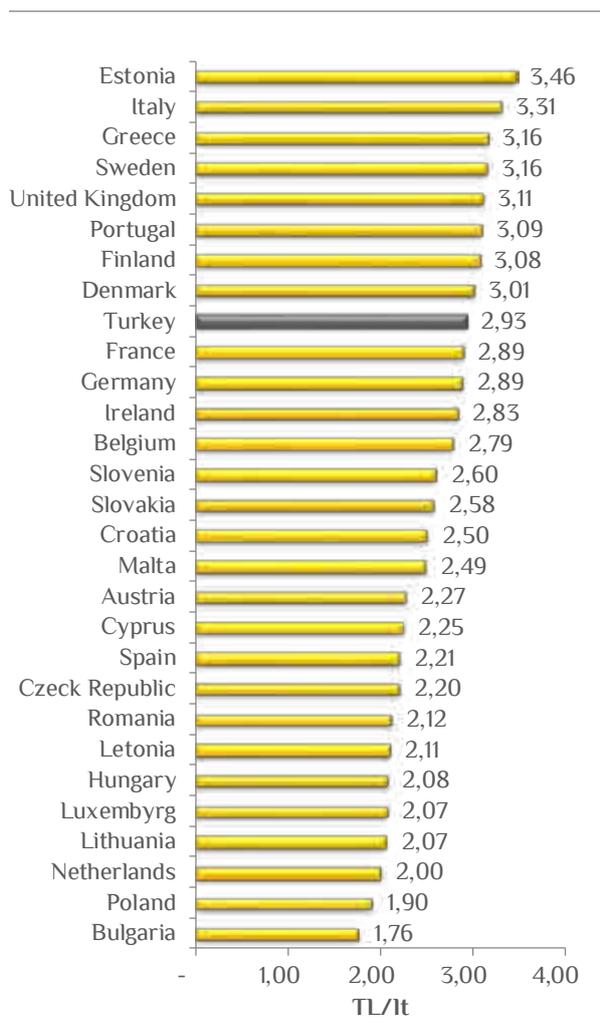
Octane Unleaded Gasoline and tenth after the UK, Sweden, Italy, Finland, Ireland, France, Estonia, Slovenia and Belgium in diesel.

figure 16



2016 Average Taxes in Gasoline in EU and Turkey (TL/lt)

figure 17



2016 Average Taxes in Diesel in EU and Turkey (TL/lt)
Source: <http://ec.europa.eu/energy/en/statistics/weekly-oil-bulletin>

In addition, the SCT accrued until the 15th is to be paid until the 25th of the same month and the SCT accrued until the 31st is to be paid until the 10th of the following month. In some EU countries these periods are extended. For instance, in Italy, the SCT accrued within the month is to be paid until the 15th of the following month and in Spain until the 20th of the following month. This situation has negative effects on national economy as a result of financing costs.

Besides the difference in figures in indirect taxes, another issue to be taken into consideration is the difference in tax collection methods. In Turkey, the SCT paid by distributors ex-refinery is collected after sale, creating a financing cost.

There are three components of fuel prices in Turkey:

- Product prices
- Taxes (SCT and VAT),
- Market profit margin shared by three legal entities, involving gross profit margins of refineries, distributors and stations.

A direct comparison of taxed and tax-free fuel prices in Turkey and in EU countries leads to inaccurate and incomplete evaluations. In addition to several factors affecting the margins in the countries, profit margins might change in time based on these. There are also significant differences between EU countries themselves depending on the conditions in each country.

It is necessary to take into consideration the following factors when making a comparison of fuel prices in Turkey and in EU countries.

Both in the EU Oil Bulletin and in the surveys conducted by EU on the prices announced in this bulletin, it is stated that comparisons between prices and price trends in different countries should be carefully made because;

- In the weekly oil bulletin, the extent that standard categories are representative of the total sales of a given product, differences in product quality, in marketing practices, in market structures;
- In the survey report, discount sales in the countries, application of different

methodologies in price reporting, variations in biofuel components and differences in taxation systems are highlighted.

There are significant differences between the market dynamics in these countries and Turkey.

Fuel is sold only at self-service stations in some European countries and at self-service stations along with regular stations in others. The operating models shaped by distributor/dealer station ownership in these countries are different from those in Turkey. The average sales per station in some countries are 2-3 times the average sales of stations in Turkey. In all these countries, the share of pipelines in fuel transportation is far above Turkey. In most of these countries tax collection methods are different than in Turkey and do not require additional financing for the companies. Comparing these prices with the station retail prices in Turkey leads to inaccurate results.

There are differences in price indication methods

Countries notify their prices to the EU Oil Bulletin in different methods such as weekly average/single day, including/excluding discount sales, lowest price, supermarkets/hypermarkets and including/excluding self-service stations. Therefore, it is stated in reports that it is important to pay attention to such factors when making comparisons.

There are additional costs due to legal obligations in Turkey which do not exist in these countries.

High taxes imposed on fuel products as a fact and requirement of our economy result in illegal and smuggled fuel activities and the industry has to deal with this problem constantly. Unlike several European countries, the main additional costs in Turkey as a result of the measures and other legal obligations, which have been imposed to prevent such activities and which PETDER supports, are;

- Dealer automation system operating and reporting in order to register fuel movements and operations,
- Implementation of national marker in order to detect smuggled fuel,
- Cost caused by cash payment of the SCT,

Main additional costs in Turkey as a result of the measures and other legal obligations, which have been imposed to prevent illegal fuel activities are:

- Dealer automation system operating and reporting
- Implementation of national market
- Cost caused by cash payment of the SCT
- Operation and maintenance of cash registers
- Keeping national stock
- Investments for e-book, e-bill, e-registration transition period
- The costs for bank guarantee letters in import
- Shipping costs
- Annual EMRA payments of distributor companies
- Dealer sampling cost
- Employment of Occupational Health and Safety Specialists

- Operation and maintenance of cash registers at each station separately for each pump,
- Additional costs for keeping national stock,
- Investments for e-book, e-bill, e-registration transition period,
- The costs for bank guarantee letters in import,
- Shipping costs,
- Annual EMRA payments of distributor companies,
- Dealer sampling cost,
- Employment of Occupational Health and Safety Specialists.

Such factors as a result of legal obligations have reached significant amounts in terms of investment and operating costs.

Differences in National Economies

There are significant structural differences between the general economic structure in Turkey and in the other European countries and as a result of such differences, the inflation rate and financing costs are higher in Turkey. This situation creates additional costs in loans and bank guarantees and when using credit cards.

In the recommendations section of the EU Oil Bulletin in which the prices in European Union countries are compiled and shared, it is stated that “some Member States expressed concerns that inconsistencies in the reporting process might impede direct consumer price comparisons”. When making price comparisons with or without tax between countries the factors listed above should be taken into consideration and comparisons should be interpreted accordingly.

4.3 OIL, LPG AND LUBRICANTS INDUSTRY STATISTICS

4.3.1 Number of Refineries, Distributor Companies and Stations

As of the end of 2016, there were 4 refineries (6 licensed refineries), 91 distributor companies, 12,638 fuel stations operating in the petroleum market with EMRA licenses. In the Liquefied Petroleum Gas (LPG) market, 87 distributor companies, 10,651 autogas stations were operating with EMRA licenses.

Data indicates that number of autogas stations keeps increasing. The number of fuel and LPG distribution companies peaked in 2016.

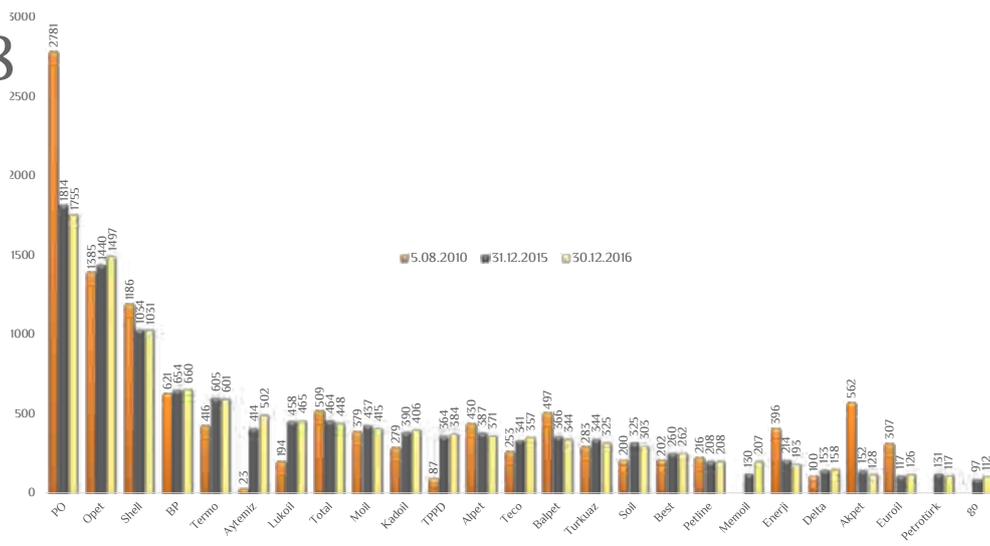
The number of fuel stations of each company between 05.08.2010-31.12.2015-31.12.2016 is given in the figure below.

table 3

	2012	2013	2014	2015	2016
Refinery Licenses	6	6	6	6	6
Fuel Stations	12.460	12.623	12.667	12.704	12.638
Distributor Licenses	58	77	78	91	91
LPG Stations	9.802	10.089	10.360	10.556	10.651
LPG Distributor Licenses	72	73	79	83	87

Number of Licenses in Petroleum and LPG Markets (Source: EMRA)
*4 out of 6 licensed refineries are active

figure 18

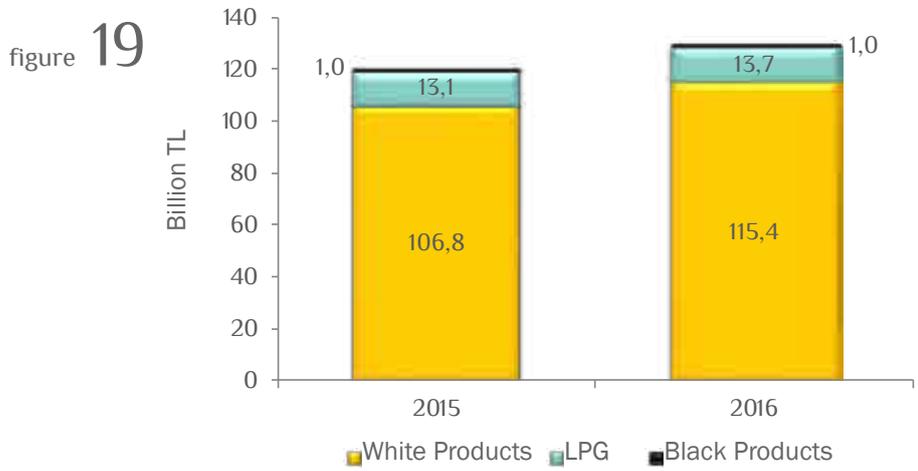


A comparison of the number of fuel stations of the distributor companies (as of 05.08.2010 – 31.12.2015-31.12.2016)(Source: EMRA)

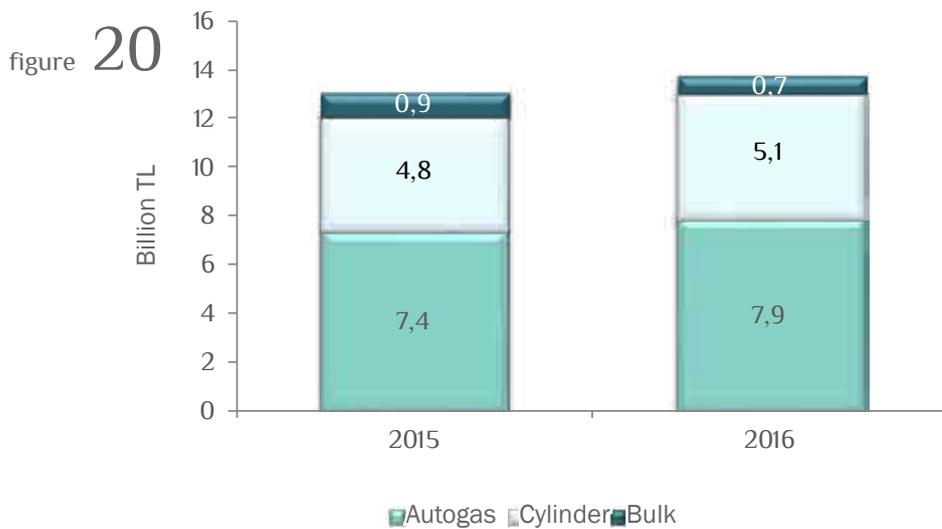
4.3.2 Market/Trading Volumes

The total financial magnitude of the fuel sector in 2016 reached 123.3 billion TL with an increase rate of 7.9% compared to 2015, as a result of an increase in consumption and taxes. The following two figures below demonstrate sector magnitudes calculated for fuel and LPG comparatively and independently.

In 2016, white products market volume increased by 8.0% reaching 115.4 billion TL, the LPG market volume became 13.7 Billion TL with an increase of 5.0% and black products market volume decreased by 6.3% totaling 1 billion TL compared to 2015.



Trade Volumes in Fuel (billion TL)
(Source: EMRA, PETDER, TCMB)



LPG Types Trading Volumes (billion TL)
(Source: EMRA, PETDER, TCMB)

4.3.3 Automotive Fuels (Gasoline, Diesel, LPG Autogas) Consumption

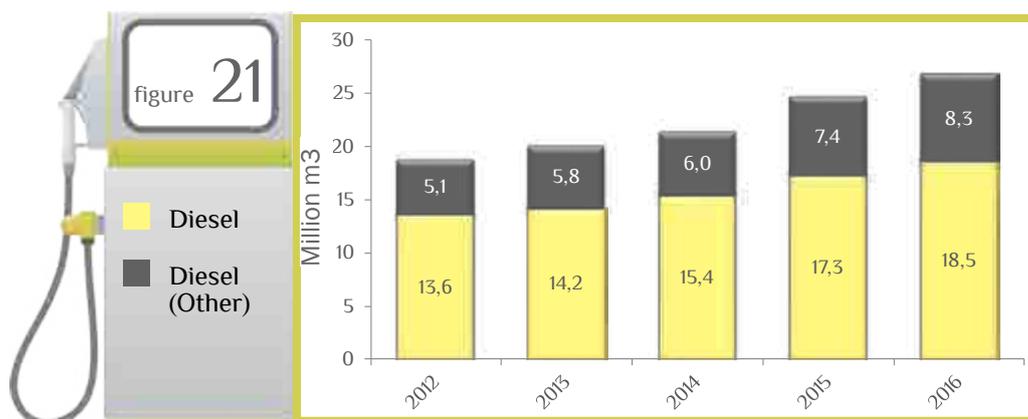
4.3.3.1 Diesel Consumption

Based on data compiled by PETDER, total consumption of diesel fuel types (diesel fuel and diesel fuel - other) in 2016 reached 26.8 million m³ with an increase of 8.5% compared to 2015.

