

# PRZEMYSŁ HANDEL NAFTOWY OIL INDUSTRY AND TRADE 2013



### DEAR READER,

We are pleased to be presenting, once again, the "Oil Industry and Trade 2013" report prepared by experts from the Polish Organisation of Oil Industry and Trade. This time, it focuses on events which have taken place in 2013 in the liquid fuels sector and related areas. As usual, our report presents key statistics on the liquid fuels sector in Poland, an analysis and discussion of the main problems of the industry and selected issues in fuels and lubricating oils production and logistics. The report describes the situation in a sector that is of key importance to the Polish economy and public revenues, and which ensures the energy security of the country and employs tens of thousands of people.

The report has arisen mainly from an analysis of data from POPiHN member companies and also from the Ministry of Finance and the Material Reserves Agency. This data, which is very precise and systematic, was analysed and interpreted against a background of market monitoring and observing the independent businesses sector. In 2013, it was particularly difficult to assess the overall market, mainly due to the estimated data for fuel consumption from firms which were not POPiHN members. The analysis of the position was more difficult than in previous years due to the rapid growth of the shadow market for fuels.

In 2013, the phenomenon of fuels market tax fraud reached intimidating proportions, threatening the stability of firms which operate within the law. Unfortunately, the actions taken by the authorities to eliminate this development proved ineffective. Neither the actions of law enforcement and tax inspection agencies, nor the introduction of new VAT rules yielded hoped-for results.

In summarising 2013, one cannot fail to mention several changes that have been beneficial for petrol station entrepreneurs and their clients. This may certainly be said of the amendment to the law on payment services - aimed at reducing fees incurred by merchants, the admission of self-service at LPG pumps, the ending of metrological monitoring of petrol station storage tanks, the decision to not renew the transitional period for petrol stations to meet environmental requirements and finally, the greater flexibility of the General Directorate for National Roads and Motorways in discussing Service Area investments.

We commend the "Oil Industry and Trade 2013" report to you and hope that you will find it interesting.

**Leszek Wieciech** Chairman & Director General

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**Piotr Pyrich** Chairman of the Board of Directors

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POPiHN 51



# PRZEMYSŁ I HANDEL NAFTOWY oil industry and trade 2013

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### THIS REPORT USES THE FOLLOWING CONVERSION VALUES:

1 BARREL OF CRUDE OIL (1 BBL) = 159 LITRES

1 TON OF CRUDE OIL = 7.26 BBL

### Product densities used in mass to volume conversions in 1<sup>st</sup> quarter 2013:

Petrol	lg/m <sup>3</sup>
Diesel	lg/m³
Light fuel oil	lg/m³
LPG	lg/m <sup>3</sup>

## Product densities used in mass to volume conversions in 2<sup>nd</sup> quarter 2013:

Petrol
Diesel
Light fuel oil
LPG

### Product densities used in mass to volume conversions in 3<sup>rd</sup> quarter 2013:

Petrol
Diesel
Light fuel oil
$LPG\ldots\ldots\ldots\ldots.0,556~Mg/m^3$

### Product densities used in mass to volume conversions in 4<sup>th</sup> quarter 2013:

Petrol0,749 Mg/m <sup>3</sup>
Diesel0,835 Mg/m <sup>3</sup>
Light fuel oil $\dots \dots \dots$
LPG

OPiHN

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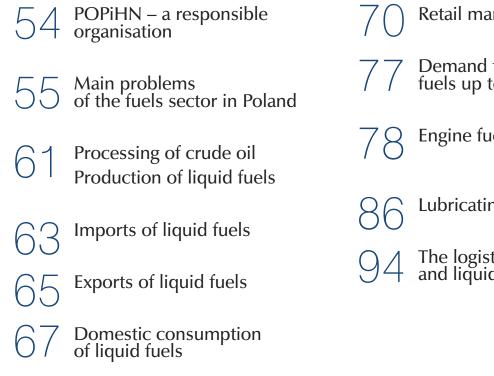
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# POPIHN – A RESPONSIBLE ORGANISATION

The Polish Oil Industry and Trade Organisation (POPiHN) has existed since 1995 as an employers' organisation, bringing together the largest Polish companies in the production and distribution of liquid fuels, fuel infrastructure and the production and distribution of lubricating oils. The unique aggregation of the fuel and oil industries with the infrastructure sector inside one organisation gives POPiHN unique capabilities, enabling it to take into account the mutual interests of these sectors when preparing its positions. POPiHN is working to create a fully competitive, customer-friendly market and to ensure the safe and sustainable development of its affiliated companies. A key task is the development of the legal environment for the fuel industry in Poland and the European Union that will ensure the creation of a fully competitive and transparent market benefitting the whole Polish economy and all customers.

POPiHN bases its activities on a Charter and Code of Ethics, on "POPiHN's Vision and Mission" adopted in 2012, and a "Code of Good Practice under Competition Law". The purpose of implementing the "Code of Good Practice under Competition Law" was to make POPiHN's office staff and member companies' representatives sensitive to the need to strictly observe the law in this respect.

In view of the increasing amount of industry data being collected and processed, since 2010, the organisation holds an ISO/EIC 27001:2005 Information Security Management System certificate, together with a statement regarding use and an Information Security System Policy approved by the management board. This imposes an obligation on it to undergo inspection audits verifying compliance with the management system, own procedures and current legal requirements.

POPiHN engages in dialogue with all stakeholders, including government and EU agencies. It shares with them its experience and knowledge of the refining industry, provides opinions on draft legal acts within public consultation procedures, and advocates the adoption of solutions that are most favourable for the industry and the end users of fuels and oils – customers of POPiHN's members petrol stations and wholesale clients.

The organisation is actively engaged in efforts to restore transparency to the fuels market and to eliminate the shadow economy from it. The market is monitored continuously and the results communicated to the appropriate institutions.

POPiHN takes part in a number of expert groups, such as one appointed by the Chief Inspector of Labour on safety in the refining and gas industries. It is also a member of Technical Committee 222 on petroleum products and is actively involved in the standardisation process within the Polish Committee for Standardisation. The ground-breaking safety solutions for autogas refuelling, developed by POPiHN, have a chance to become compulsory throughout the European Union.

At the international and EU levels, mention should be made of the organisation's cooperation with EUROPIA/ CONCAWE, and also of its membership, from 2011, of the Union of the European Lubricants Industry (UEIL), which has a representative of POPiHN on its board.

POPiHN's effectiveness is based on continuous cooperation with its member companies' experts, as well as on the unique internal store of expertise within the organisation. This enables effective action, and allows a variety of initiatives to be undertaken.

POPiHN promotes behaviours which encourage responsible use of fuel by vehicle drivers within the "Save More Than Fuel" campaign (www.savemorethanfuel.eu/poland/index.html) initiated by the European Petroleum Industry Association (EUROPIA), which, in line with the European Commission's guidelines on reducing CO2 emissions and improving energy efficiency, promotes principles for economical vehicle use and contributes to safer and more efficient driving.

POPiHN supports the "Been Drinking – Don't Drive" campaign. It is also a partner of the Friendly Motoring programme of the Polish Automotive Industry Association, which aims to popularise styles of motoring that are safe, sensible, modern and environmentally responsible.

As part of efforts to improve road safety, the organisation supports a public campaign under the slogan "Fashion for reflectors. Switch on your thinking", organised by the National Road Safety Council and the Ministry of Transport, Construction and Maritime Economy and the "Been Drinking - Don't Drive" campaign. POPiHN is also a supporting member of the Partnership for Road Safety and actively takes part in the work of this unique organisation, which brings together representatives of government, businesses, communities of experts and ordinary citizens for whom road safety issues are important.

POPiHN promotes awareness among its members of the needs of people with disabilities. Architectural barriers are being eliminated from offices and petrol stations of member firms (appropriate width of approach, automatic sliding doors, specially prepared toilets with secure handrails and handles, no curbs in front of main entrances to buildings and no steps inside forecourt interiors) and station staff are always willing to assist customers with disabilities.

More information on the corporate social responsibility-related activities of POPiHN's member firms may be found in their annual reports and on individual companies' websites.

# MAIN PROBLEMS OF THE FUELS

### **1. FUELS TRADING CRIME**

Since mid-2011, there has been a dramatic increase in the fuels market's shadow economy. According to the report "Areas affected by scams on the Polish diesel market", commissioned by POPiHN from the consulting firm Ernst & Young in cooperation with the security bureaux of Rapacki and Partners and Niemczyk and Associates, fraud on the diesel market in 2012 amounted to at least 12.6% of estimated Polish diesel consumption (over 2 million m<sup>3</sup> diesel). The main mechanism used by criminals is a VAT scam using the disappearing firm scenario. The estimated losses of revenue to the state in terms of VAT, excise and fuel duty due to fraud on the diesel market in 2012 amounted to about PLN 4 billion. At a smaller scale, the problem relates to breaches of the law on excise duty and to fuels, such as petrol or LPG. The total losses to the state arising out of economic crime in the fuels market in 2012 were estimated at over PLN 5 billion. The victims of scams are also often honest companies which lose their market shares because

they cannot compete on price with operators that violate the law. The main causes encouraging the growth of commercial crime on the fuels market have been identified as loopholes in the system of tax and other laws, the lack of a comprehensive system for monitoring irregularities in the market for the production and distribution of liquid fuels, and poor coordination between various authorities and services.

Official statistics and the observations of POPiHN member companies suggest a further growth of scams in diesel trading in 2013 and which has exceeded 15%. Fuels from Polish refineries are already being displaced from the market by shadow economy fuels. As a result, there will be a progressive increase in exports of Polish fuels and thereby increasing depletion of state revenues from taxes on goods sold domestically. The smaller output of fuels from domestic refineries onto the internal market means also the need to reduce the number of companies involved in fuels trading in Poland - including some multinationals' divestments – and the inevitable increase in unemployment in the areas of fuels production, wholesale, transport and distribution.

### **OUR POSITION**

In the opinion of the industry, the actions already undertaken - including the provisions adopted in the Act of 26 July 2013 Amending the VAT Act and Certain Other Acts - are insufficient to significantly reduce crime in the fuels market. After a short period of observing the enforcement of new solutions by the agencies of the Ministry of Finance, the firms which operate in breach of the law then increased their activities. The minimum deposit of PLN 200,000 has failed to deter criminals who engage in illicit trading in fuels as it generates huge profits. So, there is a real danger that by being entered in the register, companies which defraud VAT will come to be seen by potential customers as reliable partners,

POPIHR [Joseph Prozemyslu | Handu Nationwayo

safe in terms of joint and several liability.

We welcome the signing of the agreement on 30 January 2014 by the Minister of Internal Affairs, the Minister of Finance and the Prosecutor General on cooperation in combating commercial crime. We hope that the increased cooperation of tax offices, police, prosecutors and courts will contribute to a more effective combating of the spreading wave of tax scams. We are, though, of the opinion that without the introducing the amendments to the law as proposed by the industry, it will not be possible to achieve a reduction of fuel trading crime.

In particular, we repeat the proposal to amend the Energy Law and to create a special register of firms engaged in fuels trading, and introducing a provision that trading in fuels trade is only possible between parties, which have been registered and the purchase or sale of wholesale fuel to a firm which is not registered would be regarded as a crime and appropriately penalised. Registration would only be possible if an entrepreneur fulfilled formal requirements, such as no tax arrears. Another condition should require financial guarantees or payment of a sufficient, mandatory deposit (we suggest a minimum of PLN 5 million) for securing debts towards the state, which may arise as a result of breaches of the provisions on compulsory reserves, implementation of the National Indicative Target, and above all, from tax arrears.

We also request amending the solutions adopted in the Act of 26 July 2013 Amending the VAT Act and Certain Other Acts, with the following provisions:

1. extending the obligation of monthly VAT returns to entrants to the fuel sales market

2. abandonment of the optional deposit to be replaced by a mandatory deposit

3. reduction of the value to PLN 10,000, from which it would be possible to apply joint and several liability

4. reduction to PLN 10,000 of the value of supplies, as the limit for mandatory monthly VAT returns 5. raising the minimum amount of the guarantee deposit to PLN 5 million 6. amendment of the provision on the register of operators that had lodged deposits, in such a way so as to also leave firms visible that had been deleted from it by the tax office due to paying in too low a deposit or due to arisen tax arrears - together with the reasons for the deletion.

### 2. COMPULSORY RESERVES

Work is finishing on implementing into Polish law the Council Directive 2009/119/EC of 14 September 2009 on the system of mandatory reserves. The industry has for years been moving for the speediest and fullest implementation of changes in the system of compulsory reserves. The current legal situation compelling oil companies to physically hold stocks of liquid fuels, or their equivalent in crude oil, at a consumption level of 76 days, has a negative impact on their finances and, therefore, the retail prices of fuels. The system also encourages the growth of the shadow economy and threatens Poland's energy security.