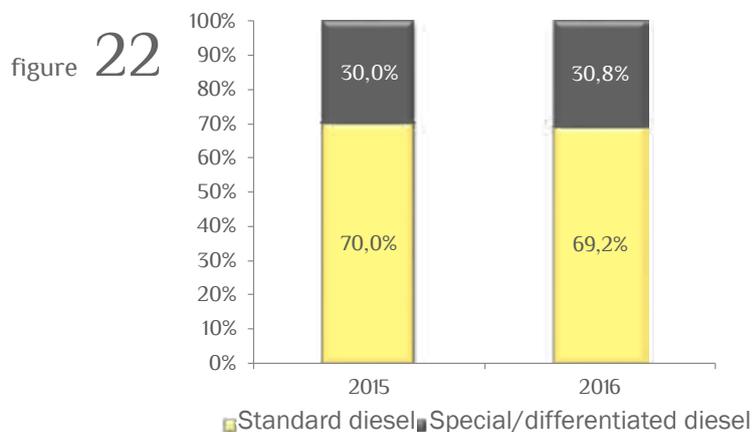
As a result of the removal of high sulfur off-road diesel from the market following EMRA Communiqué in 2011, all diesel fuels at the pumps are being offered to consumers in Turkey as low sulfur (10 ppm) diesel fuel as of April 1, 2011 and gasoline and diesel fuels are in full compliance with EU standards.

ppm, the amount of pollutant emissions are expected to decrease significantly. According to the report published by PETDER in September 2010, a decrease of 9,900 tons per year in the amount of emissions is expected. Fuel distribution companies continue to widen the product range of the special/differentiated diesel and gasoline products in parallel with the consumer demands in order to meet the quality and performance expectations of the consumers. Special/Differentiated Diesel Fuel consumption increased in 2016 constituting 31% of total diesel fuel consumption.

As a result of the restriction of the sulfur content of the gasoline and diesel fuels to 10



Total Diesel Consumption (million m³) (Source: EMRA, PETDER)



Shares of standard diesel fuel and special/differentiated diesel fuel in total diesel consumption (Source: EMRA, PETDER)

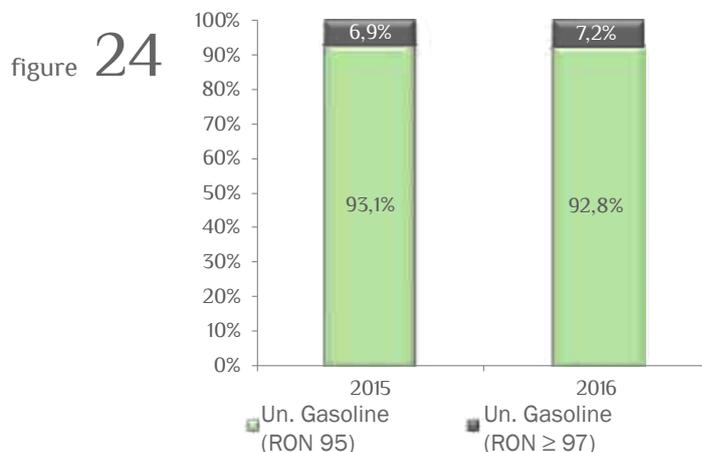
4.3.3.2 Gasoline Consumption

In 2016, total gasoline consumption increased by 6.5% compared to 2015 totaling 3.0 million m³. Gasoline consumption has an upward trend in the recent years.

Gasoline 95 Octane has the highest share (92.8%) in total gasoline consumption. The consumption of “unleaded gasoline with additives” that is used in older vehicles declined drastically almost reaching a near end.



Change in total gasoline consumption over the years (Source: EMRA, PETDER)

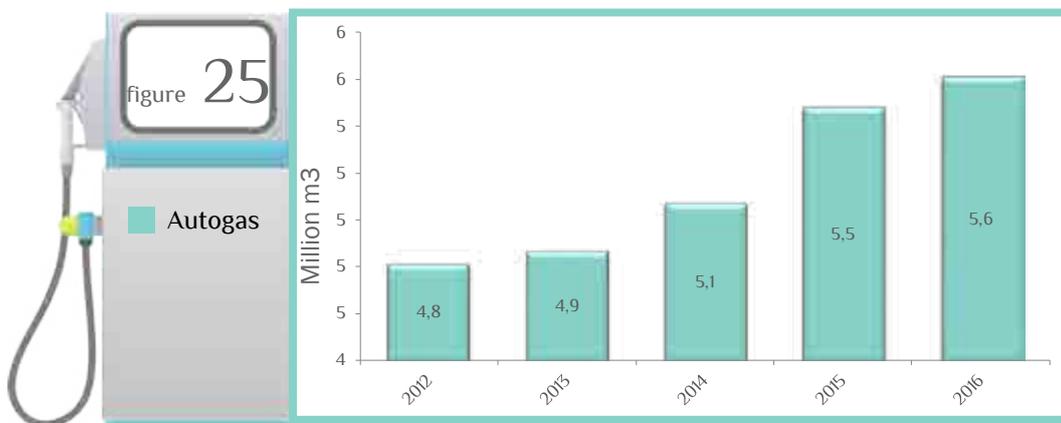


Shares of 95, 97 Octane gasoline and gasoline with additives in total gasoline consumption (Source: EMRA, PETDER)

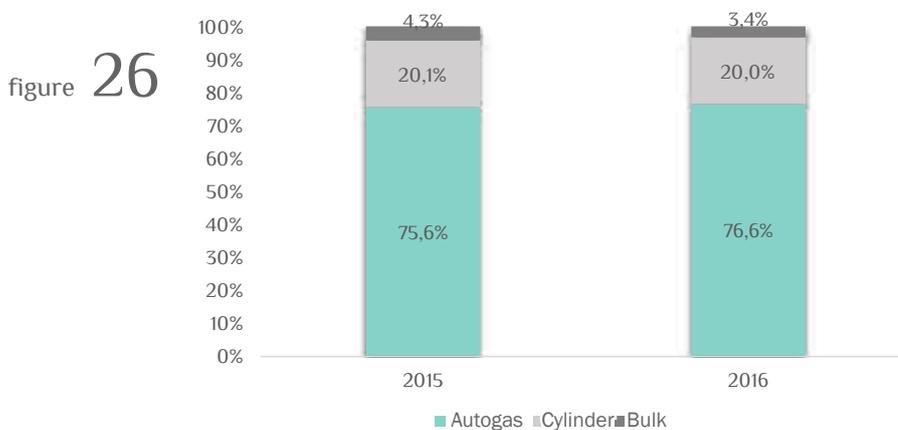
4.3.3.3 LPG Autogas Consumption

LPG Autogas consumption, which was 5.5 million cubic meters in 2015, increased by 2.4% in 2016 and reached 5.6 million cubic meters. The chart below displays LPG consumption in the last 5 years.

The increase in LPG autogas shares is mainly because of the lower pump price of this product due to lower Special Consumption Tax rates.



Change in LPG Autogas consumption over the years (Source: EMRA, PETDER)



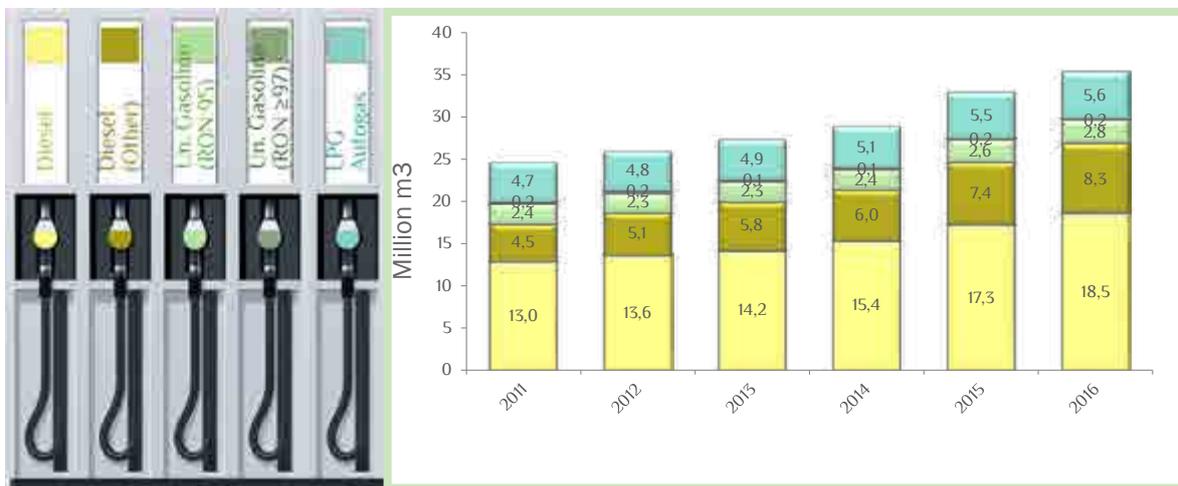
Shares of autogas, cylinder and bulk LPG in total LPG consumption (Kaynak: EPDK, PETDER)

4.3.3.4 Total Automotive Fuels Consumption

The total automotive fuel consumption increased by 7.3% compared to the same period of the previous year and reached 35 million m³ in 2016. The following figure demonstrates the consumption progression for the last 5 years for all automotive fuels.

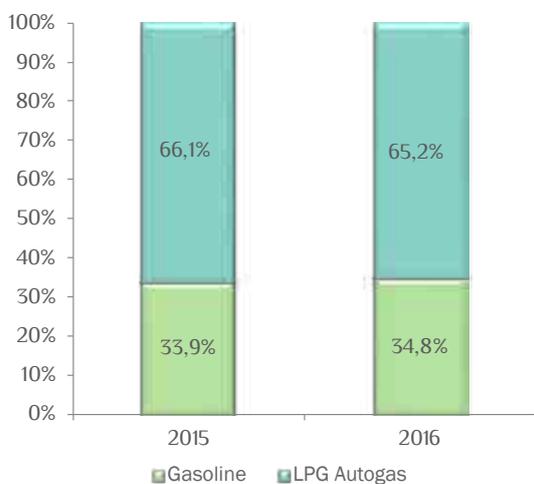
Among the automotive fuels, the share of diesel increased while the shares of gasoline and LPG Autogas in total consumption decreased. The charts in Figure 23.a and 23.b indicate that while the share of autogas (LPG) in automotive fuels gets smaller, LPG consumption has reached almost twice the amount of gasoline consumption, constituting 15.8% of the total automotive fuel market.

figure 27



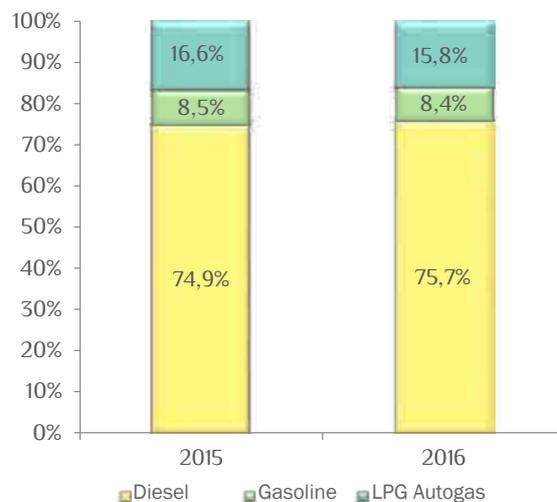
Change in the amount of automotive fuel consumption over the years (Source: EMRA, PETDER)

figure 28



Automotive Fuels Consumption (volume based %) (Source: EMRA, PETDER)

figure 29



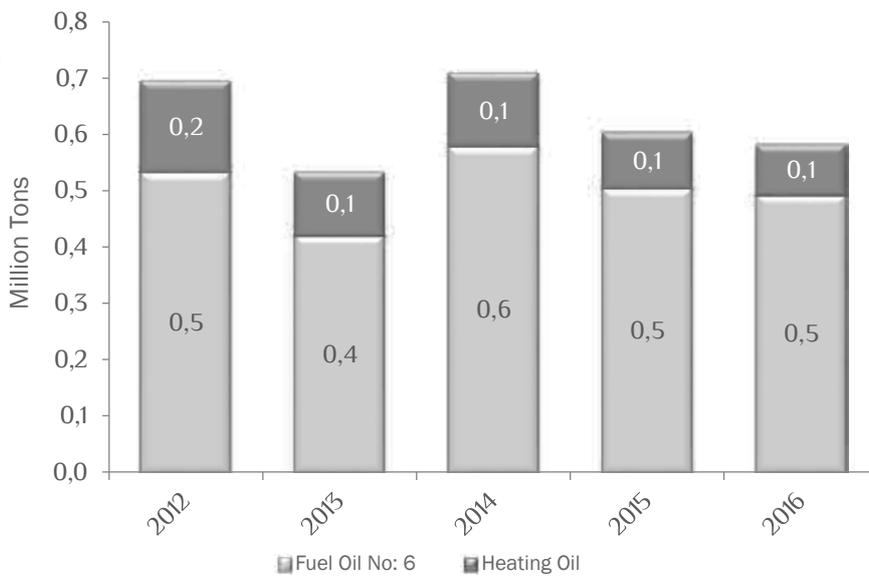
Gasoline and LPG Autogas Consumption (volume based %) (Source: EMRA, PETDER)

4.3.4 Black Products (Fuel Oil, Heating Oil) Consumption

In 2016, black products consumption totaled approximately 584,000 tons with a decrease of 3.4 % compared to the previous year. In this period, heating oil consumption totaled 91,000 tons with a total decrease of 9.7% and Fuel

Oil consumption totaled 492,000 tons with a decrease of 2.1 %. Hence, the progressive decline in black products continued in 2016 due to the wide penetration of natural gas into the market.

figure 30



Change in Black Products Consumption over the years
(Source: EMRA, PETDER)

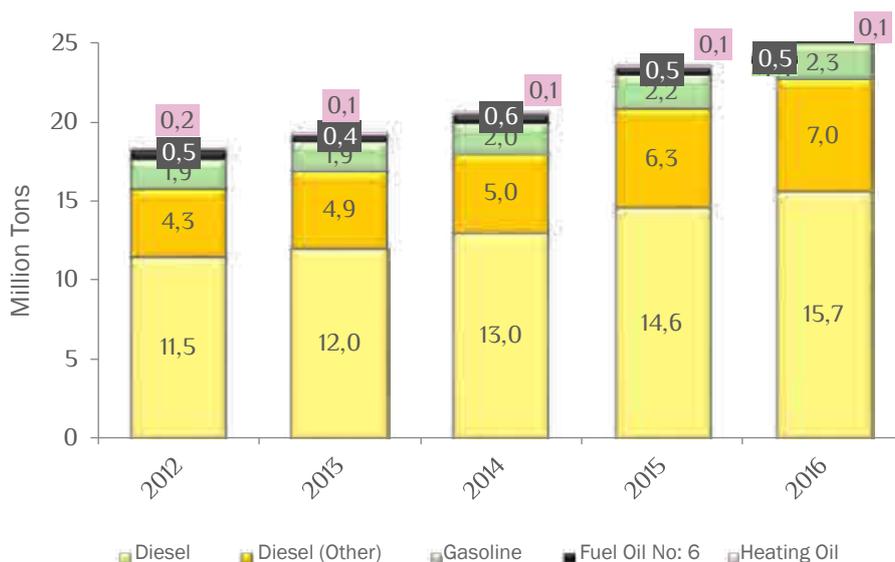
4.3.5 Fuel Consumption (Gasoline, Diesel, Heating Oil, Fuel Oil)

Total fuel consumption totaled approximately 25.1 million tons in 2016 with an increase of 7.9%. Fuel consumption, after having excelled in 2007 and 2008, fell back in 2009 and 2010. This change is in great part due to the contracted consumption of black products because of the transition to natural gas, the adverse effects of the economic crisis in 2009 and the negative effects of Number 10 Oil consumption over

diesel consumption. The market continues to grow since 2011 due to the measures taken and the improvements.