### **OUR POSITION**

We look forward to an early adoption of the amendment to the act and of the favourable provisions in the executive regulations, drawn up by the Ministry of the Economy. The proposed amendments to the act go in the right direction, but the date of entry into force of certain provisions of the Act has been postponed to 2015. This may result in an increase in the planned reserves fee, which may affect the economics of the entire exercise, the businesses in the sector and the level of fuel prices on the market. POPiHN stresses the need to make the reserves fee collection system watertight (replacing the obligation to maintain material reserves, which will be paid by producers and importers of fuels). The proposed system for collecting the fee (similar to levying VAT) may turn out to be insecure and cause some firms that operate unlawfully to evade it. For this reason, POPiHN proposes the introduction of regulations to make the system of concessions watertight (proposal presented in the above section on the gray economy) and regulations relating to the operation of the register of the Material Reserves Agency, enabling prior identification and verification of firms importing fuel into the country. The sector also expects that work will start on

a comprehensive change to the system of mandatory reserves, including through the introduction of a single (at the national and business level) method of calculating mandatory reserves as part of a comprehensive regulation of the fuel market in Poland. POPiHN also proposes that steps are taken to conclude bilateral agreements with neighbouring countries, enabling mutual maintaining of compulsory stocks abroad (foreign firms in Poland, Polish firms abroad). In the absence of bilateral agreements, the currently-binding provisions of the act are a dead letter.

### 3. AMENDMENT OF THE EXECUTIVE REGULATION OF THE MINISTRY OF INFRASTRUCTURE AND DEVELOPMENT REGARDING EQUIPMENT FOR FILLING AND EMPTYING

The regulation of the Minister of Transport of 20 September 2006 on the technical system verification requirements which should be met by equipment for filling and emptying transportation tanks, has introduced obligations which are difficult or impossible for the sector to meet. As a result of demands from the industry, the government has begun work on an amendment of the regulation. As a result of public consultations with the involvement of POPiHN representatives, it was possible to propose solutions that, on the one hand met the expectations of the Ministry and the technical supervision authorities, while on the other hand could be fulfilled by the sector. The appropriate draft was forwarded in late 2013 for interdepartmental consultations.

### **OUR POSITION**

We are hoping for an as early as possible conclusion of inter-ministerial consultations and the signing of the regulation at such a time that it could come into force before the end of the transitional period, namely 30 June 2014. If this scenario comes about, this will be the crowning moment of a process of genuine dialogue between representatives of the administration and industry.

### 4. TAX REGULATIONS

For many years now, tax regulations have constituted one of the main problems of the industry. This particularly applies to technical rules for excise duty. Another problem is the large share of tax in the price of fuel, already exceeding the minimum level set by EU rules. In 2013, the level of excise duty on petrol and diesel was above the EU minimum defined on the basis of the euro exchange rate on 1 October 2012. The reduction in state revenue in this respect could be offset by more effective combating of the shadow economy and boosting the demand for fuels. If excise duty was set at the EU minimum level, it would allow for a reduction in the retail price of petrol by PLN 0.24/litre, and diesel by PLN 0.12/litre.

The Third Deregulation Act, prepared by the Ministry of the Economy, is scheduled for adoption in 2014, and it includes provisions on taxes. The Ministry of Finance is also planning a separate deregulation bill on technical regulations for excise tax.

### **OUR POSITION**

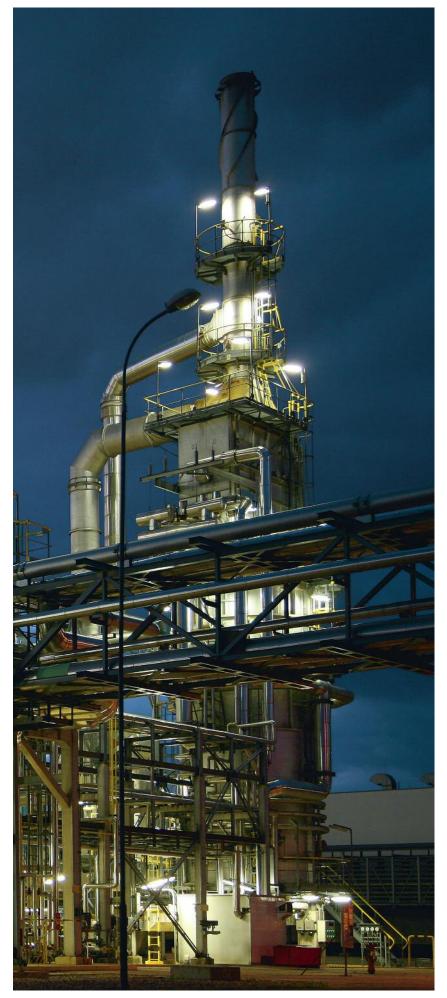
Our hope is that the greatest possible number of proposals from the sector will be taken into account in the legislative work on the draft deregulation acts. We look forward to the sector's constructive dialogue with the administration, so that it will be possible to find solutions which are acceptable to both sides, without decreasing tax revenues.

### 5. OILS AND LUBRICANTS: INTRODUCTION OF A UNIFORM "ZERO" RATE OF EXCISE TAX IN POLAND AND THROUGHOUT THE EU

For years, the industry has been pointing out that keeping excise tax on lubricating oils reduces the competitiveness of the sector, while encouraging the development of the shadow economy, which has grown into a major problem for the industry. Excise tax interferes with the equal playing field for firms which trade in lubricants, increasing operating costs for legitimate businesses, which leads to their lower competitiveness and higher prices of products. Moreover, if excise tax and all its related additional costs are not present in other EU countries, then its application in Poland is a form of additional and unwarranted restriction on businesses operating in the country, and on end-users of these products.

### **OUR POSITION**

The harmonisation of excise duty on all types of lubricating and base oils in Poland would significantly facilitate trading in these products, reducing entry barriers for new entrants and



lowering the financial burden on member companies.

However, the introduction of a "zero" rate throughout the EU would lead to a further significant reduction of the gray market in lubricating oils and fuels not only in Poland but also in neighbouring countries. Therefore, the key demand of the industry remains the introduction of uniform rules of taxation across the EU. It should be noted that a similar proposal has been officially submitted by the Union of the **European Lubricants Industry (UEIL)** which brings together the sector's organisations and companies from across 21 European countries and is the principal representative of the lubricants industry in Brussels. Both in Poland and across the EU, the introduction of a single "zero" rate would be an optimal solution combining the objective of combating the shadow economy with minimum interference in the market and a minimal burdening of market players with the costs of fighting this.

### 6. RENEWABLE FUELS

Following many years of preparation, draft acts that implement Directives 28/2009/EC and 30/2009/EC, were sent to the Sejm [parliament] to amend the Law on Bio-components and Liquid Biofuels and the Act on Monitoring the Quality of Fuels. The drafts that were forwarded for consultation evoked numerous concerns. The fuels industry pointed to the need to adopt those provisions which enable the most cost-effective implementation of the provisions of the Directive, in particular flexibility in determining the National Indicative Target (NCW) in relation to market conditions, the possibility of transferring NCW surpluses to a subsequent year and of trading them, and finally the possibility of implementing NCW by using modern biofuels, such as HVO (hydrogenated vegetable oil) - including those manufactured using co-hydrogenation technology.

The provisions drawn up by the Ministry of the Economy scarcely meet the industry's expectations, mainly with regards to National Indicative Target settlements, penalties, and promoting new technologies for biofuels production.

### **OUR POSITION**

We hope that during the legislative process in the Sejm and the Senate, it will be possible to adopt at least several of the key demands of the industry. If the industry's position is re-



jected in the current legislative process, we look forward to a parliamentary initiative which would work on developing a new, comprehensive law, which would meet the requirements of the market, the requests of the fuels industry and trends which are clearly beginning to emerge in the European Union. **Biofuels policy – particularly the** imposition of a very high NCW level - translates directly into increases in prices of liquid fuels in Poland. Continued promotion of first generation biofuels - such as B100 - will cause further increases in costs, and hence of retail prices of fuels and foods.

In planning promotional programmes for renewable fuels - including biofuels, the key is to consider the economic impact of adopted solutions and their effect on the final price of fuels, and also to incorporate the latest technologies for the production of biofuels, which have been accepted by vehicle manufacturers, namely, primarily HVO. The level of NCW should be no higher than could be achieved through the sale of standard fuels (currently, E5 and B7). Maintaining a high NCW is not conducive to Polish agriculture, as it is unable to produce rapeseed in amounts sufficient to meet the needs of the Polish food industry and of producers of esters (RME).

### 7. ELECTRONIC PAYMENT INSTRUMENTS

Despite a noticeable reduction in the level of interchange fee in the past dozen or so months, Poland remains a country in which merchants who accept payment and debit cards incur huge costs associated with receiving payments in this form. The effects of this are high costs of doing business and higher prices for customers. In this situation, many traders refuse to accept payment cards, which limits the development of cashless transactions, that are so important for the development of the Polish economy, especially in the perspective of Polish accession to the euro zone. As a result of many years of efforts of merchants, and also because of the failure to reach a compromise under the auspices of the National Bank of Poland, in 2013 on the initiative of the Senate, an amendment was passed to the law on payment services, setting from 1 January 2014 a maximum level of interchange fee of 0.5%. At the same time, the European Commission

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took up an initiative to regulate the level across the entire European Union at 0.2-0.3%.

### **OUR POSITION**

We hope that all businesses that are subject to the interchange fee level regulations passed by the Sejm will fulfil their obligations pursuant to the intentions of the authors of the senate's draft. In particular, we expect that there will be no increases in other fees paid by merchants, and that the mandatory reduction of interchange fees will result in a real reduction in all card acceptance costs. We also hope that the EU regulations will be adopted in a form that will meet the needs of merchants and consumers throughout the European Union.

### 8. PROFITABILITY OF THE SECTOR

Average annual margins in fuels trading are still at a relatively low level (in 2013, average margins for 95 octane petrol and diesel were PLN 0.15/litre: 2% of the diesel retail price and 3% of the 95 octane petrol retail price). In the long term, this state of affairs threatens the stability of the fuels market in Poland, and also promotes the shadow economy in the fuels trading, hindering the activity of entrepreneurs that operate within the law. In a situation of high prices and low margins many petrol stations can only continue to operate primarily through the sale of non-fuel products and services. The high price of fuel is heavily affected by taxes and similar burdens; on average, in 2013 they accounted for 49% of the price of 95 octane petrol, 45% of the price of diesel and 38% of autogas.

### **OUR POSITION**

We expect that market prices of fuels will be shaped solely by economic factors and that the adopted regulations will not cause further unjustified price increases. The law should be so constructed as to ensure a minimal profitability of trading in fuels, which may give grounds for entrepreneurs to continue in this business.

We oppose all actions that could lead to limiting the range of services provided and goods sold at petrol stations, for example, by prohibiting the sale of alcohol or tobacco, or essential medicines. One cannot objectively connect the fact of the sale of alcohol at petrol stations in Poland with cases of drinking and driving, without having reliable data on consumer behaviour in this regard. Market research conducted in 2013 showed that only just over 3% of spirits are purchased by customers at petrol stations (with a downward trend compared to 2012). In the case of beer, it is less than 4%, also less than in the comparable period of 2012. Moreover, the best enforcement of rules prohibiting the sale of alcohol to intoxicated persons and minors occurs precisely at petrol stations, due to their existing systems of monitoring. The experience of those countries, which have introduced total or partial bans on the sale of alcohol at petrol stations (Netherlands and Belgium), shows that there is no relationship between the availability of alcohol at petrol stations and numbers of drunk drivers. We are also convinced that the provisions on trading in alcohol should be the same for all distribution channels.

The only tangible outcome of introducing the proposed restrictions would be a further deterioration of the already difficult situation of the oil industry. The sale of goods other than fuels, including those subject to excise tax, enables petrol stations to exist in the current quantity and market format. A prohibition on the sale of alcohol would result in increased costs of running them and would lead to higher fuel prices.

### 9. LEGAL REGULATIONS, THE ADMINISTRATION'S DIALOGUE WITH SECTOR REPRESENTATIVES

Further amendments to the Energy Law and other laws have led to a situation where the whole system covering production, logistics, storage and marketing of fuels has become disjointed and no department comprehensively supervises the fuels market. Regulations prepared by individual ministries are often not coordinated with each other, which makes it more difficult for firms to operate in the industry, increasing the associated costs. Despite the significant improvement in the intensity of dialogue between the government and the industry, substantiated requests raised by the fuels industry are often not being taken account of in the legislative process. The result of this is that measures are adopted which generate huge costs and fail to take into account the economic situation across the EU, especially the difficult position of the refining sector. This leads to further increases in fuels prices

and a deterioration of the position of businesses, which operate within the law.

### **OUR POSITION**

As an objective, the industry is proposing the drafting of an oil industry law modelled on the Energy Law, which would contain all the acts relating to the oil industry, including the issues of the registry of firms producing and marketing fuels, fuels quality, biofuels, compulsory reserves, technical requirements and others.

We are again proposing to organise, under the auspices of the prime minister of Poland, an interdepartmental roundtable with representatives of the Sejm, government, industry representatives and experts. This would enable a clear definition of mutual expectations and requirements and, consequently, a better drafting of laws and an improvement in the competitiveness of the Polish economy. We look forward to the continuation of the debate launched by the Ministry of Economy as part of the round table conference, organised in 2012.

# 10. EUROPEAN UNION REGULATIONS

There is a debate in progress in the decision--making bodies of the European Union over the long-term shape of climate and transport policy. Any solutions adopted will have a direct impact on the future of the refining industry in Europe. They should take into account the fact that in the medium term, oil will remain the main energy source used in transport. Ill thought-out regulations which fail to take into account the interests of not only the refining industry, but also related sectors of the economy could lead to the collapse of the sector and the relocation of production outside the European Union. This would have tragic consequences for the whole European economy and its energy security.

### **OUR POSITION**

We look forward to further dialogue between the government and representatives of the sector and for our views to be taken into account in positions presented by Poland's representatives in the forum of the European Union. It is essential for Poland to be sufficiently active during the regular meetings of the "Refining Roundtable", which commenced work in May 2012 within the framework of the European Commission.



# PROCESSING OF CRUDE OIL

by Polish refineries in 2013 was just over 24.3m tonnes, which was 4% less than in 2012 (fig. 1). Thereby, last year about 1m tonnes less of crude oil was processed than in the previous year. This result was largely caused by a planned 30-day standstill to refurbish processing plant at LOTOS Group.

At its Polish refineries PKN ORLEN processed 15.6m tonnes of crude (0.5% more than in 2012), and LOTOS Group 8.7m tonnes (10% less than in 2012). The clear reduction of processing at the Gdansk refinery was due to shutdowns associated with a period of refurbishment, although it must be noted that in the fourth quarter of 2013, the refinery made up for that situation, which after three quarters of 2013 was lower by 13% than that in the previous year. The Polish part of PKN ORLEN, despite strong pressure from the demand side of the fuels market to reduce processing, was able to maintain last year's level of production, even slightly exceeding it.

The east remained the dominant direction for oil supplies to Polish refineries of both oil concerns accounting for 93% of total supply. As in previous years, REBCO crude remained the main type of oil used in Polish refineries. Pricing and technological considerations of Polish plants favour this type of crude and will continue to do so. Supplementary crude was bought from the UK and Norway; however, the volumes of these supplies were not very large. LOTOS Group processed Baltic crude at its plants which it had also extracted.

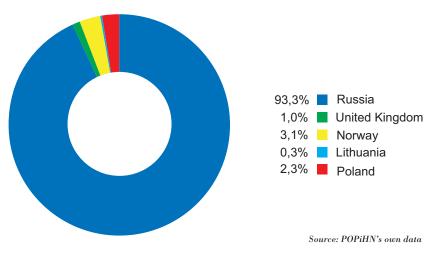
Figure 2 shows the structure of supplies of crude oil to domestic refineries. It shows a clear dominance of REBCO crude in the total of supplies to Polish refineries. About 23m tonnes of this crude type were bought that year. Just over 85% of REBCO crude supplies were made using the pipelines of Przedsiębiorstwo Eksploatacji Rurociągów Naftowych PERN SA. Around 4.5m tonnes of crude were brought in via the port facilities of Naftoport on the Baltic coast.

The volume of crude oil supplies from domestic fields constituted slightly more than 2% of supplies to refineries and accounted for only about 9 days of refinery processing.

#### ■ Fig. 1 PROCESSING OF CRUDE OIL – DATA FOR 2012 AND 2013 millions of tonnes

Year	2012	2013	Reference 2012=100
OVERALL	25,2	24,3	96
			Source: POPiHN's own data

### ■ Fig. 2 SHARE OF CRUDE OIL SUPPLIES TO DOMESTIC REFINERIES IN 2013 [%]



# PRODUCTION OF LIQUID FUELS

(Fig. 3) of petrol (P), diesel (D), JET aviation fuel, light fuel oil (LFO) and heavy fuel oil (HFO) and liquefied petroleum gas (LPG) totalled 24.3m m<sup>3</sup> in 2013. Therefore, compared to 2012, it decreased by 1%.

### Fig. 3 COMPARISON OF LIQUID FUELS PRODUCTION IN 2013 AND 2012

Description	2012	2013	Reference 2012=100
Petrol	5 357	5 419	101
Diesel	13 040	13 110	101
LPG	654	627	96
JET fuel	1 156	1 079	93
Light fuel oil	1 299	957	74
Heavy fuel oil	3 111	3 151	101
OVERALL	24 617	24 343	99

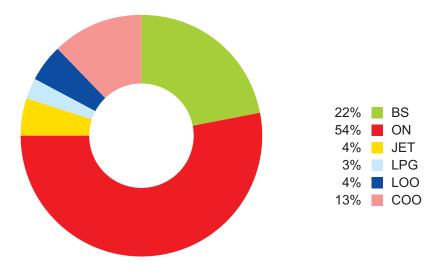
Source: POPiHN's own data

An increase of 1% was recorded in both main fuel types: petrol and diesel. There was also a 1% increase in production of heavy fuel oil. However, there was a significant decrease in production of heavy fuel oil and to lesser degree of LPG and JET fuel. It was possible to increase production of the main types of fuels despite lower processing of crude, which demonstrates refineries' good fuel yields. The reduced demand for asphalt led to ■ Fig. 4 BREAKDOWN OF LIQUID FUELS PRODUCTION IN 2013 [%]

increased production of heavy fuel oil. The country continued to experience shrinking demand for light fuel oil, and this trend was followed by output. The annually decreasing market for petrol and the strong effect of the shadow economy on the diesel market forced an increase in fuel shipments abroad. Although it was possible to maintain the level of production from the previous year, the domestic market received less fuel than in the year before, because official fuel imports also declined. Virtually the entire pool of engine petrol and diesel fuel intended for the domestic market was blended with biocomponents, because this was forced by the need to achieve the National Indicative Target of 6.65%, with respect to the calorific value of fuels. In Poland, fuel blending is also included in production, although it should be noted that in 2013 it was at a similar level to the previous year, which was possible due to the introduction of reduction ratios provided for using biocomponents of Polish and European Union origin.

Production of diesel - a fuel that dominates in the production of fuels in Poland and for which substantial funds have been invested in recent years to increase output - increased by 70,000 m<sup>3</sup> (by 1%). This is a return to the trend before 2012, which saw a strong increase in the production of this fuel type, which was stimulated by the economy and by the extensive dieselisation of transport fleets. The increase in the production of engine petrol is estimated to be similar to that for diesel, at 1%. Previously, reductions had to be made in production due to declines in demand. There was also decreased production of LPG for clients of refineries, but this market showed an upward trend and had to be satisfied from imports. The increased production of diesel had the consequence of limiting light and JET fuel production, for which domestic demand was partly met from imports. 2013 was the first year in which JET fuel imports appeared on the domestic market, and this was due to the entry onto this market of new aviation fuel firms, which were supplied from their own foreign refineries.

Overall production in 2013 was lower than in 2012. All six types of fuel saw a decrease in total production of 274,000 m<sup>3</sup>. Fuels which were produced in greater quantities than in the previous year experienced an overall increase of 172,000 m<sup>3</sup>, and those which saw lower production, a decrease of 446,000 m<sup>3</sup>. Since the fuels which were produced in



Source: POPiHN's own data

greater quantities constitute the main production of refineries, the overall decline in fuels production was only 1%.

The structure of fuels production in 2013 is shown in fig. 4.

For years, diesel continues to dominate domestic refineries' output. In 2013, this position strengthened further. There was also an increase in heavy fuel oil at the expense of JET fuel and light fuel oil. As has been the case for several years now, petrol maintained its 22% share in the pool of fuels produced.

The production of liquid fuels also includes the blending of biocomponents with traditional fuels. In 2013, the National Indicative Target (NCW) and therefore the minimal level of biofuels introduced into trade which firms that market fuels are obliged to meet was set at 7.1% of calorific value and that led to a need to add alcohol and esters to each sold litre of petrol and diesel. In addition, it was also necessary to sell a sufficient amount of B100 fuel because simply adding fuel biocomponents to standard fuels was not enough to fulfil the NCW. To an extent, some benefit was gained from taking advantage of introduced reduction factors at the level of 0.85 of NCW, which was dependent on using biocomponents originating from EU and EFTA countries. It should be noted that in 2013 NCW limits were frozen at 2013 levels until 2017. This is good news for all who have to implement NCW. Unfortunately, there were no amendments to the Act on Biocomponents and Biofuels, which would allow higher pro-

portions of biocomponents to be used in the standard fuels and would admit the use of the new generation of biocomponents affecting fuel production economics and lifespans of vehicle engines. Initial market indications show that, at a cost to their own profits, as in previous years, POPiHN member firms managed to achieve the NCW imposed on them. According to preliminary data, about 300,000 m<sup>3</sup> of ethanol and about 770,000 m3 of esters were added to fuels. It is estimated that about 188,000 m<sup>3</sup> of B100 fuel were sold (final figures will be known by the end of March 2014). This means that sales of B100 fuel, compared to 2012, rose by about 63,000 m<sup>3</sup>, although it should be noted that there was a significant decrease in direct sales of this fuel at petrol stations. It is not popular with drivers of private passenger vehicles and must therefore be strongly subsidised. Fortunately, it was possible to add B100 fuel to the list of fuels that have their excise duty reimbursed when purchased by farmers and this greatly helped to offset the declines in retail sales.



## IMPORT OF LIQUID FUELS (sum of actual imports and intra-Community supplies)

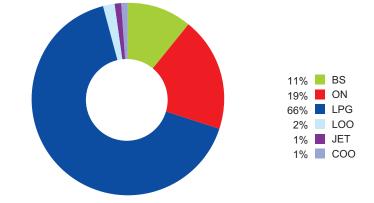
(figs 7 and 8), in 2013, according to initial estimates, were nearly 5.5 million m<sup>3</sup>. This was 6% lower than in 2012. There was again a reduction of official foreign purchases of diesel, which should be associated with an increase in sales on the grey market. The decline of official imports by 30% for a consecutive year, with a simultaneous growth in exports of the product from Polish refineries, clearly demonstrates continuing disruption on the market. This is confirmed, moreover, by frequent inspections of supervisory bodies which uncover further companies selling diesel without paying the applicable taxes or fulfilling the obligations required of producers and importers of fuels.

### ■ Fig. 5 BREAKDOWN OF LIQUID FUELS IMPORTS IN 2013 [%]

The volume of petrol imported to Poland did not change, but the decline in domestic demand for petrol and the increase in domestic production compelled greater export efforts. There was an increase in LPG imports. The increase in domestic demand had to be met by LPG imports, particularly as domestic production of this fuel fell, instead of rising. A separate problem in the statistical data is the re-export of this fuel type. The question arises, how much of this re-export actually goes abroad and how much remains in the country, while the shadow economy merely shuffles around documents. The problem is further described in the section on fuel exports. There was a significant decrease in foreign supplies of light fuel oil, which should be associated with a systematically decreasing demand for this fuel.

Compared to 2012, officially recorded imports of liquid fuels declined by 340,000 m<sup>3</sup> and although this was much less than the drop seen in 2012 of over 2.3 million m<sup>3</sup>, nevertheless the trend was maintained and unless a brake is put on the growth of the grey market, it will continue.

Increased production capacity at LOTOS Group and PKN ORLEN may undoubtedly contribute to a reduction in imports, particularly in an economic slowdown. However, export performance, which showed more and more shipments of fuels abroad, forced by the decrease in official domestic consumption, simply indicates the growing influence of the shadow economy on the diesel market. The LPG market and, periodically, that of engine petrol, are more frequently also being mentioned as endangered areas. The further reduction in fuel supplies from abroad changed the structure of fuel imports. Imports of LPG gained greatly in significance (increase in share of 8 percentage points) while diesel lost out (decline in share of 6 percentage points). There was also a 2 percentage point decrease in light fuel oil, while instead petrol gained, although it was an increase of only 1 percentage point.