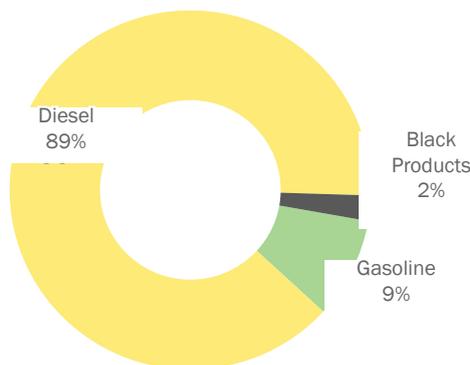
The shares of fuel types in total fuel consumption are given below and no significant change has been observed in 2016 compared to 2015. Diesel has the largest share in total consumption figures with 89%.

figure 31



Change in Total Fuel Consumption (Source: EMRA, PETDER)

figure 32



Shares of Fuel Types in Total Fuel Consumption (%) (Source: EMRA, PETDER)

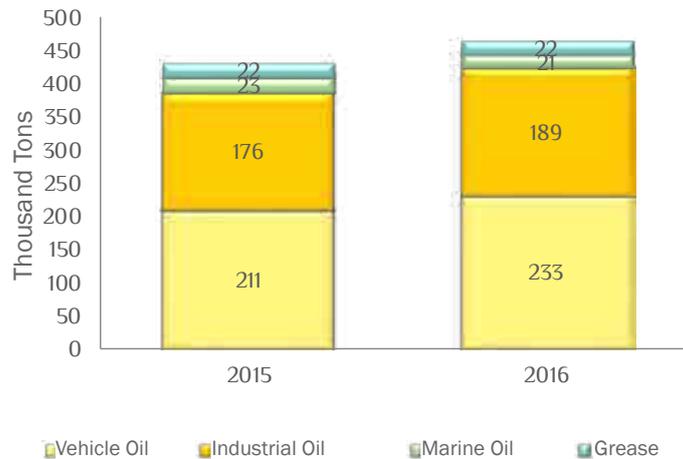
4.3.6 Lubricating Oils Consumption

Developments in the lubricants market (mineral and synthetic) are followed through data compiled by PwC from lubricant producers on a voluntary participation basis.

The shares of these companies in the total lubricant market have been determined through comparing data from EMRA and the

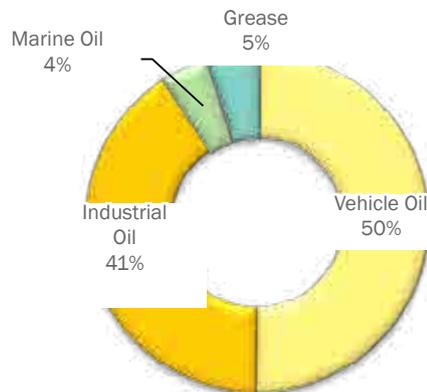
Ministry of Environment and Urbanization. Based on this data, it is estimated that total domestic lubricant consumption in 2016 reached 464,000 tons with an increase of 7.4% compared to the previous year. In 2016, total lubricant consumption shares were as follows; 50% Vehicle Oils, 41% Industrial Oils, 4% Marine Oils and 5% Greases.

figure 33



Lubricating Oil Consumption in Turkey

figure 34



Lubricating Oil Consumption in Turkey (%)

The figures displayed in the table below indicate that in the recent years an excessive amount of surplus lubricants, which have been imported as base oil to be used in lubricant industry, used and sold in the diesel market and used in illegal market activities under the name of Number 10 Oil, has been supplied to the market.

Demand surplus in lubricants exceeded 1 million tons in 2011 but decreased to 125,000 tons in 2016 with the measures taken. Despite the significant decrease in the surplus lubricants, there are still steps to be taken in order to prevent illegal activities under the name of Number 10 Oil.

table 4

Base Oil (TON/YEAR)	2012	2013	2014	2015	2016
Base Oil Imported	832.627	743.795	591.346	552.358	396.292
Lubricants Imported	94.824	114.495	99.292	100.339	125.844*
Additives and Preparations Imported	61.363	72.350	68.648	80.963	85.267
Base Oil Refinery Sales	266.000	154.291	119.697	126.430	128.760
SUPPLY to the market (A)	1.254.814	1.084.931	878.982	860.090	736.163
Base Oil Exported	706	3.858	3.264	4.626	842
Lubricants Exported	135.000	174.070	165.457	139.684	140.450
Additives and Preparations Exported	6.551	13.695	4.979	5.146	5.591
Domestic Lubricant Sales	408.000	416.000	417.000	432.000	464.485
Total DEMAND (B)	550.257	607.623	590.699	581.456	611.368
DIFFERENCE (A-B)	704.557	477.308	288.283	278.634	124.794**

Import, Export and Consumption Figures of Lubricants in Turkey (Source: TÜİK, TÜPRAŞ, PwC)

* The figure which had been stated as 102,776 in the Waste Motor Oil Management Project 2016 Activity Report has been revised.

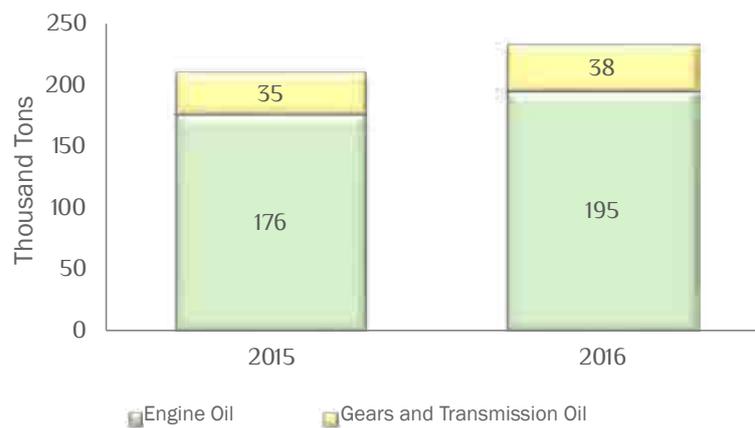
** The figure which had been stated as 101,727 in the Waste Motor Oil Management Project 2016 Activity Report has been revised.

Vehicle Oils (Motor Oils, Gear and Transmission Oils)

Turkey's total vehicle oil consumption totaled 233,734 tons with an increase of 10.4% in 2016 compared to the previous year. While the amount of gear and transmission oils used in 2015 was 35,000 tons and motor oil consumption was 176,000 tons, in the same period of 2016, gear and transmission oil consumption totaled 38,000 tons and motor oil consumption totaled 195,000 tons.

In 2016, consumption of motor oils increased by 11.0% compared to the same period of the previous year and totaled 195,000 tons. In this period, motor oils' share in total lubricant consumption was 42%. The figures below provide comparisons of motor oil consumption.

figure 35



Vehicle Oil Consumption in 2015 and 2016

figure 36



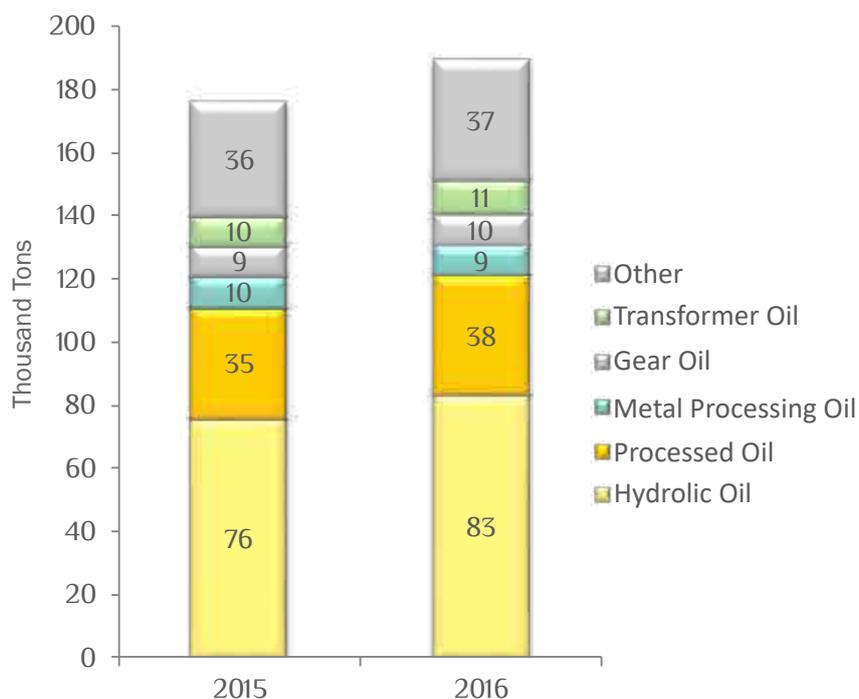
Motor Oil Consumption in 2015 and 2016

Industrial Oils

Total consumption of industrial oils totaled approximately 189,000 tons with an increase of 7.5% in 2016 compared to the previous year. During this period, industrial oils had a 41%

share within the total lubricating products. The comparative charts of industrial oil consumption are given below.

figure 37



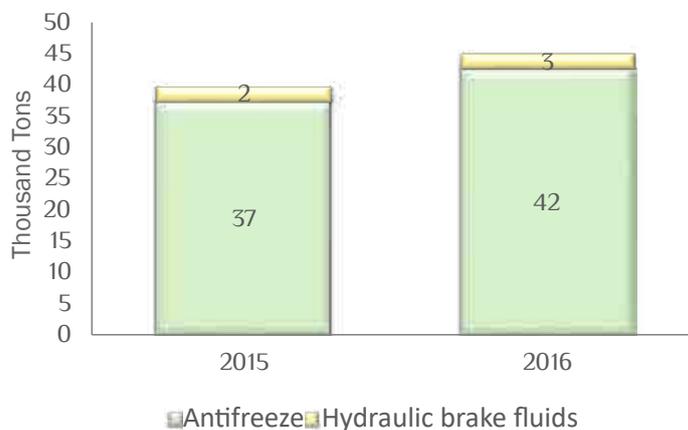
Industrial Oil Consumption in 2015 and 2016

Special Products (Antifreeze and Hydraulic Brake Fluids)

The total amount of antifreeze and hydraulic brake fluids consumption increased by 13.3%

compared to previous year's figures and totaled 45,000 tons.

figure 38



Special Products Consumption in 2015 and 2016



5. OTHER SECTOR STATISTICS

5.1 NUMBER OF MOTOR VEHICLES

Based on data from Turkish Statistical Institute, the total number of vehicles registered as of the end of 2016 was 21,090,424 and the shares were divided as follows; 53.7% automobiles, 16.3% vans, 14.2% motorcycles, 8.4% tractors, 3.9% trucks, 2.2% minibuses, 1.0% buses, and 0.2% special purpose vehicles.

In 2016, there was a 3.5-4% increase in the number of gasoline and autogas LPG powered vehicles compared to 2015 while the number of diesel powered vehicles increased by 14% in the same period.

When the breakdown of fuel types of automobiles registered to traffic as of the end of 2016 is analyzed, it is observed that the number of LPG powered vehicles is 4,439,631, the number of diesel powered vehicles is 3,803,772 and the number of gasoline powered vehicles is 3,031,744.

The change in the total number of vehicles in traffic and automotive fuel consumption is displayed in the chart below.