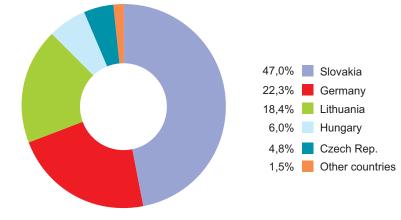
Source: POPiHN's own assessment

### ■ Fig. 6 COMPARISON OF IMPORTS AND INTRA-EU SUPPLIES OF ABOVE LIQUID FUELS IN 2013 AND 2012

Description	2012 '000 m <sup>3</sup>	2013 '000 m <sup>3</sup>	Reference 2012=100	
Petrol	596	597	100	
Diesel	1 489	1 027	69	
LPG	3 407	3 677	108	
Light fuel oil 217		89	41	
JET fuel	37	68	184	
Heavy fuel oil	130	77	59	
Liquid fuels overall	5 876	5 535	94	

Source: Ministry of Finance and POPiHN's own data

### ■ Fig. 7 SOURCES OF ENGINE PETROL IMPORTS [%]



Source: Ministry of Finance and POPiHN's own data

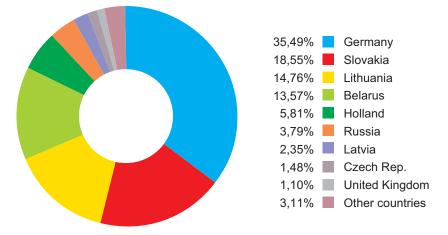
Official data on reductions of imports shows that it was mainly firms which were POPiHN members that were responsible for bringing in less fuel onto the Polish market. The overall decline in the total of liquid fuel imports in 2013 for POPiHN members was about 30%. Data on other Polish fuel market operators showed that their import supplies increased by around 12%. For independent

### ■ Fig. 8 SOURCES OF DIESEL IMPORTS [%]

operators, a key element was import of LPG which cover nearly 90% of domestic demand and which significantly increases the data for independent imports. Independent firms also quadrupled imports of engine petrol although in volume terms these were not large amounts. In the group of 4 most important liquid fuels, companies brought in about 1.7m m<sup>3</sup> and this was around 700,000 m<sup>3</sup> less fuels than in the previous year. Independent operators increased their purchases abroad by about 390,000 m<sup>3</sup> and brought into Poland nearly 3.7m m<sup>3</sup> and this was around 700,000 m³ less fuels of the group. These numbers clearly show, who is most affected by the shadow economy in the liquid fuels market.

Most engine petrol was brought into Poland from Slovakia. Other sources were, traditionally, Germany, Hungary and the Czech Republic. Much petrol was bought from Lithuania. Trace amounts were imported from other countries.

Official imports of diesel showed a larger variety of source countries, although most of this fuel was traditionally



Source: Ministry of Finance and POPiHN's own data

imported from Germany, Slovakia, Lithuania and Belarus. About 18% of all imported fuel came from beyond Poland's eastern border, from countries outside the EU. This is about 7 percentage points less than in 2012. If EU Member States are included, the east provided in total about 35% of all diesel imports, which meant that this was about 10 percentage points less than in the year before. The east is pointed out as the main source of supplies to the grey economy, but, from observations, fuel also reaches it from the west through a wide network of brokers.



### EXPORTS OF LIQUID FUELS (sum of actual exports and intra-Community supplies)

(figs 9 and 10) in 2013 reached almost 5m m<sup>3</sup> and were 17% higher than in 2012. Therefore, about 700,000 m<sup>3</sup>

more liquid fuels went abroad than in the previous year.

■ Fig. 9 STRUCTURE OF EXPORTS AND INTRA-EU SUPPLIES IN 2012 AND 2013. [in '000 m<sup>3</sup>]

Description	ROK 2012	ROK 2013	Wskaźnik 2012=100
Petrol	909	1 180	130
Diesel	407	698	171
JET aviation fuel	546	466	85
LPG*	51	88	173
Heavy fuel oil	2 359	2 550	108
OVERALL	4 272	4 982	117

\*direct exports without re-exporting Source: POPiHN's own data

Increased production of the main fuel types in domestic refineries concomitant with a decrease in domestic demand for these fuels compelled a search for markets outside Poland. The growing grey market, mainly in diesel, contributed significantly to the need for this quest. Mainly, because the shadow economy was also found to be active on the engine petrol and LPG markets, but its involvement in these fuels markets was smaller. The largest percentage increase in exports was for diesel, twice as much of which left the country than in the preceding year. In volume terms, the largest growth was in diesel (+ 290,000 m<sup>3</sup>) and it was an increase which was comparable with the preceding year. The increase in foreign shipments of engine petrols was not much less at  $(+271,000 \text{ m}^3)$ , which was 60,000 m<sup>3</sup> more than in 2012. Heavy fuel oil still remains a key Polish export fuel. A new development was the decrease in foreign sales of JET

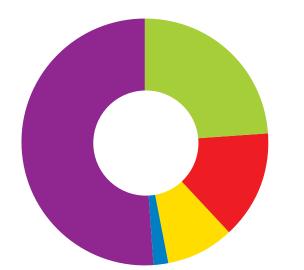
aviation fuel, which has been till now Poland's second main export. This was the outcome of growing domestic demand and the smaller output of domestic refineries. Heavy fuel oil's share in total exports of liquid fuels decreased, once again; this time by 4 percentage points, and was 51%.

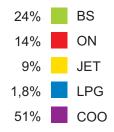
The exports of JET fuel given here were deliveries directly from domestic producers. However, most of the output of this fuel is to domestic intermediary companies which deliver to airports and refuel aircraft of international airlines. The volume of these deliveries, in 2013, was 642,000 m<sup>3</sup>, thus 58,000 m<sup>3</sup> more than in the previous year.

A new development which has been developing strongly since 2012 is the re-export of LPG. From the pool of product officially imported into Poland, about 10% was notified as having then been sent further across the Polish border. Observations show that, as in the diesel market, the grey economy is making greater inroads into the market for this kind of fuel. The question arises then how much of what was reported in official fuel shipments actually went abroad, and how much remained only on paper. The rate of growth of these activities and the supposed destinations of this product, raise doubts as to the genuineness of sales.

The main destinations of exports and intra-Community supplies for petrol were Ukraine (38%), the Netherlands (26%), Sweden (22%) and United Kingdom (14%). Diesel was delivered mainly to the United Kingdom (19%), Germany (19%) and the Netherlands (18%). Heavy fuel oil was supplied chiefly to the Netherlands (34%) and outside the EU (38%). Direct foreign deliveries of JET fuel from domestic refineries were mainly to Sweden (43%) and Czech Republic (17%).

### ■ Fig. 10 BREAKDOWN OF LIQUID FUELS EXPORTS IN 2013 [%]





Source: POPiHN's own data



# DOMESTIC CONSUMPTION of liquid fuels in 2013

Table 11 shows a preliminary comparison of domestic consumption of liquid fuels in 2013 compared to that in 2012. Final data, taking into account final calculations by the Ministry of Finance of imports and intra-Community supplies, as well as approved reports of POPiHN member companies, will be available in mid-2014. Therefore, the presented results for 2013 should be treated as because this is a steady European trend, but the decrease in demand for diesel can only be explained by the illegal trade supplying part of the economy. According to POPiHN's estimates, supported by reports of consulting firms, the shadow economy in the diesel market has already exceeded 10% of this market's supplies. Some market analysts suggest that this may be even greater. This problem summarise, the overall market for liquid fuels in Poland showed a decline in official demand for petrol, diesel and light and heavy heating oils. The domestic market for JET aviation fuel saw growth and so did, most probably, the LPG market. Domestic demand for liquid fuels was fully satisfied and there were no recorded instances of market disruption.

### ■ Fig. 11 ESTIMATE OF DOMESTIC LIQUID FUELS CONSUMPTION VOLUMES IN 2013, COMPARED TO 2012

Description			2012		2013	Reference
		'000 m <sup>3</sup>	share of consumption %	'000 m <sup>3</sup>	share of consumption %	2012=100
Petrol	Consumption	5 036	consumption 76	4 926	consumption 76	98
	of which total	596	12	597	12	100
	imports	550	12	557	12	100
Diesel	Consumption	14 293		13 426		94
	of which total	1 489	10	1 027	8	69
	imports				-	
LPG	Consumption	4 045		4 209		104
	of which total	3 407	84	3 677	87	108
	imports					
Total for 3 fuel types	Consumption	23 374		22 561		97
/1	of which total	5 492	23	5 301	23	97
	imports					
JET fuel	Consumption	616		676		110
	of which total	37	6	68	10	184
	imports					
Light fuel oil	Consumption	1 114		998		90
	of which total	217	19	89	9	41
	imports					
Heavy fuel oil	Consumption	711		641		90
	of which total	130	18	77	12	59
	imports					
OVERALL	Consumption	25 815		24 876		96
	of which total	5 876	23	5 535	22	94
	imports					

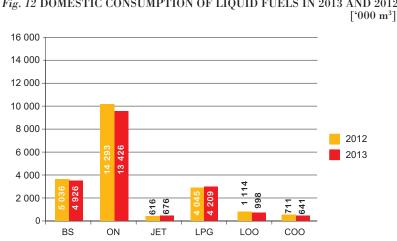
estimates, albeit very close to final figures.

The liquid fuels market in Poland shrank by a further 4% in 2013. The main reason for this trend, which has continued for a second year in a row, was the decline in official demand for diesel. The Polish economy did not show any deterioration that could have caused a decline in demand for diesel, which is the main transport fuel for the economy. Also, fuel prices should not have caused a reduction in fuel consumption because across the year, on average, they were lower than in 2012. It is customary to expect a decline in engine petrol sales is growing despite the introduction of more frequent tax office inspections and despite the amendment of the VAT Act, introducing joint and several liability for trading in liquid fuels. It seems that the only market which effectively resisted the slump was that for LPG, although this also cannot be stated definitively. This is because of the increases in re-exports, which, if included in official market statistics, mean that the market for this fuel type also noted a slight decline in domestic demand. The factor that caused more interest in this fuel was its good price compared to engine petrol. To

Source: Ministry of Finance and POPiHN's own data

The relatively high cost of buying diesel, the prices of which for a significant period exceed the price of EU95 petrol, and the slowing rate of infrastructure investment and the decreasing number transport consignments, encouraged owners of transport firms to search for cheaper fuels. At the same time, the official demand for diesel, registered by firms operating within the law, experienced a decline. This was in contrast with the performance of the Polish economy which showed a small 1.6% growth in GDP. Thus, the scale of the decline in official diesel consumption can only be

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■ Fig. 12 DOMESTIC CONSUMPTION OF LIQUID FUELS IN 2013 AND 2012

Source: POPiHN's own calculation

explained be the increase in supplies from the grey economy. The decline in demand for high compression engine fuels by a further 6% caused a return of the market for this fuel to pre-2009 volumes. The market share of official imports of diesel decreased by a further 2 percentage points and reached a level of 8%. In volume terms, this was about 1m m<sup>3</sup>, when only two years earlier this was more than 3m m<sup>3</sup>. If the additional volume of fuel supplied by the grey market was taken into account, the rate of diesel consumption decline would be smaller by several percentage points.

The level of retail prices and the size of the vehicle fleet are the main factors determining the level of engine petrol purchases, as it is a fuel which is bought mainly by Polish drivers for their private needs. In 2013, the price of EU95 petrol, but also those for high-octane petrols, were lower than in 2012, but even so drivers' purchases were smaller. Have they been travelling less? Probably yes, but the progressive modernisation of Polish roads must be noted as well as the smaller fuel requirements of new petrol engines. All these elements caused the demand for engine petrol in 2013 to be 2% lower than in 2012. What is also important for engine petrol consumption is the difference between the price of this fuel and that of LPG, which is their substitute in spark ignition engines. For the first three quarters of 2013, prices favoured purchases of LPG by drivers who had their cars fitted with autogas equipment. Statistics show that virtually the same amount of engine petrol was exported as imported. It is clear that the market for this fuel type may be self-sufficient. Normal trade in goods meant however, that Polish drivers filled their cars with 0.5m m<sup>3</sup> of fuel from abroad. That was about 12% of the total in this market.

Polish drivers have become accustomed to using LPG in their cars and since September they can refuel them even faster due to the newly-introduced availability of self-service. The favourable price relation to EU95 petrol means that consumption of LPG is not falling. An estimate for the year gives an increase in LPG consumption of about 4%. However, the above-described re-exporting mechanism may help to reduce this level and ultimately LPG consumption may be at the previous year's level, or even slightly less. An important question is how much of this declared re-export actually happened and how much remained in the country and ended up in Polish vehicle tanks via the grey market. According to methodology used by POPiHN, the supply to the market in this fuel type increased by 160,000 m<sup>3</sup>, but within official re-exports about 360,000 m<sup>3</sup> went abroad. Approximately 87% of this market's supplies were imported from abroad which was about 3 percentage points more than in 2012.

The market for light fuel oil has been shrinking for years. In 2013 too, there was a further decline – this time of 10%. This was the first year when demand for this fuel was estimated at below 1m m<sup>3</sup>. Undoubtedly, the high prices of deliveries of this fuel in comparison to other heating fuels, such as natural gas, LPG and coal made a contribution. Most of the demand for this fuel (91%) was met by supplies from domestic production. Official supplementary imports declined by 60%, reaching only 89,000 m<sup>3</sup>.

There is continuing strong growth in domestic demand for JET aviation fuel. In 2013, the increase was much greater at 10%. The main factors in the market's

growth were new businesses supplying fuel at domestic airports and the increase in the number of flights on domestic and international routes. Interestingly, despite the large exports of JET fuel by domestic producers, imports of this fuel are rising and in 2013 they amounted to 10% of the market, while only a year earlier this was 6%.

Heavy fuel oil consumption fell by 10% in relation to 2012 and so did supplementary imports by 6 percentage points, to 12% of the market. This fuel is produced by Polish refineries in quantities far exceeding domestic requirements and therefore production surpluses are sold abroad in large volumes.

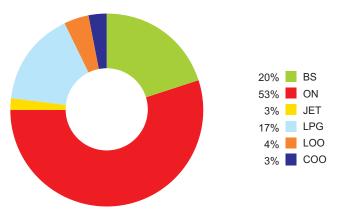
Total domestic consumption of the 6 types of liquid fuels was 24.9m m<sup>3</sup> and was lower by 0.9m m<sup>3</sup> than in 2012. This decline in the market of 4% was also associated with a reduction in official imports of 6%, namely by 340,000 m<sup>3</sup>. Despite this reduction, around 22% of the market is still supplied by foreign fuel. This is 1 percentage point less than in the year before. Total imports of liquid fuels were just over 5.5m m<sup>3</sup>, largely dominated by LPG and diesel.

The breakdown of fuel consumption in Poland is shown in the diagram (Fig.13).

In relation to previous years, there has not been much change in the breakdown of consumption of liquid fuels. But there was a slight increase in the importance of LPG and JET aviation fuel within the total of liquid fuels consumed in Poland. Nevertheless, the consumption of diesel dominates with a share over 50%.

The main sales market for Polish refineries is the domestic one, which is determined by economic, trade and logistics factors. At the same time, normal foreign trade is continuing, although domestic requirements play a role in stimulating foreign exports. Multinationals operating in Poland, as well as private companies, are also bringing their foreign purchases onto the domestic market, but their share of market supply is only supplementary.

In 2013, the dominance of fuel imports, understood in broad terms, over exports was only 553,000 m<sup>3</sup>. Only - because just a year ago it was about 1m m<sup>3</sup> higher, and two years ago about 4m m<sup>3</sup> higher. This change in international trade flows follows, among others, from Polish producers' need to seek new markets, when the shadow economy is expanding on the domestic market, and when there is decreasing demand for ■ Fig. 13 STRUCTURE OF LIQUID FUELS CONSUMPTION IN 2012 [%]



Source: POPiHN's own calculation

#### ■ Fig. 14 BALANCE OF INTERNATIONAL TRADE IN LIQUID FUELS IN 2013 ['000 m<sup>3</sup>]

	Import + Purchases	Export + Supplies	Difference (2-3)	
1	1 2		4	
Petrol	597	1 180	(-583)	
Diesel	1 027	698	329	
LPG	3 677	88 *)	3 589	
JET aviation fuel	68	466 *)	(-398)	
Light fuel oil	89		89	
Heavy fuel oil	77	2 550	(-2 473)	
OVERALL	5 535	4 982	553	

Source: Ministry of Finance, POPiHN \*) – trade of domestic producers

the most popular types of liquid fuels. In 2013, it was possible to maintain domestic production of fuels at the previous year's level, which, in the situation described above, compelled the need for greater exports of fuels. If it will not be possible to recover the domestic market in 2014, there will be a similar situation again, albeit to an even greater extent. This is not conducive to strengthening the economics of Polish refineries which earn less on exported fuels, while the state collects less revenue. This is because the grey economy does not pay its taxes, and taxes are not levied on products exported abroad. Until recently, the international trading balance was, in fact, formed by the imports of diesel and LPG on the one hand, and the exports of heavy fuel oil and JET fuel on the other. In 2013, the fuels which Poland exports more of than it imports were joined by petrol, and the volume of diesel imports fell again against rising exports. Another problem described in the paragraphs above is the re-export of LPG, which slightly changes the overall picture of Polish international trade in fuels, although any possible adjustment in this case is not very large.



Fot. LUKOIL

# RETAIL MARKET

The postponement by one year of the entry into force of new regulations harmonising equipment at petrol stations with existing environmental requirements meant that the oldest, previously unmodernised facilities remained on the market and drivers were still able to refuel at about 6,800 petrol stations. About 44% of petrol stations in the market were still owned by independent operators. Nevertheless, it is noticeable that private operators are looking for ways to survive in the market and to optimise operating costs by joining common sales networks or purchasing groups.

In 2013, PKN ORLEN remained the market leader in petrol stations. Domestic companies operating under the ORLEN, BLISKA, LOTOS and OPTIMA logos increased their share of the overall market of outlets selling fuel to drivers. Currently, domestic oil concerns' petrol stations have almost a 33% share of the forecourt market: an increase of one percentage point over the year before. The position of multinationals operating on the Polish market did not change and, as in 2012, their share in the total market of petrol stations was 21%, and the total number of forecourts owned by this group of operators was 1,422 - 2 less than in the previous year. Some of these operators increased the number of their petrol stations, and some - the best example of which was the former network of NESTE stations, which are now called Shell Self Service - significantly reduced them. The main tool for expanding the station network remained the franchise formula. The number of petrol stations owned hypermarkets increased by several. Thus, their share of the petrol stations market increased to 2.5%, which is not significant, but it must be remembered that these stations sell large quantities of fuel.

The value of the retail market for fuel sales in Poland in 2013 is estimated at around PLN 100bn, while its volume at about 20bn litres of engine fuels (petrol, diesel and autogas). The proceeds to the state from remitted taxes (VAT, excise duty, fuel levy) from retail sales of engine fuels amounted to about PLN 45bn.

2013 saw the completion of the acquisition of NESTE's station network by Shell Polska. The outcome of this deal was the addition of several stations operating previously under the Finnish network's logo to the SHELL network, along with a change of trade dress, and the closure

### ■ Fig. 15 NUMBER OF STATIONS OF RETAIL OPERATORS IN 2011–2013

	2011	2012	2013	
Petrol station network	31.12.2011	31.12.2012	31.12.2013	
Domestic companies	2 1 2 5	2 172	2 217	
Foreign companies	1 392	1 424	1 422	
Independent chains				
(operating under a common brand)	580	620	732	
Other independent				
operators (approx.)	2 520	2 380	2 208	
Shops	154	160	166	
TOTAL (approx.)	6 771	6 756	6 745	

Source: POPiHN's own data

of a dozen or so sites operating under the previous logo. All changes, including the rebranding of NESTE's stations are to be completed by the end of 2014. An important issue in the petrol stations market was the expansion of the OPTIMA network by a further 50 sites and the re-branding of some BLISKA network stations to PKN ORLEN.

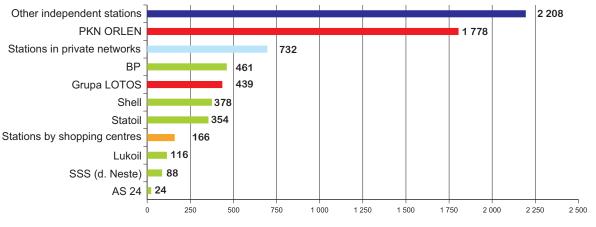
The network of stations on motorways and expressways grew by 10 sites, which was the result of tenders awarded in 2012 and at the beginning of 2013. These modern forecourts, located in Motorist Service Areas, will certainly contribute to a change in the geography of Polish drivers' fuel purchases, while at the same time eliminating some stations from the market, whose commercial viability may greatly reduce due to changing national traffic flows. At the same time - as can be seen in the example of the OPTIMA network - there is expansion of the segment of budget stations which are located mainly in towns or on their outskirts. The example of the NESTE network may suggest that the Polish market is not profitable for self-service stations grouped in large networks, but on the other hand new unmanned stations are being established and - what is interesting - they belong to independent operators (OPN24 and MOMO). It is clear that they are not vexed by the lack of opportunity to generate additional margin on non-fuel transactions and probably hope for a return to a time when margins on sales of fuels will support the sites.

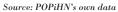
As mentioned above, in 2013, PKN ORLEN remained the leader of the petrol stations market. The network gained, overall, 11 petrol stations, but it must be stressed that this figure is the result of a variety of moves involving building new stations, terminating previous agreements for running stations, and concluding new franchise agreements with other operators. PKN ORLEN decreased the number of forecourts under the BLISKA brand by 130, transferring them to the PKN ORLEN brand. Therefore, there are now 358 stations remaining on the market with the BLISKA green trade dress. The company also launched 4 new motorway petrol stations.

LOTOS Group continued its policy of expansion. Due to this expansion (by 50 sites), and the construction of new premium stations and the optimisation of existing patronage agreements, LOTOS ultimately enlarged its network by 34 sites. This was almost the same figure as in 2012. The company is planning further expansion of its network in the coming years by developing its budget and motorway segments. At the end of 2013, the company had 439 forecourts. It also launched 3 new motorway stations.

There was no significant change to the number of international oil concerns operating in Poland. However, individual companies launched new forecourts, building them from new, or through signing franchising agreements. Although after taking over NESTA, Shell took the number two position on the Polish petrol stations market, but if account is taken of stations under a common brand, then BP is still in the number two position, with 461 forecourts at the end of 2013, which meant that it increased its network by 15 sites, of which 3 were on motorways. The actual second slot holder, Shell, had 378 stations in its own trade dress at the end of the year, and 88 stations still under the NESTE brand. The rebranding and adaptation process will last throughout 2014. Statoil was in the next position on the market with 354 stations. LUKOIL opened one new station and now holds 116. The majority of new acquisitions by oil concerns were of stations gained from independent

### ■ Fig. 16 PETROL STATIONS IN POLAND AT THE END OF 2013





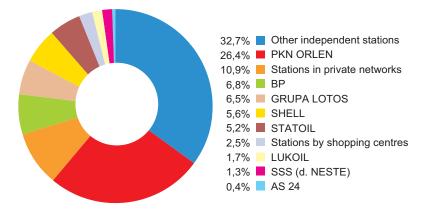
operators who saw an opportunity of remaining in the market through cooperating with large players. The franchising formula is a good solution for both sides.

2013 saw an increase in the number of sites operating under common brands within independent private network groups. POPiHN recognises, as such, chains which have a minimum of 10 stations. The most active of these were Huzar, Anwim with the Moya brand, Slovnaft Partner cooperating with Slovak Slovnaft and the Pieprzyk group. Common fuel purchasing policies, loyalty programmes and, at the same time, a large degree of independence of operation, mean that these associations are becoming viable competitors to networks of domestic and international companies. Within the overall market of petrol stations they constitute the second grouping in terms of the number of organised sites enged in retail selling of fuels.

There was an increase of 6 petrol stations alongside hypermarkets, and currently drivers can refuel at 166 such stations. Most of the new stations, (6) were opened near Intermarche stores, and this store chain with 47 stations is currently the leader of this segment of the petrol station market. Carrefour holds second place with 43 stations. Subsequent positions are held by Tesco, Auchan and E.Leclerc none of which made any changes to the numbers of their stations in comparison to the previous year. Due to the turnover volumes of stations of this type (under the principle of low margin - low price, high turnover of station and store), their role in the total fuel retail market grew again in the past year.