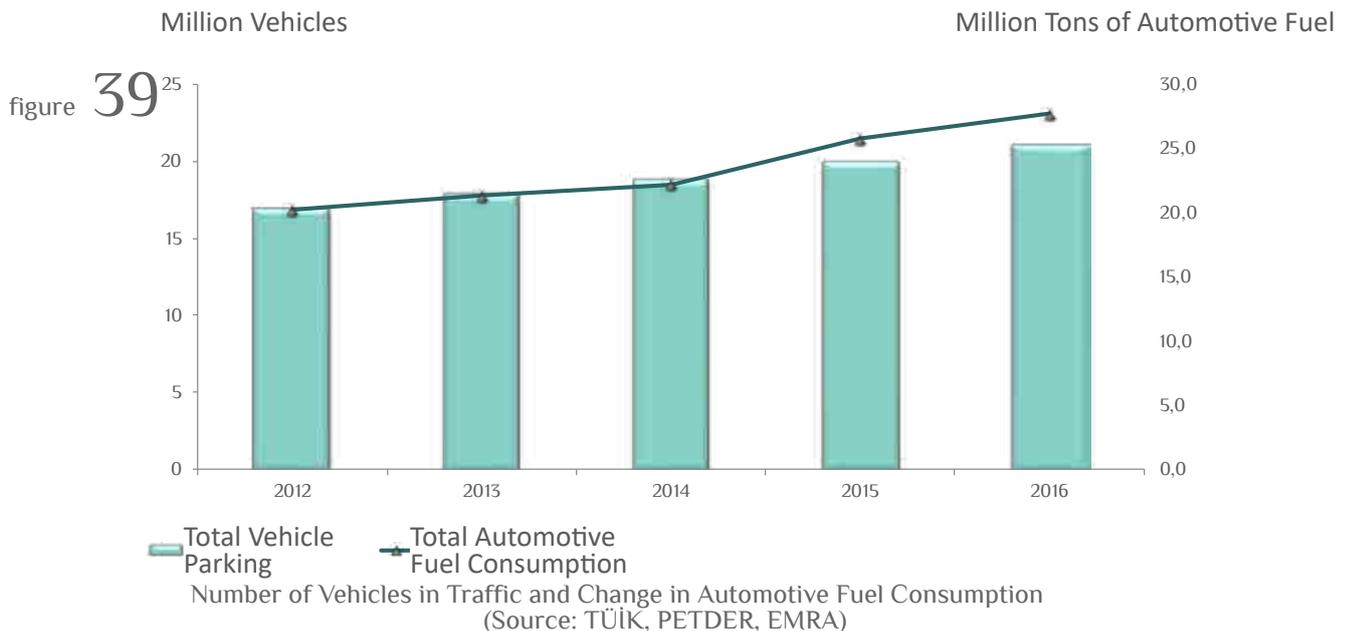
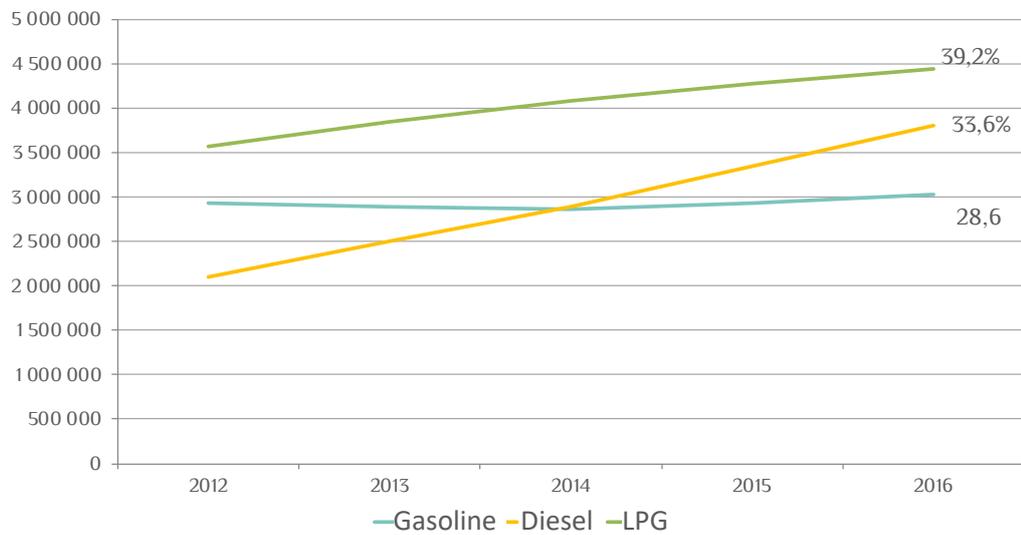
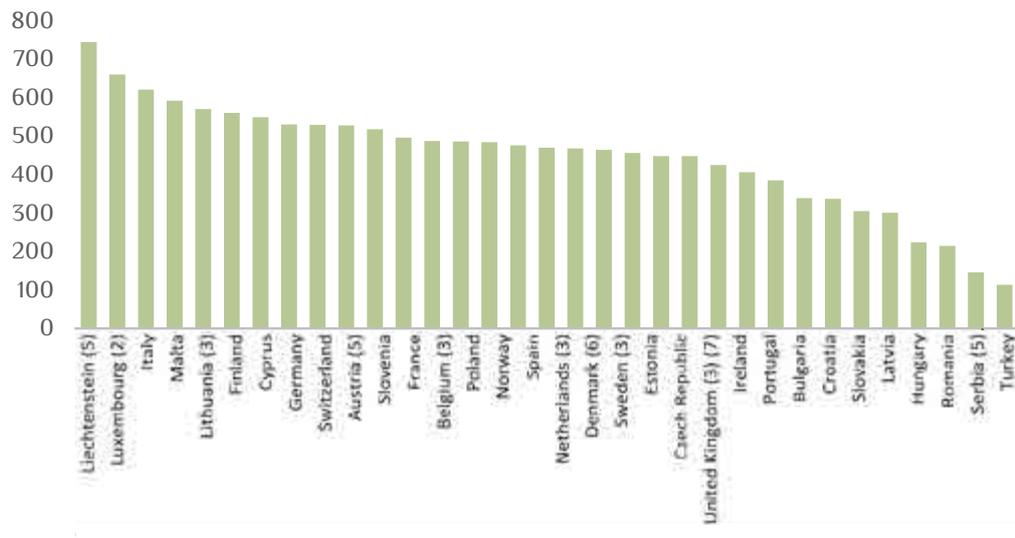


figure 40



Number of Vehicles Registered to Traffic According to Fuel Types (million)(Source: TÜİK, EMRA, PETDER)

figure 41



Number of Vehicles per 1000 People (Source: Eurostat)

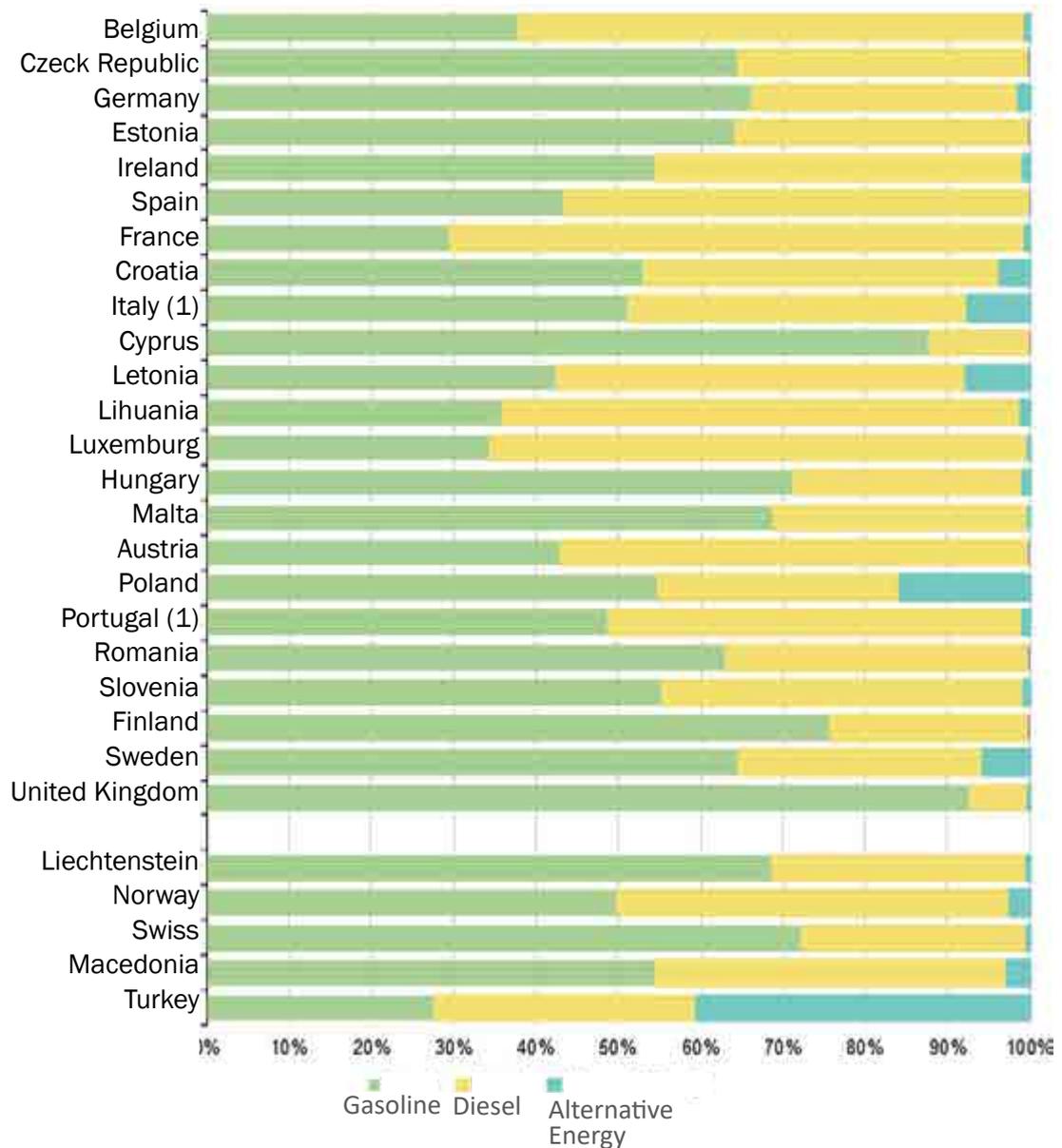
- (1) Greece, Iceland, Montenegro: No data
- (2) 2009 data
- (3) 2011 data
- (4) Aland included
- (5) 2010 data
- (6) 2008 data
- (7) Only Great Britain
- (8) The vehicles that have not undergone technical inspection within the last 5 years are not included
- (9) Estimated values

Turkey ranks as the last country among European countries in terms of number of vehicles per 1000 people.

The chart below displays the percentages of automobile types in Turkey and Europe. Turkey differs from European countries as

approximately 40% of the automobiles in Turkey use alternative energy (LPG).

figure 42

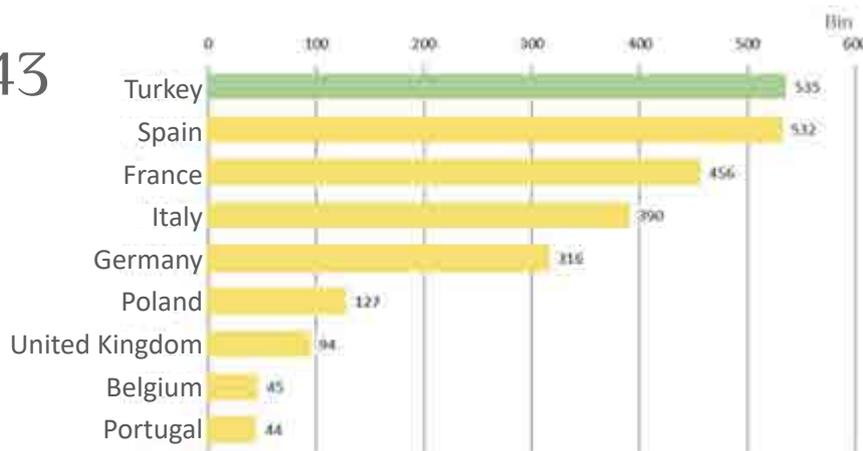


Automobiles based on Fuel Types
 (1) 2014 data has been used instead of 2015.

Turkey manufactured 535,000 commercial vehicles maintaining her position at the top of the list among EU countries in 2016.

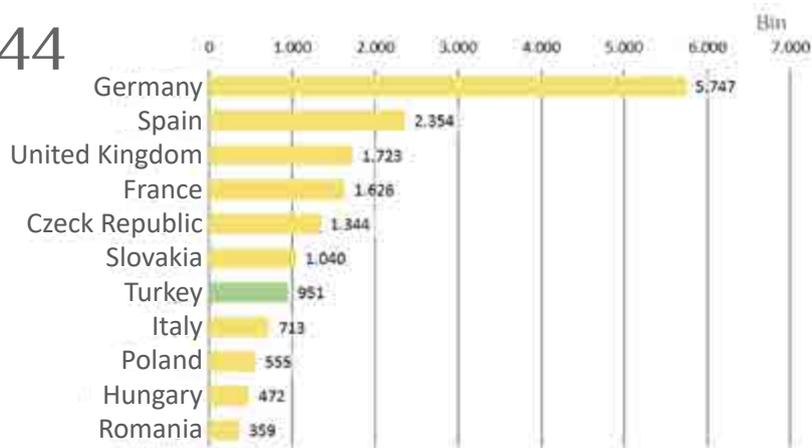
In 2016, Turkey ranked as seventh in EU countries automobile manufacture list and fifth in EU countries total automotive manufacture.

figure 43



Commercial Vehicle Manufacture in EU and Turkey

figure 44

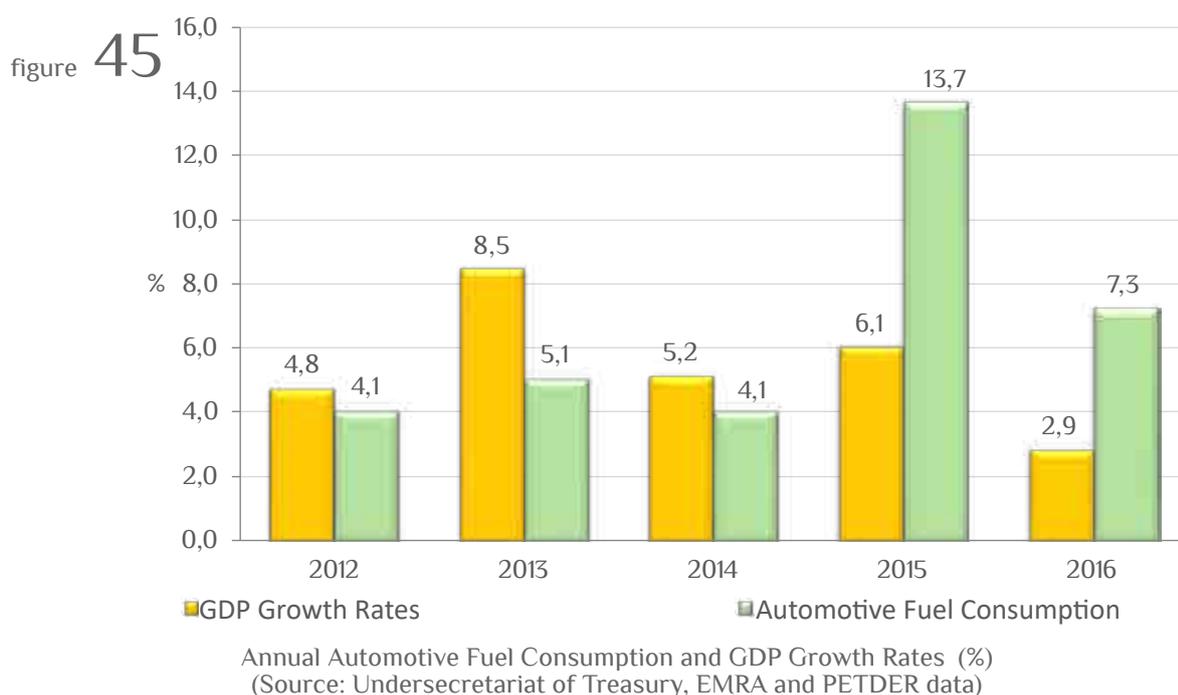


Automobile Manufacture in EU and Turkey

5.2 GROSS DOMESTIC PRODUCT AND AUTOMOTIVE FUEL CONSUMPTION RATES

Growth rates that are regarded as one of the most significant macroeconomic indicators are also closely followed by the oil sector. As the economic growth rates are related to industrial growth and transportation sector, they serve as an important indicator of the growth figures especially in the diesel fuel market. Turkish economy completed 2015 with a growth rate of 6.1% and grew by 2.9% in 2016.