The expansion of the largest market players' forecourt holdings was associated with a decrease in the number of independently operated stations. Takeovers were usually in the form of franchises. It is difficult to assess how many independent forecourts are actually operating in Poland

■ Fig. 17 BREAKDOWN OF THE PETROL STATIONS MARKET AT THE END OF 2013 [%]



Source: POPiHN's own calculation

because this segment of the market is subject to continuous change. However, from available information, at the end of 2013, the Polish market had still approximately 2,200 stations which were operating independently and were grouped into networks of less than 10 sites. The decision of the Ministry of the Economy to extend for another year the current moratorium on adapting petrol stations to new technical requirements meant that sites remained on the market which were not and will not be modernised and which are often used by the shadow economy for trading in fuels. The entry into force of the new provisions at the beginning of 2014 and frequent inspections by appropriate government agencies should cause around 300 to 500 stations to stop operating. This will not perturb the market. At the same time the elimination of these unadapted stations should limit the shadow economy's sphere of influence and contribute to improving the profitability of companies which operate in the market legally, and which carried out the required adaptations by the prescribed deadline.

There was a slight increase in the rate of building new petrol stations on motorways and expressways. In 2013, 10 new motorway forecourts commenced their operations. Further ones are under construction and the good weather at the end of the year will lead to shorter times for completing further construction projects under tenders awarded by the General Directorate for National Roads and Motorways (GDDKiA). Further procurement processes will be announced and the amended approaches contained in them should bring certain simplifications for investors and thereby make the business of selling fuels at motorways more profitable. In 2013, motorists had available a total of 55 petrol stations located on motorways. Most of these sites were held by PKN ORLEN (26 stations) and LOTOS Group (14 stations). In addition, BP had 9 stations and Shell 6. As was mentioned above, a consequence of opening motorway stations will be the closure of stations that are currently operating on the verge of profitability, and due to their locations will become even less attractive after of the network of motorways is completed.

The slowdown in the growth rate of the economy is affecting the incomes of Polish firms and citizens and lowering the demand for engine fuels. In addition, the increasingly dynamically expanding shadow economy is providing difficult trading conditions for firms which operate legally. The low margins achieved on fuel sales do not allow them to even come close to the prices offered by the unfair competition. In this situation, running a business involving the sale of fuel becomes very risky. Without offering additional services and selling non-fuel goods, it becomes almost impossible to operate petrol stations. Postponement by one year of the introduction of new technical requirements for petrol stations has only delayed the judgment day for some, mostly independent, forecourts. This may mean that at the start of 2014, we will see closures of the least commercially viable petrol stations, which are mainly located in rural areas and villages. This process will mainly affect independent operators, although some stations which now belong to oil concerns will also disappear from the market.

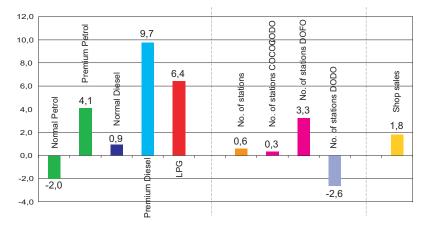
# The market for the retail sale of liquid fuels from the point of view of the petrol station operations of POPiHN member firms

Independent forecourts constitute about 44% of the petrol stations market in Poland, but for most of them it is very difficult to obtain any data on their commercial operations. While it is fairly easy to obtain information on larger purchasing groups or on networks with more than 10 petrol stations, there is practically no information on the activities of other stations and it can only be estimated, which is what is actually being done on this market. Around 54% of petrol stations on the market and about 70% of total domestic fuel sales belong to firms which are members of POPiHN. Reliable data obtained from these companies allow the showing of trends which are occurring in the fuel retail sales market, as well as sales of other products offered at stations. They also determine the types and varieties of most services provided to drivers, such as car washes, hotels and restaurants. One can state with a high degree of probability, that the trends observed for this group of operators reflect, in practice, the state of the entire market. The standards established by oil concerns mark out new directions and are usually copied by other operators.

The below information is based on data from POPiHN member companies' petrol stations, and the pertinent commentary relates to other stations.

The key trends in the retail market for fuels in POPiHN members' station networks are shown in Figure 18. It is immediately noticeable that there has been a marked increase in sales of premium fuels, as well as a significant rise in autogas sales at the expense of standard petrols. A further element characterising POPiHN member firms' station networks is the rise in the number of stations operating as franchises, which is also a continuation of previous years' trend with, at the same time,

### ■ Fig. 18 CHANGES IN RETAIL SALES OF FUELS, IN NUMBERS OF PETROL STATIONS AND IN SALES AT STATION STORES IN 2013 COMPARED TO 2012 [%]



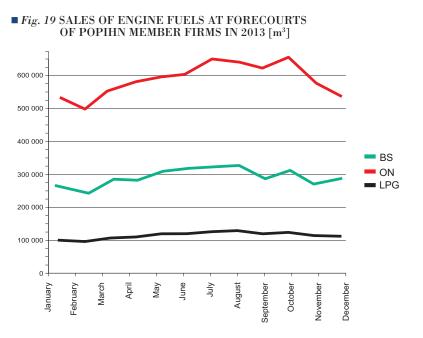
Source: POPiHN's own data

a withdrawal from DODO arrangements (patronage agreements). Gains of new stations under franchise agreements are associated with reductions in the number of stations operating independently. Interestingly, this form of network expansion has also been adopted by the largest independent networks of petrol stations, such as HUZAR and MOYA. Despite earlier fears, there was growth in non-fuel sales in stores located at the petrol stations of the largest market players. However, taking into account Euromonitor International's findings, this research showed that, in general, there was a fall in such sales at petrol stations, so one can conclude that independent stations' results must have been much worse than in the year before.

Premium fuels are sold mainly through forecourts owned by the big oil concerns, although in 2013, one independent network also undertook this form of marketing. Premium fuel sales account for

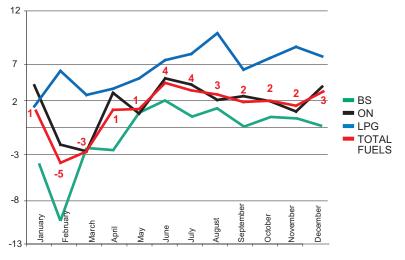
about 10% of total market sales of engine petrol. For diesel, this share is 13%. After a weak year, in 2011, in terms of premium fuel sales, 2012 and then 2013 saw increases in sales of this type of petrol and diesel. This trend has occurred despite the significant price differences between standard and premium fuels, which were of the order of PLN 0.20 to 0.25 per litre of fuel. Drivers appreciated the economic and environmental aspects of buying better quality fuels. The aspect of the higher content of biocomponents in standard fuels, which is important in buying diesel fuel, was also not without significance, and operators' appropriate bonus or price incentives for purchasing premium fuels still further strengthened the upward trend.

The higher sales of premium petrol were accompanied by an opposite trend for standard fuels (EU95 petrol). This is a steady development associated with the presence of better and more energy-efficient car



Source: POPiHN's own data





Source: POPiHN's own data

engines, and also with the popular use of autogas systems for petrol engines. The quoted figures relate to POPiHN member firms stations, so it must be presumed that for independent stations, the declines in standard fuel sales were larger.

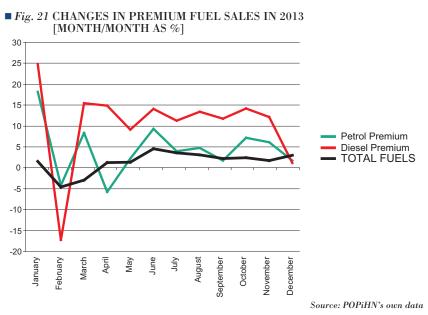
In 2013 the trend continued, noted in previous years, of an increasing number of petrol stations operating as franchises, as well as an accompanying decrease in the number of stations operating under patronage agreements. Franchising is the cheapest means of acquiring new sites to a network and was used both by the oil concerns and by the largest networks of affiliated independent stations. The increase in the number of franchised stations caused a decline in the number of stations operating within the DODO formula, usually meaning patronage agreements. Good sales were recorded last year in stores located at petrol stations of POPiHN member firms. The increase in the value of sales was about 2% and this should be seen as a good result, given that studies of sales in all stores at petrol stations (see information above) showed lower sales than in the year before.

Figure 19 shows the monthly retail sales at forecourts of POPiHN member firms, showing the seasonal nature of fuel sales. The graph also shows the impact of price levels on sales of petrol and LPG. Independent stations showed similar sales curves, although in this case the declines in periods of weaker official sales at oil concerns' stations were greater and the increases were smaller in periods when those stations sold more fuel. Undoubtedly, the shape of the official sales curves was impacted, particularly in the case of diesel, by the activities of the shadow economy, which fed a part of its sales to the market by cooperating with certain independent stations.

In 2013, petrol stations owned by POPiHN member firms recorded a fall in retail sales of engine petrol. This trend was observed at forecourts operating under COCO and CODO arrangements and so mainly within the group of oil concerns' own stations. Stations under DOFO and DODO arrangements noted a small rise in sales which was connected with the increase of stations operating as franchises and the lower prices in force at those stations. Customer retention in a weaker market can only be accomplished through offering good quality fuels at prices, which do not deter clients, and by offering a wide variety of supplementary services. This is an important factor in the market in which for yet another year it was not possible to achieve a sufficient margin on fuel sales enabling fuel stations to be maintained solely from their fuels sales. Petrol and particularly LPG are markets of retail customers, who are careful with their fuel expenditures. As fuel prices in 2013 were fairly stable, it was possible to avoid greater declines in sales. Better results than in the previous year were achieved by diesel sales from pumps at the largest market players. Sales growth was achieved in COCO, CODO and DOFO fuel stations. DODO stations sold less diesel engine fuel than in the year before. Diesel fuel sales are closely related to the state of the economy, which not only did not decline in 2013, but actually clearly picked up in the fourth guarter. The weather at the beginning of the year affected sales at oil concerns' stations, as customers sought reliable winterized fuels. Such products were offered at fuel stations of POPiHN member companies. With diesel, pricing did not play as large a role as for petrol or autogas, but the market was disrupted by the activities of the shadow economy, which for its stratagems used certain independent fuel stations which were struggling with the profitability of operating on a market with low margins. It was these stations which were frequently competing directly with DODO type forecourts, which had to implement pricing policies of the whole sales group; hence their poor results.

Changes in sales in individual months of 2013 at forecourts of POPiHN member firms are shown in the diagram below (Fig. 20).

The graph of changes in fuel sales demonstrates the above described processes affecting oil concerns' fuel



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stations. From the beginning of the second quarter there was already positive sales growth in diesel fuel. For engine petrol, only the holiday period was favourable, which lasted from May to August. Other periods had lower sales than in 2012. Sales of LPG performed well, and this was due both to an increase in customer interest, but also – perhaps primarily – due to more fuel stations of oil concerns offering this type of fuel, an engine petrol substitute.

For the year as a whole, the average growth rate of fuel sales at POPiHN member companies' forecourts was around 1.5%, while diesel sales showed an increase of nearly 2%, petrol a decline of 1.5% and autogas an increase of nearly 6.5%. Analysis of sales growth data of POPiHN member companies and results of total official fuel consumption in the country shows large falls in sales at independent forecourts and particularly in the whole non-forecourt segment (transport depots and firms, construction, railways, local government). This is an area which the grey market supplies with its fuels.

As mentioned above, the past year has been a further one with an increase in sales of premium fuels. Sales of these fuels showed a trend which was completely opposite to the whole fuel market and ended the year with increases, as illustrated by the graph (Fig. 21). The growth of premium petrol sales for the whole year was almost 5%, and for premium diesel it was almost 10%. The causes of this growth have been described above, although it is worth noting that oil concerns' marketing policy in 2012 attracted some drivers and accustomed them to use better quality fuels. These actions had their effects in 2013, while also average prices which were lower than in 2012 encouraged use of fuels that were more beneficial to engines.

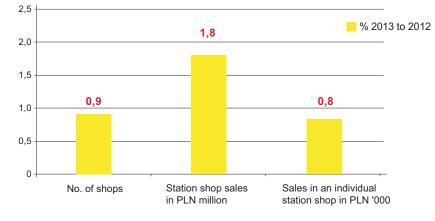
One can expect that with the increase of Poles' incomes and the growing use of biocomponents in fuels, purchases of premium fuels will rise. Modern engines in new vehicles require fuels of the highest quality to maintain the usage parameters of vehicles at the highest level. This is already guaranteed today by premium class fuels and every driver will want to use them, if only occasionally, to improve the state of the engine.

The overall number of stations in POPiHN members' networks increased by 0.6% (Fig. 18) but the number of forecourts operating as franchises rose by a further 3%. There was also growth in oil concerns' own forecourts mainly due to new sites built alongside motorways and expressways. Franchising agreements are the most effective and cheapest way of gaining new stations to a network, so the ever greater popularity of this approach is not surprising. Just as in 2011 and 2012 there was also a decrease in the number of fuel stations operating under patronage agreements (DODO). This was due to the expiry of these contracts and failure to sign new ones. Some of the existing business partners transformed their agreements into franchises, and some ceased to operate under the umbrella of the network and either joined the independent competition, or decided to trade on their own.

Growth was also observed in shops which operate at these stations, although it was not revolutionary. In 2013, the number of stores operating at oil concerns' fuel stations increased and so did these stores' turnovers.

The number of fuel stations in POPiHN members' networks increased by 0.6% (Fig. 18). At the same time, the number of stores actively trading at these stations increased by almost 1%. This was the result of changes in ownership and changes in fuel stations' formulae. With the increase in the number of stores, their sales also grew and rose almost 2% for 2013. This means that each single store saw an increase in the value of sales of 0.8%. These are by no means large quantities, but are satisfactory in the context of the decline in sales in the overall pool of stores at petrol stations in Poland. At the same time, this also means that shops at stations which were not part of oil concerns' networks had sales that were worse than in the previous year, although many of them adjusted the standard of their service to meet the customer expectations of fuel station in networks of the most important domestic and foreign operators. As in previous years, provisions that prohibit trading on selected public holidays in premises not selling essential goods (fuel stations are deemed as selling such) contributed to the increase in turnover at those sites. Also the broadening of product ranges and the expan-

### ■ *Fig.* 22 MARKET OF SHOPS AT FUEL STATIONS OF POPIHN MEMBER FIRMS IN 2013 [%]



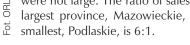
Source: POPiHN's own data

sion of stores' food service attracted new customers, while encouraging regular ones to remain loyal. With low margins on fuel sales, the range on offer and the size of a store's sales play ever increasing roles in maintaining the site.

As shown by the graph (fig. 23), there were very wide variations in sales in shops at fuel stations between individual months. Sales increased mainly during holiday periods and at times of increased travel (e.g. All Saints public holiday). When making comparisons, it is important to refer to the previous year as a base and when considering last year's results, the situation of 2012 should be taken into account. For example, an interesting result is given by the first months of 2013, when Polish roads were in the grip of winter, and December, with a long period when supermarkets were closed. Fuel prices have a significant impact on levels of sales in shops. High fuel prices can discourage customers from visiting a particular fuel station and therefore prevent them from shopping in the store. Therefore operators often sell fuel with minimal or no margin, so as not to raise prices too high and lose customers for their shops. It is the forecourt store which, in the current market conditions, generates a fuel station's profit which is essential to maintain the site and its employees.

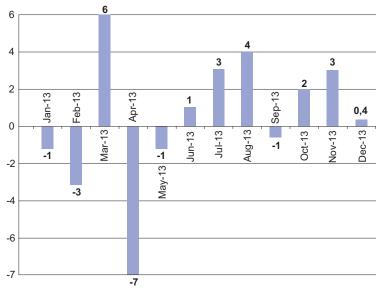
As every year and in 2013 too, the Polish Oil Industry and Trade Organisation monitored changes in the geographical distribution of engine fuel sales in Poland from data submitted by the organisation's member companies. The figures here are not that different from those for 2012. The one significant fact is the 1 percentage point increase in the share of the Malopolska province in the total retail market for fuels. The province with the greatest demand for vehicle fuels is still Mazowieckie (Mazowsze) while the smallest is in the Podlaskie province, where the grey market supplements much of the market. Sales in four provinces still account for almost half of all retails sales of fuel in Poland.

The graph shows total sales of engine fuels, diesel and autogas. Similar shares apply to sales of each of these fuel types separately. POPiHN member firms experienced the greatest decreases in sales of petrols in the Opolskie and Slaskie provinces, while noting increases in Malopolska. The largest players saw an increase in retail sales of diesel in all provinces, apart from Wielkopolska. Autogas sold well, because falls in sales were seen only in 2 provinces and they were not large. The ratio of sales in the largest province, Mazowieckie, to the



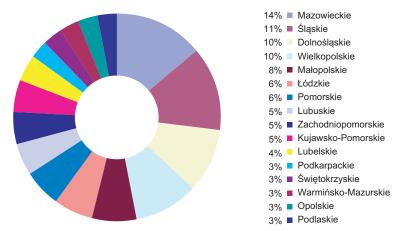
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■ Fig. 23 CHANGE IN VALUE OF SALES IN STORES OF POPIHN MEMBER FIRMS IN INDIVIDUAL MONTHS OF 2013 IN RELATION TO 2012 [%]



Source: POPiHN's own data





Source: POPiHN's own data





# DEMAND FORECASTS for liquid fuels up to 2020

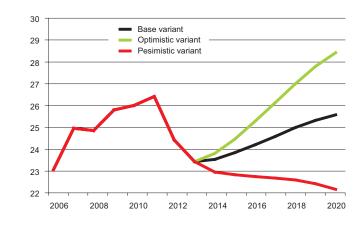
As in previous years, the Polish Oil Industry and Trade Organisation has prepared scenarios for fuel demand, taking into account the latest trends on the liquid fuels market. In 2013, the performance of the market was similar to the pessimistic scenario for fuel consumption drawn up a year earlier. The drop in demand exceeded even the expected fall in fuel consumption. The assumptions used for earlier scenarios did not include such a large impact of the shadow economy's growth, which led to such a major reduction in sales especially to clients in the non-forecourt segment. New scenarios have been developed with the participation of POPiHN's member companies, taking into account current developments in the domestic and international oil markets. Special consideration was given to the influence of the shadow economy, in its current manifestation, and the consequences of its limitation or further development. It has been assumed that a new pool of European Union aid funds will become available for Poland in 2014-2020, and that they will again have impact on infrastructure investment, understood broadly, and on the growth of domestic consumption. Account was also taken of the systematic modernisation and development of the road network, and the lower demand for fuels in modern car engines.

The baseline scenario assumes an annual growth rate of 3-4% of the Polish economy from 2014 and an effective reduction of the shadow economy. The two other variants use values below and above this level with appropriate acknowledgement of the growth or effective elimination of the shadow economy. Other assumptions used in the scenarios remain similar to those adopted in previous reports.

The baseline scenario assumes a stable situation in the international commodities market and +/- 10% fluctuations in crude oil prices. The GDP figure for 2013 and the government's expected GDP figure for 2014 of about 2.5% have been applied. Such an assumption allows the expectation that the fuel market will grow starting from 2014. In accordance with these assumptions, the baseline scenario indicates an increase in demand for diesel and a gentle decline in demand for engine petrols and autogas in the next few years. Demand for light fuel oil will remain in a declining trend. In this variant, the domestic market's

#### ■ *Fig.* 25 SCENARIO FOR LIQUID FUELS DEMAND IN THE YEARS 2013 – 2020

[in million m<sup>3</sup>]



Source: POPiHN's own calculation

demand for liquid fuels in 2020 is estimated at about  $25.5 \text{ m} \text{ m}^3$ .

The optimistic scenario assumes, apart from the stabilisation of the international market, that VAT will remain unchanged or that it may slight reduce in the future and that there will be effective combating of the shadow economy already in 2014. The variant assumes effective use of EU funds, from current and future rounds, for strategic infrastructure and construction projects. It is also assumed that Poles' incomes will rise and that they will become more mobile. The favourable pricing of both diesel and petrols may become an important stimulus for greater use of vehicle fleets. In this variant, the domestic market's demand for liquid fuels in 2020 is estimated at about 28.2 m<sup>3</sup>.

The pessimistic scenario assumes that the economy will take longer to recover from the slowdown and that combating the shadow economy in the fuels market will prove ineffective. A possibility of high crude oil and finished fuels prices has been assumed, which could be the result of tensions in international relations. In addition, account has been taken of a possible introduction of new fiscal and environmental regulations, changing the price relationships between petrol, diesel and autogas. A possible weakening of the zloty's exchange rate may adversely affect the ability to offset the growth in crude and fuel prices. Economic stagnation and rising unemployment will result in a lower demand for fuel from domestic refineries, and it may be replaced by products from the grey market. High prices of petrols will most probably cause higher sales of autogas, which will not please domestic producers, since it must be remembered that it is a product which is almost 90% imported. In this variant, the domestic market demand for liquid fuels in 2020 is estimated at only about 22.2 m<sup>3</sup>.

The new tranche of European money should help to jump start the Polish economy, and therefore generate greater demand for liquid fuels in the coming years. Taking this assumption into account, the factors adopted in constructing the baseline scenario would seem to be the most probable for the Polish market. The biggest unknown is the extent of the shadow economy in the coming years, which will be determined by the effectiveness of methods of dealing with this racket. Transport development and, therefore, the demand for fuel, require particularly large funds for developing infrastructure and such investment projects generate the greatest demand for diesel - sales of which determine the level of fuel consumption in the country. Of course, its consumption's rate of growth will not be as impressive as in past years, but there are still opportunities in key sectors of the Polish economy for the market for this fuel to grow. The European Union's announced excise regulation is an opportunity to stop the downward trend in engine petrols consumption. It may put an end to the growing number of diesel vehicles in individual transport and lead to more sales of vehicles with spark ignition engines. Nevertheless, much will also depend on Poles disposable income in the coming years.

# ENGINE FUEL PRICES

In accordance with POPiHN's expectations last year, in 2013, annual average vehicle fuel prices were lower than in 2012. All three major types of liquid fuels: engine petrol, diesel and autogas were affected by price decreases. Drivers saved PLN 0.26 on every bought litre of EU95 petrol, PLN 0.23 on diesel and PLN 0.09 on LPG. In addition, most of the year, the price of EN96 petrol and diesel remained at similar levels. And most importantly, for the first time, the annual average retail price of diesel was higher than that of EU95 petrol. The range within which prices of both these fuel types moved was PLN 5.29-5.69 per litre. It should also be noted that retail prices at the end of the year were lower than at the beginning and were also the lowest compared to the whole of 2013. It would seem that the reduction in fuel prices would lead to an increase in sales of fuels, especially of engine petrols, but this was not confirmed by the data from the market. While the drop in sales of petrol may be explained by the lower fuel demands of modern car engines and the replacement of petrol by LPG, in the case of diesel the growing grey market in this fuel had a decisive impact on its declining sales. This is all the more evident from the fact that average trading margins achieved in 2013 did not differ substantially from those in 2012, and that means that they were insufficient to operate businesses based only on fuel sales. Sales of non-fuel products and services, continued to be essential for maintaining facilities established for the sale of automotive fuels.

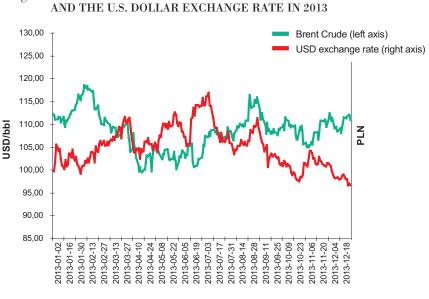
The above described reductions in fuel prices at Polish fuel stations were possible mainly due to lower than in 2012 international market spot prices of crude oil and finished fuels, and the strengthening of the Polish currency against the U.S. dollar, which is the currency for all transactions on the petroleum market. In 2013, spot prices of crude oil reached an annual average level of USD 108.73 per bbl, which was 3% lower than in 2012. The first half of the year saw very dynamic changes in spot prices of crude, when the spread of spot prices was nearly USD 19 per bbl, fluctuating between USD 99.76 and USD 118.86 per bbl. The second half of the year exhibited much smaller fluctuations in spot prices for the raw material required by engine fuel production. Here, the spread of spot prices was just short of USD 12 per bbl, and fluctuated between USD 104.90 and USD 116.60 per bbl. It is safe to say that the oil market in 2013 was much more stable than in the previous year, when the trading spread was nearly USD 38/bbl. As usual, the spot price fluctuations resulted from economic and political turmoil in North Africa and the Middle East. Also, the situation in the U.S. was important, because oil from shale is beginning to play an important role, as well as the economic situation in the developing countries of Asia, such as China and India. Average prices of finished fuels quoted on international commodity markets fell more than those for crude oil, and this meant that this time it was the demand for crude, which is often stoked by purely paper transactions, that was pushing up the crude oil market. A second important element affecting prices of fuels in Poland was the Polish zloty's exchange rate against the U.S. dollar. In 2013, the Polish zloty strengthened on average with respect to the U.S. dollar and thus this strengthening was an additional factor contributing to retail prices decreasing in

■ Fig. 26 SPOT PRICES FOR BRENT CRUDE

This time round drivers made gains, while the state lost out slightly due to lower revenues from taxes on fuels.