The chart below displays the changes in economic growth rates and total automotive fuel consumption. Fuel consumption was below the growth level between 2010 and 2014 but it outgrew GDP figures in 2015. It is considered that this is partly due to the progress in the fight against smuggled and illegal fuel.





6. NEWS FROM PETDER

PETDER ORDINARY GENERAL ASSEMBLY HELD

The General Assembly Meeting of PETDER was held on April 8, 2016. During the meeting, prior period activities of PETDER and the budget for 2016 were presented for approval of the General Assembly, members of the Directors and Audit Boards were elected. At the first Board Meeting held after the Ordinary General Assembly Meeting, it was decided that Martin Thomsen will continue his duty as the Chairman of Board, Tamas Mayer as the Vice-Chairman and Adnan Ünal as the Accountant Member.



The new Board of Directors is formed as follows:

Chairman

Martin THOMSEN BP Petrolleri A.Ş.

Vice-Chairman

Tamas MAYER OMV Petrol Ofisi A.Ş.

Accountant Member

Adnan ÜNAL Petline Petrol Ürünleri Ticaret A.Ş.

Board Members

Ekrem EKMECİ Opet Petrolcülük A.Ş.

Ahmet ERDEM The Shell Company of Turkey Ltd.

Antoine TOURNAND Total Oil Türkiye A.Ş.

Ahmet İzzet EKE Aytemiz Akaryakıt Dağıtım A.Ş.

Mustafa ERGİ Altınbaş Petrol ve Ticaret A.Ş.



PETDER SMART PHONE APPLICATION



PETDER Smart Phone Application developed by PETDER for the purpose of facilitating waste motor oil notifications is now available in AppStore and Google Play Store. The application, which aims to facilitate communication between waste motor oil generators and PETDER, now includes the Legislation Handbook updated annually. The application also contains search function within the Legislation Handbook.

The “2016 Petroleum and LPG Markets Legislation Handbook”, a reference guide for all sector representatives with all the laws, regulations, communiqués and decrees in petroleum and LPG markets, is available at PETDER website, www.petder.org.tr.



PETDER CELEBRATES 20th ANNIVERSARY



20th anniversary of PETDER, established on 23 September 1996, was celebrated at Ankara JW Marriott Hotel on 25 October 2016. Ministry of Energy and Natural Resources Undersecretary Fatih Dönmez, Energy Market Regulatory Authority President Mustafa Yılmaz, senior executives of PETDER member fuel distribution companies and executives of other companies and non-governmental organizations in the sector attended the organization. PETDER Secretary General Niyazi İter delivered the opening remarks and stated that it would be meaningful to remember PETDER's 20 years together where all players in the sector are present. Afterwards, Petroleum Industry



Association Chairman Martin Thomsen delivered his speech. Thomsen stated that great progress has been made in the last 20 years thanks to the efforts of all sector representatives and government officials, especially with the support of EMRA. Thomsen recorded that there have been various fluctuations in all value chains in this period due to intensive regulations, price cap practices or new competition rules but added that the sector has managed to overcome these difficulties thanks to open communication with the public

and relevant parties and commitment to improve consumers' standards.

Energy Market Regulatory Authority President Mustafa Yılmaz stated that significant steps have been taken towards a more competitive,



high quality and sustainable sector after EMRA was authorized for regulation and inspection of the oil market in 2003. Yılmaz acknowledged EMRA's interventions to the sector from time to time but stated that these interventions aimed for improvement of the sector. Yılmaz reminded of the strong confidence in the sector and easy access to high quality fuel. He reported that the sector growth, which was at the level of 13% in 2015, reached %7 in the first 8 months of 2016. Yılmaz recorded that this growth was due to restraining the products offered to the market through illegal means, as well as the economical growth.

Ministry of Energy and Natural Resources Undersecretary Fatih Dönmez started his speech by presenting the Minister of Energy and Natural Resources Berat Albayrak's regards. Expressing his gratitude for "old



and ageless companionships”, Dönmez stated that continuing activities for 20 years is a great success for a non-governmental organization. Pointing out that PETDER is an innovative environmentalist association, Dönmez recorded that Turkish fuel distribution sector has a distinguished position in the world. Dönmez reminded that he had made a suggestion to PETDER members for giving saplings to customers as promotion materials



and expressed his appreciation for realization of this suggestion with the “PETDER One Barrel One Tree Social Responsibility Project” for planting a tree for each barrel of waste motor oil collected. He also expressed his wish that this practice covers automobile drivers in order to eliminate carbon footprints.



PETDER AUTHORIZED INSTITUTION CERTIFICATE RENEWED

PETDER has renewed its Authorized Institution Certificate for collection of waste motor oil, obtained in 2008, within the scope of the “Procedures and Principles for Authorization” published by the Ministry of Environment and Urbanization. PETDER has been reassigned by the Ministry as an Authorized Institution for collection of waste motor oil for a period of 10 years.



SEDA GÖNCÜ STARTED WORKING AT PETDER

Seda Göncü started working at PETDER as the Office and Management Assistant in September 2016. Göncü was born in Istanbul in 1982 and graduated from Marmara University Office Administration and Management Assistant department.

After working for several organization since 2005, Göncü worked at Petrol Ofisi General Directorate before joining PETDER.

PETDER TRAININGS

PETDER employees attended the First-Aid Training held on June 24, 2016. During the one-day- training, PETDER employees were informed on what to do in case of situations such as injury and drowning.



PETDER staff also attended a training session on “Reporting” on September 30, 2016 and on “Occupational Health and Safety of Personnel” on October 17, 2016.

PETDER – OMSAN COOPERATION EXTENDED

PETDER, carrying out the “Waste Oil Management Project” since 2004 as the “Only Authorized Institution” collecting waste motor oil from waste motor oil generators including car care services, fuel stations and public car care stations, extended its cooperation in transportation with OMSAN Logistics until the end of 2021.

Signature ceremony of the agreement was held at Istanbul Ataşehir Marriott Hotel on November 30, 2016. At the ceremony, OMSAN Logistics General Manager Assoc. Prof. Hakan Keskin stated that PETDER’s decision to continue their cooperation with OMSAN for this project, which was selected as one of the 5 most successful environmental projects in Europe in European Supply Chain Excellence Awards, filled them with pride.

PETDER Secretary General Niyazi İter stated that PETDER made 14,516 trips to waste motor oil generators and collected 17,801 tons of waste motor oil in 2015 and that there has been a 10% increase in 2016 compared to 2015. İter added that not delivering waste motor oil



to the authorized institution PETDER, delivery to or purchase of waste oil by unauthorized persons or institutions and use of waste oil in illegal fuel activities under the name of “Number 10 Oil” damage national economy and the environment and cause vehicle fires and loss of lives. İter highlighted that regular and continues inspections are required to prevent such activities. İter stated that awareness has been raised in Turkey compared to the past and added that it is still not enough and waste oil generators should be much more responsive and responsible regarding the issue. İter stated that they are pleased to cooperate with OMSAN, one of the leading logistics companies in Turkey, and that they wish the extension of PETDER – OMSAN cooperation will contribute to more productive processes in waste motor oil collection.

The public service announcement on “Risks of Using Number 10 Oil as Fuel Substitute”, prepared by PETDER was shared with the participants at the ceremony.



7. PROJECTS

7.1 WASTE MOTOR OIL MANAGEMENT PROJECT

Pursuant to the “Regulation on the Control of Waste Oils” issued by the Ministry of Environment and Forestry on 21 January 2004, lubricant producers and importers are held liable to collect used motor oils which have been offered to the market.

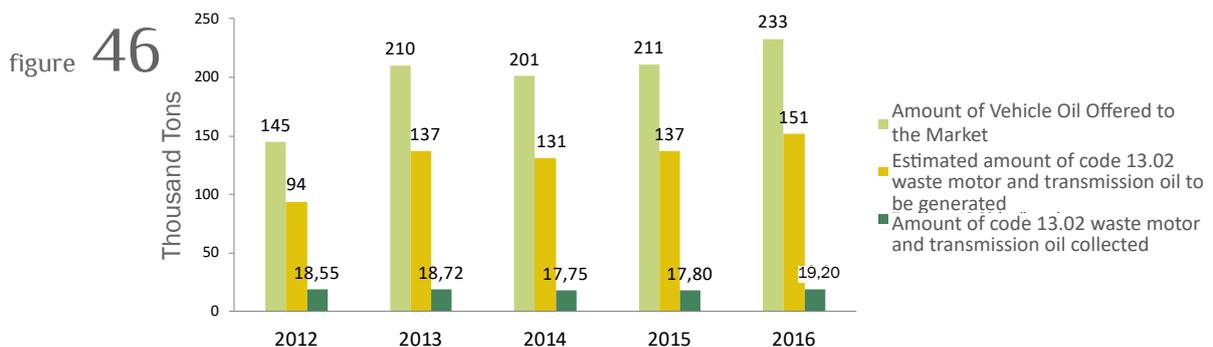
Within the scope of the Waste Oil Management Project initiated by Petroleum Industry Association Commercial Enterprise on 19 April 2004, activities have been conducted in order to fulfill the provisions of this Regulation.

Within the framework of the cooperation protocol signed with the Ministry of Environment and Forestry on 30 July 2004, waste motor oils used in motor vehicles are collected from car care services, fuel stations and state car care stations by licensed and authorized teams under appropriate conditions within the scope of the Waste Oil Management Project.

Petroleum Industry Association was licensed as an “Authorized Institution” by the Ministry of Environment and Forestry on 4 September 2008 and the Authorized Institution Certificate was renewed for a period of 10 years by the Ministry of Environment and Urbanization with the decision dated 21 June 2016 and numbered 57070256-145.04-E8039. The amended regulation prohibits real or legal entities other than Authorized Institutions

or motor oil producers to collect waste oils. PETDER is the only institution authorized for collection of waste motor oil. The project aims for processing of waste oils in facilities licensed by the Ministry of Environment and Urbanization without causing any damage to the environment and human health, locating waste generators and raising awareness. Since the beginning of the project in May 2004, the amount of waste motor oil collected and the number of collection points across the country continue to increase every year. Waste motor oil generated at motor oil changing spots are collected by licensed vehicles with National Waste Transportation Form and delivered to licensed facilities to be recovered (as energy or raw material) based on their categories or to be disposed, and adequate legal documentation is prepared and the waste generators are not charged for any of these activities.

Waste oils which might pose a threat to the environment and human health are turned into a contribution to the economy by being processed at refining and regeneration facilities, cement, lime and iron-steel factories to be recovered as energy or raw material or through disposal within the scope of the principles specified by the Ministry. The amount of waste oil collected by PETDER in the last 12 years has totaled 197,089 tons and the funds used in this period have reached 46 million TL.

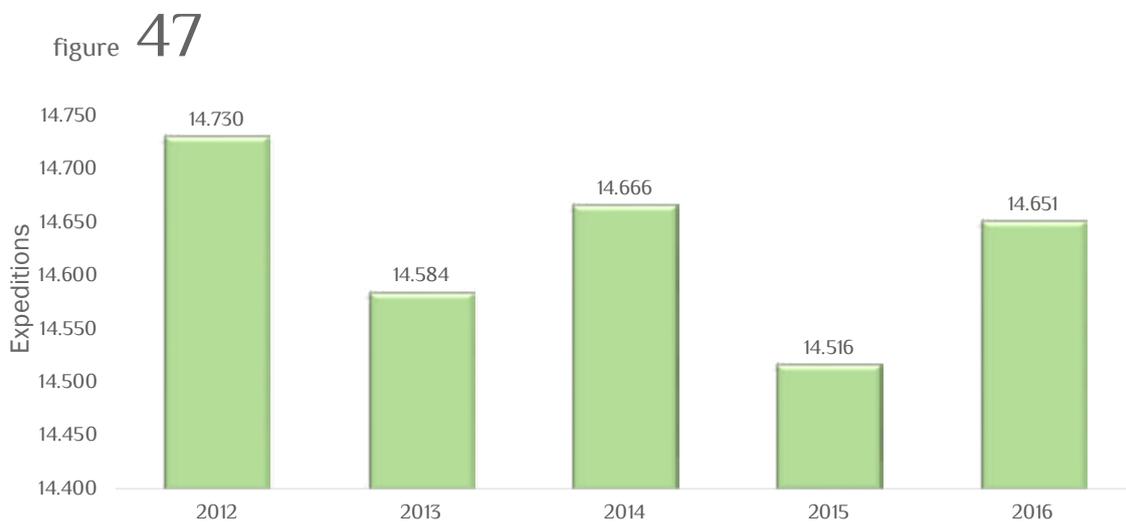


Comparison of Estimated Amounts of Waste Motor Oil and Transmission Oil to be Generated and Amounts Collected Each Year (thousand tons)

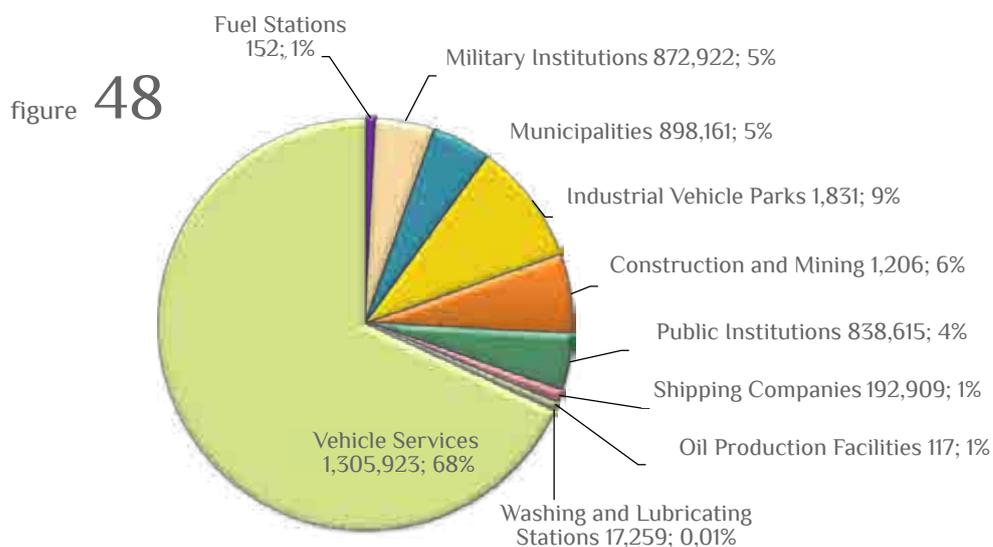
Within the framework of “waste motor oil collection” activities that have been carried out by PETDER since 2004 in accordance with the Regulation on the Control of Waste Oils, 155,197 trips have been made to 15,636 waste motor oil generators in 81 cities and the amount of waste motor oil collected has totaled 197,089 tons in the last 12 years.

13,059 tons of the waste motor oil collected in 2016 was collected from car care services, 1,831 tons from industrial vehicle parks, 839 tons from state institutions, 898 tons from municipalities, 1,206 tons from construction and mining industry, 211 tons from oil production facilities, 873 tons from military institutions, 193 tons from shipping companies, 152 tons from fuel stations and 17 tons from washing and lubricating stations.

In 2016, 14,651 trips were made to waste motor oil generators by PETDER and 19,185 tons of waste motor oil was collected.



PETDER Waste Oil Management Project – Comparison of Expeditions Each Year

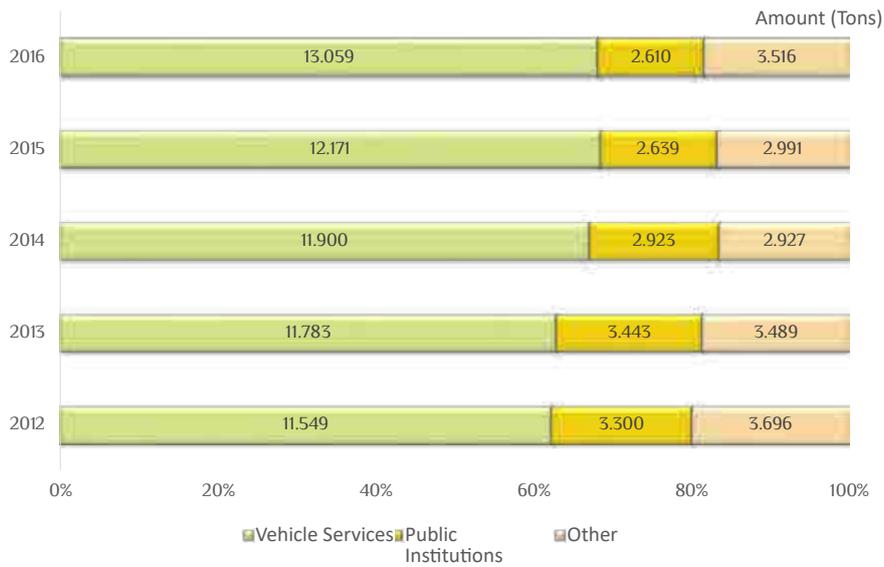


Sectoral Breakdown of Waste Motor Oil Collected in 2016

7,906 tons of the waste motor oil collected in 2016 was collected from Marmara Region, 2,626 tons from Aegean Region, 3,252 tons from Central Anatolia Region, 1,948 tons from Black Sea Region, 2,208 tons from Mediterranean Region, 571 tons from Southeastern Anatolia Region and 675 tons from Eastern Anatolia Region.

Top ten cities in waste motor oil collection in 2016 were İstanbul, Ankara, İzmir, Bursa, Kocaeli, Antalya, Zonguldak, Adana, İçel and Hatay. The cities where the amount of waste motor oil collection was the least were Iğdır, Tunceli and Kilis. No waste oil was collected from Siirt, Hakkari, Muş, Batman and Şırnak.

figure 49



Regional Breakdown of Waste Motor Oil Collected

figure 50



Regional Breakdown of Waste Motor Oil Collected

PROBLEMS ENCOUNTERED IN WASTE OIL COLLECTION AND PROPOSED SOLUTIONS

Despite all measures and successful steps taken in Turkey against smuggled and illegal fuel, use of illegal/nonstandard fuels, known as Number 10 Oil, continues. Not only base oil but also waste oil is used to produce Number 10 Oil.

Waste motor oil not delivered to PETDER is mostly used to produce Number 10 Oil, as molding oil in constructions and for heating purposes (at industrial sites, greenhouses etc.)

However, especially use of Number 10 Oil causes loss of life and property, has adverse effects on national economy as a result of tax loss and unfair competition and pollutes the environment. Most of the waste motor oil not delivered to the authorized institution is sold under the name of number 10 oil at “nonmarket” areas such as:

- Truck / bus terminals,
- Vehicle industrial sites and
- stores and open spaces at roadsides.

Unfortunately, despite all adverse effects and all measures taken, waste motor oil is still subject to trade at prices up to 1000 TL/Ton instead of being delivered to the authorized institution because of the unlawful profit obtained as a result of SCT imposed on legal fuel products.

PETDER works devotedly to collect waste motor oil in 81 cities and their counties and reaches everyone and receives waste oil regardless of the amount.

However, waste motor oil collection is not at a satisfactory level in Turkey. The main reason behind this is deriving high profits by using waste motor oil in illegal fuel activities by not paying the SCT. Aside from this main reason, the other reasons why waste motor oil delivery to PETDER is not at a satisfactory level are listed below:

1. Inspections and sanctions are not sufficient.

Unfortunately, efficient, sufficient and consistent inspections in regard to Number 10 Oil used in illegal fuel activities and sanctions

as a result of such inspections are not imposed.

Besides inspections and sanctions, the fines and penalties imposed are not shared with the public at a sufficient level.

Waste motor oil becomes subject to illegal activities by;

- not being delivered to the authorized institution by waste generators,
- unauthorized people who receive/purchase waste oil,
- those who use waste oil in fuel activities under the name of refining/regeneration,
- those who sell Number 10 Oil as fuel substitute, and
- being used as fuel by consumers especially in public transportation and shipping industries.

Due to lack of disincentives in regard to inspections and sanctions, waste oils are not delivered to the authorized institution by waste generators, are purchased and sold at high prices by licensed and unlicensed collectors, are used in fuel activities under the name of regeneration/refining, are used as fuel by consumers mainly in public transportation and shipping industries and all these illegal activities have been continuing for a long time and cannot be prevented.

In order to prevent such activities, regular, continuous and efficient inspections must be carried out at each of the four links of this chain. PETDER has made various notifications to relevant authorities regarding the issue. In addition to insufficient inspections, lack of deterrent sanctions encourages such activities.

2. Base oil production from waste oil within the scope of EMRA license should be monitored.

Waste oil regeneration/refining activities are carried out by industrialized refineries in all developed countries and they produce base oil using advanced technology. However, in Turkey, such recovery activities are carried out based on form (color and odor) without being subject to a license and mostly using primitive methods.

3. Some public institutions do not deliver the waste oil generated.

The amount of waste motor oil received from public institutions, municipalities and provincial special administrations is not sufficient.

4. Inspections and sanctions should be extended; the fines and penalties imposed should be shared with the public.

In regard to the main five links of Number 10 Oil chain (waste oil generators, unauthorized persons collecting/transporting waste oil, Number 10 Oil producers and Number 10 Oil users), inspections should be extended, deterrent sanctions should be imposed and these should be shared with the public by public authorities, especially by the Ministry of Environment and Urbanization.

4.1 Waste Oil Generators: It is believed that regular inspections on the amount of “lubricant input-waste oil output” as well as amount and documentation of waste oil delivered to PETDER mainly at car care services and workplaces at industrial sites, where lubricants are used and/or waste oil is generated as a result, would be beneficial to prevent sale of waste oil. For this purpose, the amounts delivered to PETDER by waste motor oil generators and their product purchase declarations to Provincial Directorates should be crosschecked.

4.2 Unauthorized Persons Transporting and Collecting Waste Oil: Waste motor oil is collected by unauthorized vehicles and persons under different names and sold to Number 10 Oil producers. Such unauthorized waste oil collection activities sometimes carried out using PETDER’s name and with vehicles not conforming to HSE-S standards must be prevented and Code 13.02 should be excluded from the licenses of vehicles which do not have a contract with PETDER.

It is stated in vehicle licenses granted by Provincial Directorates that wastes under code 1302 (including waste motor oil) can be carried with these vehicles. This is interpreted by waste motor oil generators as it is also allowed to collect waste oil with these vehicles and abused by collectors without license/authority to carry wastes under code 1302.

As a result, waste motor oil is collected under various names by unauthorized vehicles and persons and sold to Number 10 Oil producers.

Therefore, it is necessary to grant the license or authority to carry goods with the code 1302 only to vehicles carrying goods for the Authorized Institution and to grant such license to other vehicles only in the case of existence of a contract with PETDER as the Authorized Institution. Up-to-date license plates of the vehicles are available at PETDER.

4.3 Waste Oil Recovery Plants and Number 10 Oil Producers:

It is estimated that approximately 20,000 tons of industrial waste oil is collected by recycling companies. Taking into account 2,000 tons of Category-1 waste motor oil legally delivered to these companies by PETDER, it is believed that it is not possible for these companies to maintain their commercial activities with these amounts. Examination of input raw materials and output products of these companies would reveal the unrecorded activities. It is necessary to carry out inspections on financial situations of recycling companies, sanctions should be imposed and these should be shared with the public.

4.4. Locations Where Number 10 Oil is Sold as Fuel Substitute:

Number 10 Oil is mainly sold at “nonmarket” locations such as truck/bus terminals, vehicle industrial sites and stores and open spaces at roadsides rather than legal fuel stations. Such locations should be regularly inspected, deterrent penal and financial sanctions should be imposed in case of fuel sale and these should be shared with the public.

4.5 Number 10 Oil Users: Number 10 Oil is a legal lubricating product used for several purposes. However, it is illegal to use, sell and purchase this product as fuel. This illegal trade causes loss of lives and property as well as a significant tax loss and unfair competition.

Number 10 Oil is mainly used as fuel in buses, trucks, vans and minibuses in the transportation sector. Some of these activities involve carriage or hazardous goods and public

transport. It caused serious accidents and loss of lives in the past. Recently it has been claimed that it is also being used in heavy construction equipments and tractors. It is necessary to carry out inspection on roads mainly targeting drivers of buses, service vehicles and minibuses. National Marker inspections to be carried out on roads under the collaboration of EMRA and the Ministry of Environment and Urbanization will immediately reveal whether the products used in the vehicles are legal or not.

It is believed that regular inspections to be carried out on main highways in Turkey, penal and financial sanctions to be imposed in case of nonconformity and sharing these with the public will prove beneficial to reduce the use of Number 10 Oil. Such inspections would also decrease illegal fuel sales.

5. Implementation of compulsory standards relating to refining and regeneration plants should be monitored.

5.1. Refining and regeneration plants in all developed countries are plants that use cutting-edge technology and require high investment costs. Such plants, which are few in number, operate as refineries in these countries. However, such activities are carried out using simple methods and with temporary certificates of activity in Turkey. Such plants should conform to TS 13541 Standard determining service standards. Compliance to the standard should be monitored with on-site inspections.

5.2. In Turkey, the product recovered at these plants is a product whose form, mainly color and odor, has been improved, rather than base oil and becomes subject to Number 10 Oil activities under different names such as sawing oil or molding oil. Conformity of such products to TSE 13369 Standard should be checked through on-site inspections examining the process they undergo.

6. Re-refining plants similar to those in developed countries should be built in Turkey.

Lack of large corporate investments similar to those in developed countries where advanced technologies are used for base oil production from waste oil, technical incompetence of the players in the field and their engagement in

illegal activities in Turkey have been serious factors impairing the development of the sector. PETDER believes that advanced technology refining plants to be built in Turkey will enable conversion of waste oil used in illicit activities into products with high added value.

7.2 ONE BARREL ONE TREE SOCIAL RESPONSIBILITY PROJECT

After the preparation of the visuals and publicity materials, the project was announced to the public with a press release on September 6, 2010 upon approval of the Ministry of Environment and Urbanization.

1 Barrel 1 Tree Project, initiated for the purpose of increasing environmental benefits of collecting waste motor oil by planting one tree for each barrel of waste motor oil collected from state institutions, aims to contribute to;

- keeping account of more waste motor oil with the support of state institutions,
- protecting the environment and human health,
- raising public awareness about the harms of waste motor oil,
- preventing illegal activities carried out under the name of Number 10 Oil.

The scope of the project is to plant one tree for each barrel of waste motor oil collected by providing free of charge service with licensed transportation vehicles to all governmental institutions across the country (state institutions, armed forces, municipalities) in cooperation with the Ministry of Environment and Urbanization and the Ministry of Forestry and Water Affairs.

Within the framework of this project financed by PETDER, "by planting one tree for each barrel of waste motor oil collected from state institutions", 81,500 trees, 10,000 of which were planted in 2016, have been planted in three years in return for the waste oil collected. The number of trees planted is going to increase over the years.



FORESTATION AREAS

2016 - İSTANBUL
Roadside Forestation
Cypress, thuja

2014 - ANKARA
Roadside Forestation
Cypress, thuja

2013 - ANKARA
Roadside Forestation
Cypress, thuja

2012 - AFYONKARAHİSAR
Roadside Forestation
Cypress, thuja

2011 - ANKARA
Field Forestation
Acacia, ornamental plum, blue
cypress, thuja

7.3 NEW COMMUNICATION CHANNELS



44 44 924
YAG

PETDER SMART PHONE APPLICATION

PETDER Smart Phone Application developed by PETDER (Petroleum Industry Association) for the purpose of facilitating waste motor oil notifications is now available in AppStore and Google Play Store. The application aims to facilitate communication between waste motor oil generators and PETDER. Users who download the application to their smart phones will be able to

- Send a notice through "Waste Oil Notification" page,
- Call PETDER by clicking on the phone number 44 44 924,
- View the plate and license numbers of licensed waste motor oil collection vehicles in their city,
- Be informed about announcements made by PETDER.

44 44 YAĞ (OIL)

Within the scope of the Waste Motor Oil Management Project carried out by PETDER, the contact number, especially for waste motor oil generators and those who wish to get more information regarding the project, was changed as "44 44 924 - 44 44 YAG". With the new number;

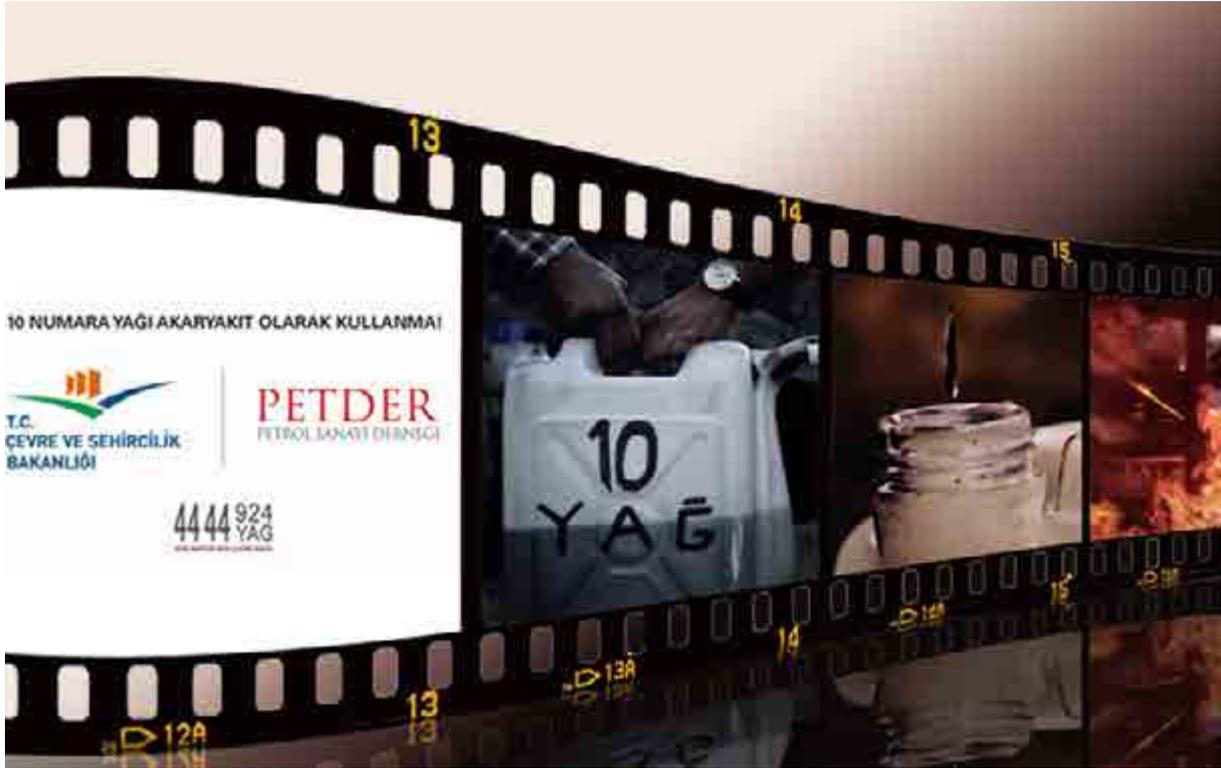
- Contact information will be easier to remember,
- Communication between waste oil generators and PETDER will be faster and easier,
- Organizational structure of Waste Motor Oil Management Project will be stronger



7.4 10 PUBLIC SERVICE ANNOUNCEMENT ON RISKS OF USING NUMBER 10 OIL AS FUEL SUBSTITUTE

The public service announcement prepared in 2015 by Petroleum Industry Association (PETDER) and the Ministry of Environment and Urbanization in order to raise public awareness on "Risks of Using Number 10 Oil as Fuel Substitute" was approved by the Radio and Television Supreme Council and began to be broadcast on television channels.

The public service announcement is expected to raise public awareness on the subject matter and contribute to Turkish economy by helping to put an end to use of Number 10 Oil and to activities for preventing the damages it causes on property, and more importantly, on human life.





8. LEGAL REGULATIONS

JANUARY 2016

COUNCIL OF MINISTERS

2016.01.01 Law Amending Certain Laws

MINISTRY OF SCIENCE, INDUSTRY AND TECHNOLOGY

2016.01.06 Communiqué (Communiqué No: SGM-2015/32) Amending the Communiqué on Implementation Procedures and Principles on the Type Approval of Motor Vehicles in Respect to Emissions from Light Passenger and Commercial Vehicles (Euro 5 and Euro 6) and in the Matter of Access to Vehicle Repair and Maintenance Information

2016.01.06 Regulation Amending the Regulation ((AT) 715/2007) on the Type Approval of Motor Vehicles in Respect to Emissions from Light Passenger and Commercial Vehicles (Euro 5 and Euro 6) and in the Matter of Access to Vehicle Repair and Maintenance Information

EMRA

2016.01.11 EMRA Fines and Penalties

2016.01.18 EMRA Licenses

2016.01.20 EMRA Fines and Penalties

2016.01.23 Board Decision Amending the Board Decision on Information and Documentation Required for License Modification Applications

2016.01.23 Regulation Amending Petroleum Market License Regulation

MINISTRY OF CUSTOMS AND TRADE

2016.01.22 Regulation Amending Customs Regulation

2016.01.22 Communiqué Amending Customs General Communiqué (Customs Transactions) (Serial No: 134)

MINISTRY OF TRANSPORT, MARITIME AFFAIRS AND COMMUNICATIONS

2016.01.22 Regulation on Training and Authorization within the scope of International Code regarding Hazardous Freight that are Carried by Sea

TSE

2016.01.08 TSE Aydın Terminated Agreements

2016.01.08 TSE Erzincan Terminated Agreements

2016.01.17 TSE Terminated Agreements

2016.01.22 TSE İzmir Terminated Agreements

2016.01.24 TSE Terminated Agreements

FEBRUARY 2016

PRIME MINISTRY

2016.02.02 General Principles Amending Motor Vehicles Compulsory Liability Insurance General Principles

MINISTRY OF LABOR AND SOCIAL SECURITY

2016.02.15 Regulation Amending the Regulation on Duties, Authorities, Responsibilities and Trainings of Occupational Safety Experts

MINISTRY OF ENVIRONMENT AND URBANIZATION

2016.02.09 Regulation Amending Environmental Impact Analysis Regulation

EMRA

2016.02.10 EMRA Tariffs

2016.02.11 EMRA Licenses

2016.02.12 EMRA Fines and Penalties

MINISTRY OF CUSTOMS AND TRADE

2016.02.06 Tax Procedure Law General Communiqué (No: 468)

2016.02.13 Regulation Amending Customs Regulation

MINISTRY OF FINANCE

2016.02.12 Communiqué Amending Tax Procedure Law General Communiqué (No: 469)

COMPETITION AUTHORITY

2016.02.13 Communiqué (Communiqué No: 2016/4) Amending the Communiqué (Communiqué No: 2012/2) on Application

Procedures for Infringement of Competition
 2016.02.13 Communiqué Amending the
 Communiqué (Communiqué No: 2010/4) on
 Mergers and Takeovers Requiring Competition
 Authority's Approval

TSE

2016.02.11 TSE Malatya Terminated
 Agreements

MARCH 2016**COUNCIL OF MINISTERS**

2016.03.01 Decision on Assignment of
 Mustafa Yilmaz as Chairman of Energy Market
 Regulatory Board

2016.03.19 Regulation Amending the
 Regulation on Procedures and Principles of
 Drafting Legislation

MINISTRY OF SCIENCE, INDUSTRY AND TECHNOLOGY

2016.03.15 Regulation Amending the
 Regulation on the Authorization Certificate
 to be Granted to Those to Repair and Adjust
 Gauges and Measuring Devices

MINISTRY OF LABOR AND SOCIAL SECURITY

2016.03.07 Regulation Amending
 the Regulation on Duties, Authorities,
 Responsibilities and Training of Workplace
 Doctors and Other Medical Staff

2016.03.31 Internal Emergency Management
 Plan Pertaining to Minimizing Industrial
 Accident Risks

EMRA

2016.03.05 EMRA Fines and Penalties

2016.03.11 EMRA Licenses

2016.03.16 EMRA Fines and Penalties

2016.03.24 EMRA Fines and Penalties

2016.03.31 EMRA Fines and Penalties

MINISTRY OF CUSTOMS AND TRADE

2016.03.29 Regulation Amending Customs
 Regulation

MINISTRY OF FINANCE

2016.03.04 Communiqué Amending
 Corporation Tax General Communiqué

2016.03.29 Expenditure Taxes General

Communiqué (Serial No: 90)

TSE

2016.03.04 TSE Terminated Agreements

2016.03.06 TSE Terminated Agreements

2016.03.19 TSE Terminated Agreements

APRIL 2016**MINISTRY OF SCIENCE, INDUSTRY AND TECHNOLOGY**

2016.04.02 Strategy and Action Plan for
 Turkish Automotive Industry (2016-2019)

2016.04.03 Communiqué on TS 11827
 Standard Pertaining to Rules for Workplaces
 Providing Maintenance and Filling Service for
 Fire Extinguishers

EMRA

2016.04.15 EMRA Licenses

2016.04.22 EMRA Fines and Penalties

2016.04.29 Regulation Amending the
 Regulation on Technical Regulations to be
 followed in the Liquefied Petroleum Gases
 (LPG) Market

2016.04.30 EMRA Fines and Penalties

MINISTRY OF CUSTOMS AND TRADE

2016.04.15 Communiqué (Customs
 Transactions) (Serial No: 139) Amending
 Customs General Communiqué (Customs
 Transactions) (Serial No: 100)

2016.04.30 Communiqué (Generalized
 System of Preferences) (Serial No: 1) Amending
 Customs General Communiqué

MINISTRY OF INTERIOR

2016.04.16 Regulation Amending the Regulation
 on Establishment and Operation of Vehicle
 Inspection Stations and Vehicle Inspections

MINISTRY OF TRANSPORT, MARITIME AFFAIRS AND COMMUNICATIONS

2016.04.18 Communiqué Amending the
 Communiqué on National Occupational -
 Communiqué No 2016-3

PROFESSIONAL COMPETENCY BOARD

2016.04.18 Communiqué Amending the
 Communiqué on National Occupational -
 Communiqué No 2016-3

TSE

- 2016.04.04** TSE Terminated Agreements
- 2016.04.07** TSE Terminated Agreements
- 2016.04.20** TSE Terminated Agreements
- 2016.04.22** TSE Terminated Agreements
- 2016.04.27** TSE Terminated Agreements

MAY 2016**COUNCIL OF MINISTERS**

- 2016.05.05** Approval of the Protocol on Controlling Authorities and Transnational Data Flow Supplementing the Agreement of Protection of Individuals during Processing of Personal Data by Automatic Means
- 2016.05.24** Decision on Declaration and Approval of the Protocol on Controlling Authorities and Transnational Data Flow Supplementing the Agreement of Protection of Individuals during Processing of Personal Data by Automatic Means

MINISTRY OF SCIENCE, INDUSTRY AND TECHNOLOGY

- 2016.05.13** Regulation Amending the Regulation on Type Approval of Measurements and Measuring Devices

EMRA

- 2016.05.09** EMRA Fines and Penalties
- 2016.05.11** EMRA Fines and Penalties
- 2016.05.16** EMRA Fines and Penalties
- 2016.05.16** EMRA Licenses
- 2016.05.26** EMRA Fines and Penalties
- 2016.05.26** Decision Amending the Board Decision on Information and Documentation for Time Extension of Petroleum Market Licenses

MINISTRY OF FINANCE

- 2016.05.04** Communiqué Amending the Special Consumption Tax List (II) General Communiqué (Serial No:1)
- 2016.05.21** Communiqué Amending the Value Added Tax General Communiqué (Serial No: 6)

TSE

- 2016.05.07** TSE Nevşehir Terminated Agreements
- 2016.05.09** TSE Aydın Terminated Agreements
- 2016.05.11** TSE Terminated Agreements

JUNE 2016**MINISTRY OF SCIENCE, INDUSTRY AND TECHNOLOGY**

- 2016.06.29** Measuring Devices Regulation (2014/32/AB)

MINISTRY OF LABOR AND SOCIAL SECURITY

- 2016.06.30** Regulation Amending the Regulation on Occupational Health and Safety Services

MINISTRY OF ENVIRONMENT AND URBANIZATION

- 2016.06.29** Regulation Amending the Regulation on Monitoring Greenhouse Gas Emissions

EMRA

- 2016.06.05** EMRA Fines and Penalties
- 2016.06.10** EMRA Licenses
- 2016.06.23** EMRA Fines and Penalties

MINISTRY OF CUSTOMS AND TRADE

- 2016.06.03** Customs General Communiqué (Tariff) (Serial No: 14)
- 2016.06.18** Customs General Communiqué (Generalized System of Preferences)

MINISTRY OF FINANCE

- 2016.06.21** Tax Procedure Law General Communiqué (No: 471)

TSE

- 2016.06.06** TSE Aydın Terminated Agreements
- 2016.06.10** TSE Nevşehir Terminated Agreements
- 2016.06.26** TSE İzmir Terminated Agreements

JULY 2016**MINISTRY OF LABOR AND SOCIAL SECURITY**

- 2016.07.23** Regulation Amending the Regulation on Health and Safety Requirements while using Work Equipment

MINISTRY OF FINANCE

- 2016.07.27** Communiqué (No: 472) Repealing the Tax Procedure Law General Communiqué (No: 403)

EMRA

2016.07.01 Communiqué Amending the Communiqué on the Procedures and Principles of Supplying Non-Fuel Petroleum Products from Domestic and Foreign Resources

2016.07.23 EMRA Licenses

2016.07.29 EMRA Fines and Penalties

TSE

2016.07.13 TSE Aydın Terminated Agreements

2016.07.13 TSE Terminated Agreements

AUGUST 2016**MINISTRY OF LABOUR AND SOCIAL SECURITY**

2016.08.02 Regulation Amending the Regulation on Prevention and Reducing the Effects of Major Industrial Accidents

MINISTRY OF FINANCE

2016.08.05 Communiqué (No: 10) Amending the Corporate Tax General Communiqué (Serial No: 1)

2016.08.05 Communiqué (No: 4) Amending the Tax Procedure Law General Communiqué (No: 426)

MINISTRY OF TRANSPORT, MARITIME AFFAIRS AND COMMUNICATIONS

2016.08.03 Regulation Amending the Harbors Regulation

EMRA

2016.08.07 Regulation Amending the Liquefied Petroleum Gases (LPG) Market License Regulation

TSE

2016.08.05 TSE Mersin Terminated Agreements

2016.08.26 TSE Terminated Agreements

SEPTEMBER 2016**MINISTRY OF ENVIRONMENT AND URBANIZATION**

2016.09.21 Regulation Amending Environment Authorization and License Regulation

MINISTRY OF CUSTOMS AND TRADE

2016.09.20 Customs General Communiqué

MINISTRY OF FINANCE

2016.09.29 Stamp Tax Law General Communiqué (Serial No: 60)

EMRA

2016.09.07 Regulation Amending the Liquefied Petroleum Gases (LPG) Market License Regulation

2016.09.11 Announcement on Licenses

2016.09.22 Announcement on Fines and Penalties

TSE

2016.09.10 TSE Nevşehir Terminated Agreements

OCTOBER 2016**MINISTRY OF SCIENCE, INDUSTRY AND TECHNOLOGY**

2016.10.15 Communiqué on Tracking Liquefied Petroleum Gas (LPG) Cylinders in the Market

2016.10.15 Communiqué on TS 1449 Filling and Discharge Procedures for LPG - Safety Requirements

MINISTRY OF CUSTOMS AND TRADE

2016.10.07 Regulation Amending the Customs Regulation

MINISTRY OF FINANCE

2016.10.02 Income Tax General Communiqué (Serial No: 293)

2016.10.04 Act of Fees General Communiqué (Serial No: 77)

2016.10.04 Communiqué Amending Value Added Tax Implementation General Communiqué (Serial No: 7)

2016.10.25 Regulation Amending the Regulation on Procedures and Principles of Tax Audits

2016.10.28 Income Tax General Communiqué

EMRA

2016.10.02 Announcement on Fines and Penalties

2016.10.13 Announcement on Licenses

2016.10.19 Regulation Amending Petroleum Market License Regulation

2016.10.19 Board Decision Amending the

Procedures and Principles on Brokerage Service for Bunker Supply to Marine and Air Vehicles under Export or Transit Regime in Petroleum Market

2016.10.23 Announcement on Fines and Penalties

2016.10.26 Board Decision Amending the Board Decision on License Applications in LPG Market

TSE

2016.10.02 TSE Terminated Agreements

2016.10.05 TSE Terminated Agreements

2016.10.08 TSE Mersin Terminated Agreements

NOVEMBER 2016

MINISTRY OF CUSTOMS AND TRADE

2016.11.26 Customs General Communiqué -Tariff- Classification Decisions

MINISTRY OF FINANCE

2016.11.11 Tax Procedure Law General Communiqué (No: 474)

EMRA

2016.11.11 Announcement on EMRA Fines and Penalties

2016.11.17 Announcement on EMRA Licenses

2016.11.25 Announcement on EMRA Fines and Penalties

TSE

2016.11.09 TSE Kahramanmaraş Terminated Agreements

2016.11.09 TSE Terminated Agreements

2016.11.25 TSE Terminated Agreements

DECEMBER 2016

MINISTRY OF FINANCE

2016.12.13 Communiqué Amending Value Added Tax Implementation General Communiqué (Serial No: 8)

2016.12.15 Communiqué (No: 475) Amending Tax Procedure Law General Communiqué

2016.12.27 Communiqué Amending Value Added Tax Implementation General Communiqué (Serial No: 9)

2016.12.27 Motor Vehicles Tax General Communiqué (Serial No: 47)

2016.12.27 Stamp Tax Law General Communiqué (Serial No: 61)

2016.12.27 Act of Fees General Communiqué (Serial No: 78)

2016.12.27 Act of Fees General Communiqué (Serial No: 79)

2016.12.27 Income Tax General Communiqué (Serial No: 296)

2016.12.27 Tax Procedure Law General Communiqué (No: 476)

MINISTRY OF TRANSPORT, MARITIME AFFAIRS AND COMMUNICATIONS

2016.12.30 Regulation Amending the Regulation on Transport of Dangerous Goods by Road

EMRA

2016.12.08 Communiqué on Fines to be imposed in 2017 pursuant to LPG Market Law 5307 and Article 16 of Law Amending Electricity Market Law

2016.12.08 Communiqué on Fines to be imposed in 2017 Pursuant to Article 19 of Petroleum Market Law no 5015

2016.12.09 Decision on Articles Relating to Crude Oil, Fuel, Bunker, Lubricants, Base Oil and Petroleum

2016.12.13 EMRA Licenses

2016.12.15 Regulation Amending the Regulation on LPG Market Training and Managing Directors

2016.12.27 Decision on “Manganese Content” not being compulsory in Gasoline and Diesel Types in terms of Technical Regulations until 31/12/2018

2016.12.27 Decision on “Oxidation Stability” not being compulsory only in Diesel Types containing more than 2% Fatty Acid Methyl Esters (FAME) in terms of Technical Regulations until 31/12/2018

2016.12.27 Board Decision Amending the Board Decision on Procedures and Principles of National Marker Activities and National Marker Delivery

2016.12.27 Decision on the Charges for Obtaining a License, License Amendment, Time Extension (Visa), Obtaining a Copy of the License, Tariff Approval and Fuel Trade Licenses in 2017

2016.12.27 Decision on the Shares to be applied in 2017

2016.12.27 Decision on the Charges for Obtaining a License, License Amendment, Time Extension (Visa) and Obtaining a Copy of the License in the PG Market in 2017

2016.12.27 Decision on the Shares to be Applied in the LPG Market in 2017

2016.12.27 Board Decision Amending the Board Decision on Energy Market Declaration System Instruction Manual

2016.12.28 EMRA Fines and Penalties

TSE

2016.12.09 TSE Terminated Agreements

2016.12.28 TSE Terminated Agreements

2016.12.29 TSE İzmir Terminated Agreements



9. ABOUT PETDER



PETDER (Petroleum Industry Association) was established on September 23, 1996 by a group of leading fuel distribution companies with the aim of supporting a spectrum of activities ranging from production to consumption of oil products. PETDER's members are Alpet, Aytemiz, Belgin, BP, Gulf, ExxonMobil, Opet, Petline, OMV Petrol Ofisi, Petroyağ, Shell, Shell & Turcas, Total, and Turkuaz. PETDER's founding members are BP, ExxonMobil, Opet, Petrol Ofisi, Shell and Total.

PETDER's Mission

PETDER advocates proactively for improvement in all fields of petroleum industry and carries out research and development activities to produce relevant, reliable and objective information to present for formation of industry policies and strengthen its advocacy role.

PETDER's Main Activity Areas:

In cooperation with its members and related stakeholders and in compliance with Competition Law, PETDER's main activity areas are;

- To play active role in the development of sector policies,
- To support the further development of competition,

- To perform research and development for the solution of market inefficiencies, especially the fight against illegal/non-registered fuel,
- To be a leader about the highest HSSE standards,
- To conduct communication activities for reliable and objective information for the sector and public,
- To represent the sector in all areas in an effective and efficient way,
- To perform research and development activities in collaboration with national and international professional organizations in order to increase knowledge and produce higher quality products and processes. Since its establishment, PETDER has always acted towards being a professional non-governmental organization based on strong, reliable and objective principles. PETDER cooperates with "FuelsEurope", which represents the European fuel industry.

Waste Oil Management Project

Following the "Regulation on Control of Waste Oils", PETDER initiated the "Waste Oil Management Project" in 2004 in order to fulfill the members' liabilities resulting from the Regulation by collecting the waste motor oils generated at car maintenance and repair

shops, fuel stations and public car maintenance stations by licensed and authorized personnel under appropriate conditions.

Waste motor oils collected by PETDER within the framework of the project are processed at facilities licensed by the Ministry of Environment and Urbanization to eliminate the negative impacts on environment and human health and public awareness is raised on the negative impacts of waste oil and how it should be reclaimed.

PETDER is the only institution authorized by the Ministry for the collection of waste motor oil.

PETDER plants one tree for each barrel of waste oil collected from state institutions in cooperation with the “Ministry of Environment and Urbanization” and the “Ministry of Forestry and Water Affairs”. Within the framework of this project financed by PETDER, 81,500 trees, 10,000 of which were planted in 2016, have been planted in five years. The number of trees planted continues to increase.

Management System Certification

PETDER has been the first non-governmental organization which was granted the three certificates TS EN ISO 9001, TS EN ISO 14001 and TS 18001 and certified in three areas of “Quality, Environment and Occupational Health”.



Committees

PETDER committees in different fields of expertise carry out studies and activities with regulatory authorities and the stakeholders in the industry and study current and legal developments in their fields. The committees mainly meet once a month regularly and also when deemed necessary.

PETDER bünyesinde;

- Law Committee
- Supply Committee
- Corporate Communications Committee
- LPG Sectoral Board
- LPG Technical Committee
- Lubricants Technical Committee
- Automation Committee
- Health, Safety and Environment Committee
- Transportation Committee
- Engineering Committee
- Taxation Committee

BOARD MEMBERS (end of 2016)

Chairman

Martin THOMSEN *BP Petrolleri A.Ş.*

Vice Chairman

Tamas MAYER *OMV Petrol Ofisi A.Ş.*

Accountant Board Member

Adnan ÜNAL *Petline Petrol Ürünleri Ticaret A.Ş.*

Board Members

Ahmet ERDEM *The Shell Company of Turkey Ltd.*

Ahmet İzzet EKE *Aytemiz Akaryakıt Dağıtım A.Ş.*

Antoine TOURNAND *Total Oil Türkiye A.Ş. (Mayıs 2016 itibariyle Yönetim Kurulu Üyeliğine Yaşar TAŞKIRAN devam etmektedir)*

Ekrem EKMENCİ *OPET Petrolcülük A.Ş.*

Mustafa Ergi *Altınbaş Petrol ve Ticaret A.Ş.*

ORGANIZATION CHART



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Secretary General



Serkan BEREKET
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Corporate Communications
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Hasan HIRAOĞLU
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Serdar BEKDEMİR
Planning Executive

table 5
2008-2016 Fuel and LPG Consumption Figures

Product	Unit	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Change (2015/16)
Unl. Gaso. with additives	m ³	110.902	57.709	22.588	0	0	0	0	0	0	-
Unl. Gasoline (RON 95)	m ³	2.602.498	2.589.832	2.513.068	2.410.987	2.313.900	2.345.180	2.440.076	2.614.258	2.775.368	%6,2
Unl. Gasoline (RON ≥ 97)	m ³	310.926	294.493	235.700	208.426	163.095	140.382	132.564	193.302	215.321	%11,4
Total Gasoline	m³	3.024.326	2.942.034	2.771.356	2.619.413	2.476.995	2.485.562	2.572.640	2.807.561	2.990.689	%6,5
Diesel	m ³	13.161.773	11.919.770	11.516.166	12.970.291	13.643.591	14.231.355	15.411.746	17.273.595	18.538.407	%7,3
Diesel (Other)	m ³	3.415.699	4.007.423	4.987.982	4.484.992	5.141.038	5.841.868	5.953.700	7.414.103	8.259.401	%11,4
Total Diesel	m³	16.577.472	15.927.193	16.504.148	17.455.283	18.784.629	20.073.223	21.365.445	24.687.697	26.797.808	%8,5
Kerosene	m ³	13.624	11.171	32.714	65.079	56.194	59.109	50.358	71.657	18.508	%-74,2
Total White Products	m³	19.615.422	18.880.398	19.308.218	20.139.775	21.317.817	22.617.894	23.988.443	27.566.915	29.807.005	%8,1
Heating Oil	Ton	384.756	320.531	203.709	194.259	159.970	114.083	130.370	100.999	91.190	%-9,7
Fuel Oil No:6	Ton	2.373.363	1.596.687	630.061	594.624	533.149	420.109	577.170	503.055	492.349	%-2,1
Total Black Products	Ton	2.758.099	1.917.218	833.770	788.883	693.119	534.192	707.540	604.054	583.539	%-3,4
LPG Autogas	m ³	3.770.638	4.105.857	4.445.538	4.710.386	4.812.245	4.869.509	5.068.586	5.480.752	5.610.593	%2,4
Total Automotive*	m³	23.372.436	22.975.084	23.721.041	24.785.082	26.073.868	27.428.294	29.006.671	32.976.010	35.399.090	%7,3
Product	Unit	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Change (2015/16)
Unl. Gaso. with additives	Ton	85.949	44.724	17.506	0	0	0	0	0	0	-
Unl. Gasoline (RON 95)	Ton	2.016.936	2.007.120	1.947.628	1.868.515	1.793.272	1.817.515	1.891.059	2.026.050	2.150.911	%6,2
Unl. Gasoline (RON ≥ 97)	Ton	240.968	228.232	182.668	161.530	126.398	108.796	102.737	149.809	166.874	%11,4
Total Gasoline	Ton	2.343.853	2.280.076	2.147.801	2.030.045	1.919.671	1.926.311	1.993.796	2.175.860	2.317.784	%6,5
Diesel	Ton	11.121.698	10.072.206	9.731.160	10.959.896	11.528.834	12.025.495	13.022.925	14.596.188	15.664.954	%7,3
Diesel (Other)	Ton	2.886.266	3.386.272	4.214.845	3.789.818	4.344.177	4.956.379	5.030.876	6.264.917	6.979.194	%11,4
Total Diesel	Ton	14.007.964	13.458.478	13.946.005	14.749.714	15.873.012	16.961.874	18.053.801	20.861.104	22.644.148	%8,5
Kerosene	Ton	10.899	8.937	26.171	52.063	44.955	47.287	40.287	57.326	14.806	%-74,2
Total White Products	Ton	16.362.716	15.747.491	16.119.977	16.831.822	17.837.637	18.935.472	20.087.884	23.094.290	24.976.738	%8,2
Heating Oil	Ton	375.318	320.531	203.709	194.259	159.970	114.083	130.370	100.999	91.190	%-9,7
Fuel Oil No:6	Ton	2.346.240	1.596.687	630.061	594.624	533.149	420.109	577.170	503.055	492.349	%-2,1
Total Black Products	Ton	2.721.558	1.917.218	833.770	788.883	693.119	534.192	707.540	604.054	583.539	%-3,4
Total Fuel	Ton	19.084.274	17.664.709	16.750.038	17.426.446	18.370.786	19.355.581	20.665.054	23.597.345	25.469.087	%7,9
LPG Autogas	Ton	2.111.557	2.299.280	2.489.501	2.637.816	2.694.857	2.726.925	2.838.408	3.069.221	3.141.932	%2,4
Total Automotive*	Ton	18.474.273	18.046.771	18.609.478	19.469.638	20.532.494	21.662.397	22.926.292	26.163.511	28.118.670	%7,5

* The difference in change ratios arises from the differences in m³/ton conversions of the products.

REFERENCES

- Data regarding Oil and LPG sectors is based on EMRA Oil and LPG Sector Report.
- Fuel data used in this report have been compiled from statements provided by 15 fuel distributors whose aggregate market share is calculated to be above 85% of the market and reported to the independent research organization on voluntary participation basis. For data on fuel distributors who did not participate in this voluntary data formation system, calculations were made using data from previous periods obtained from EMRA.
- Lubricant data used in this report is prepared by an independent audit organization on a voluntary participation basis.
- Inflation, GDP, CPI, exchange rates, vehicle numbers and total vehicle station data is obtained from Turkish Statistics Institute (TurkStat) and the Central Bank public reports. Crude oil prices and pump tax rates are obtained from Argus and European Commission sources.
- The sources for crude oil prices and pump tax fees are Argus and European Commission values.
- Turkish pump prices used in this report are obtained from EMRA and company websites. Data related to European pump prices is obtained from:
European Commission, EC Oil Bulletin, http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm
- Data for the Developments in World are collected from;
 - World Energy Outlook 2016
 - FuelsEurope 2017 Statistical Report



PETDER founded on September 23, 1996
by leading fuel distribution companies
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