The decrease in prices of fuels was a consequence of the decline of import parity, the main components of which are commodity market prices of finished fuels and the Polish zloty's exchange rate to the U.S. dollar, which is also the pricing basis used by Polish producers of liquid fuels. Spot prices for Brent crude which determine prices for the European market, are shown in Figure 26.

The relatively stable spot prices of crude at the beginning of 2013 and the clear downward trend in the U.S. dollar against the Polish zloty were two elements that caused the retail prices of fuels in Poland to be lower than in the year before. From the beginning of the year, there was a conviction on the crude oil market that the global situation should promote stabilisation on the market and all factors connected with threats to the market had already been included in the price per barrel of crude in the previous year. It is estimated that the premium is around USD 15-25 per bbl and unfortunately in 2013 this level was maintained. Lack of stability in the crude



Source: e-petrol.pl, POPiHN

the domestic market. Thanks to lower prices of fuels, there was lower inflation in Poland, which also averted greater growth of the grey market in liquid fuels. oil market in North Africa and the lack of an agreement with Iran on nuclear energy – which led to the introduction of sanctions on oil imports from that country - were still causing uncertainty and, consequently, led to rises in spot prices rather than reductions. The U.S. market is an interesting case because ever increasing amounts of crude oil extracted from shale have given rise to a situation in which the United States may in the near future become an exporter, and not an importer of oil and natural gas. If it became possible to fully remove all legal restrictions prohibiting the export of oil from the U.S., this could contribute to a substantial decline in energy prices around the world. This could lead to a further reduction in the price of crude oil, and thus within a time to price reductions for drivers. This is important news for European economies which are still struggling with low economic growth rates, although these are now better than in the year before. This increases the demand for diesel, prices of which equalled prices of premium petrols from September 2013 and often exceeded them. The placing of growing numbers of diesel vehicles on the market in developing countries and the relatively high price of engine petrol are limiting the demand for this vehicle fuel, while current imports into the U.S. market have significantly reduced, for the reasons described above. This creates additional problems for European and Polish refineries and the need to seek customers for petrol fractions in the petrochemical industry.

Fortunately for Polish motorists, the Polish zloty strengthened in 2013 against the U.S. dollar by 3%, and thus contributed to falls in annual average prices. On average, one USD cost PLN 3.16 compared to PLN 3.26 in 2012. The strengthening of the zloty coupled with a decrease in spot market prices of finished fuels and the lack of any significant increases in taxes applied to fuels in Poland meant that import parity price decreased and therefore prices at domestic refineries fell in the same extent as the decreases on the spot market for fuels. Domestic refinery prices of engine petrols and diesel fell by 3% and 4% respectively.

In 2013, factors affecting domestic wholesale and retail prices (spot prices of crude oil, spot prices of main engine fuels and the dollar exchange rate) were as follows (Fig. 27).

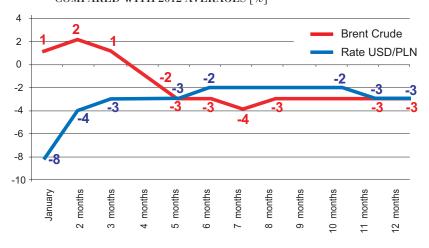
The interdependence in the Polish market of spot prices for crude oil and the USD exchange rate is shown in Fig. 28. In 2013, the compensating effect of the zloty's exchange rate was much less noticeable than in previous years.

### ■ Fig. 27 COMPARISON OF ANNUAL AVERAGE SPOT PRICES FOR CRUDE OIL, LIQUID FUELS AND USD EXCHANGE RATE IN 2012 AND 2013

Description	2012		20	013	Reference 2013 to 2012
	Value	Units	Value	Units	2012=100
1	2	3	4	5	6
Spot prices					
for Brent crude	111,82	USD/bbl	108,73	USD/bbl	97
Spot prices for					
premium petrol 10 ppm S	1 039,2	USD/tonne	993,1	USD/tonne	96
Spot prices for					
diesel 10 ppm S	988,1	USD/tonne	946,4	USD/tonne	96
USD exchange rate	3,2578	PLN	3,1611	PLN	97

Source: Prices from e-petrol.pl for Brent crude FOB Sullom Voe, for fuels CIF NWE ARA

#### ■ Fig. 28 FLUCTUATIONS IN SPOT PRICES OF BRENT CRUDE AND IN THE EXCHANGE RATE OF THE USD IN 2013 COMPARED WITH 2012 AVERAGES [%]



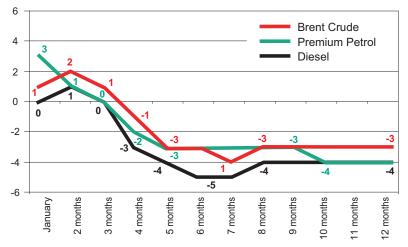
Source: POPiHN and e-petrol.pl

The comparison between trends for crude oil and finished engine fuels is shown in Fig. 29.

The strong downward trend recorded in the first half of the year stabilised from June and remained steady to the end of the year. Of note are the larger declines in spot prices for finished fuels than for crude oil.

Trends from international markets transfer to the Polish market through import parity pricing covering international

### ■ Fig. 29 FLUCTUATIONS IN CRUDE OIL AND FUELS PRICES IN 2013 COMPARED WITH 2012 AVERAGES [%]



Source: POPiHN and e-petrol.pl

### ■ Fig. 30 COMPARISON OF ANNUAL AVERAGE WHOLESALE PRICES OF ENGINE PETROLS AT DOMESTIC FUEL PRODUCERS

Description	2	012	2	013	Reference 2013 to 2012		
	Value	Units	Value	Units	2012=100		
1	2	3	4	5	6		
EU95 Petrol PKN ORLEN							
gross (without VAT)	4 4 5 0	PLN/1000 l	4 301	PLN/1000	97		
Excise	1 565	PLN/1000	1 565	PLN/1000	100		
Fuel duty	99	PLN/1000	103	PLN/1000	104		
PKN ORLEN EU95 Petrol							
Net	2 797	PLN/1000 l	2 634	PLN/1000 I	94		
GRUPA LOTOS EU95 Petrol							
gross (without VAT)	4 451	PLN/1000 I	4 302	PLN/1000 I	97		
GRUPA LOTOS EU95 Petrol							
Net	2 798	PLN/1000 l	2 636	PLN/1000 I	94		

Source: PKN Orlen SA, Grupa LOTOS SA, POPiHN

### ■ *Fig. 31* COMPARISON OF ANNUAL AVERAGE WHOLESALE PRICES OF DIESEL AT DOMESTIC FUEL PRODUCERS

Description	2	012	2	013	Reference 2013 to 2012		
	Value	Units	Value	Units	2012=100		
1	2	3	4	5	6		
PKN ORLEN diesel							
with 0.001% S gross (without VAT)	4 458	PLN/1000 I	4 303	PLN/1000	97		
Excise on diesel							
with 0.001% S	1 196	PLN/1000	1 196	PLN/1000	100		
Fuel duty	250	PLN/1000 I	260	PLN/1000 I	104		
PKN ORLEN diesel							
with 0.001% S Net	3 009	PLN/1000 I	2 844	PLN/1000 I	95		
GRUPA LOTOS diesel							
with 0.001% S gross (without VAT)	4 462	PLN/1000 I	4 304	PLN/1000 I	96		
GRUPA LOTOS diesel							
with 0.001% S Net	3 013	PLN/1000 l	2 845	PLN/1000 l	94		

In 2012, the difference between the average prices of EU95 petrol and diesel was PLN 0.02 per litre. In 2013, diesel was already PLN 0.01 per litre (annual average) dearer than EU95 petrol. It is worth remembering that only three years ago the difference between the price of EU95 petrol and that of diesel was PLN 0.28 per litre. During 2013, the retail prices of both fuels practically coincided. There were periods, of course, when prices of EU95 petrol were higher and times when diesel was dearer. But what is significant is that from September 2013 the retail price of diesel was consistently higher than that of EU95 petrol. The biggest difference between retail prices of both fuels was PLN 0.08 per litre, whereas in 2012 this was PLN 0,18 per litre - diesel being the higher price.

A comparison of the retail prices of EU95 petrol, autogas and diesel in the years 2012 to 2013 is shown in the following table (Fig. 32).

Retail prices of EU95 petrol and diesel fell like prices of supply. Reductions in retail prices reached the same levels as wholesale prices, and this means that margins generated on the sale of fuels could not be significant. Struggling with lower demand and competing with the grey market, retail operators lowered their margins on fuels sales just to keep their customers coming, as this allowed additional margins to be generated on non-fuel sales, thus securing the continued upkeep of the fuel selling sites. Margins improved in the second half of the year, but it proved impossible to fully make up for the losses

Source: Own calculation based on data from PKN ORLEN SA and Grupa LOTOS SA

markets' spot prices of finished fuels, the exchange rate of the zloty against the U.S. dollar and the tax burden in the domestic market. In 2013, the two main components of import parity pricing decreased, and the tax burden in the form of VAT and excise duty remained at the same level as in the previous year, and as in the year before, the fuel levy was increased by 4%, but as a component it contributes only in a small extent to the level of fuel prices. Changes in annual ex-refinery prices for both Polish oil concerns are presented in the tables below (Fig. 30 and 31).

The average gross and net prices of EU95 petrol FROM both main Polish producers fell to an extent that reflected the lowered spot prices in international markets. Net prices, which are directly related to spot prices, mirrored the falls of international markets.

Comparisons of diesel prices in the Polish refinery market are given in Figure 31.

■ *Fig. 32* COMPARISON OF ENGINE FUELS' RETAIL PRICES

Description	20	12	201	13	Reference		
					2013 to 2012		
	Value	Units	Value	Units	2012=100		
1	2	3	4	5	6		
Average retail price							
of EU95 petrol	5,71	PLN/I	5,49	PLN/I	96		
Average retail price of diesel	5,69	PLN/I	5,50	PLN/I	97		
Average retail price							
of autogas	2,79	PLN/I	2,51	PLN/I	90		

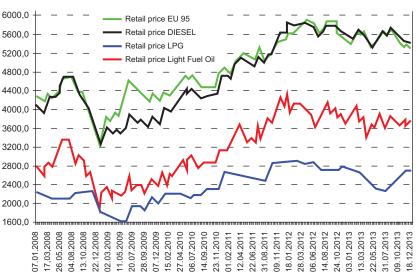
Source: Own calculation based on data from e-petrol.pl and WNP

In the case of this fuel type, the reductions on the domestic market coincide also with the size of reductions on international markets. The above tables show that the Polish market accurately reflects the behaviour of international markets and at the same time they demonstrate that there is no possibility of playing off individual interests of national operators on this specific international open market. generated in the first half of the year and therefore the annual average margins remained the same as in 2012. And this means that it was entirely insufficient to maintain filling stations basing only on fuel sales. Petrol is a fuel for engines of individual customers' private passenger vehicles and demand for this fuel is heavily linked to its retail price. The relationship between prices of petrol and autogas, which is a natural substitute for spark ignition engine fuels, significantly affects this demand. The price of autogas declined from the beginning of 2013 up to the start of the holiday season, when the trend was permanently reversed to a rising one. Nevertheless, the declines exceed the increases in scale terms and thereby the annual average price of autogas was 3% lower than that in the previous year, namely by PLN 0,09 per litre. In 2013, the demand for autogas failed to decrease, despite the fact that the ratio of its price to that of EU95 petrol decreased from 49% in 2012, to 46%. The price trends of individual fuels on the domestic market are illustrated in the following graphs (Fig. 33 and 34).

Retail prices during the year were at previously unprecedented levels, especially over such long periods of time. One can probably forget the days when 4 stood before the decimal point. The question remains, when will this figure be replaced by 6? This is another psychological boundary which was successfully defended in 2012. But for how long? So far, in periods of when economic indicators were rising in Europe and the world, a strong zloty was able to protect Poland from high prices. This time, the zloty's value was not such effective protection and the effects of this weakening could be seen at forecourt fuel pumps. The fairly stable level of prices throughout the year is more a result of a response to changes in demand. The chart below shows the relationship between the prices quoted on international markets and the retail prices of motor fuels in Poland.

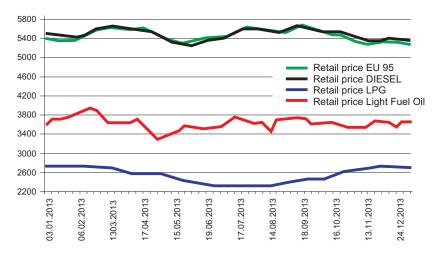
In 2013, prices of the main transport fuels remained relatively stable. There were noticeable variations associated with the summer and school holidays and long weekends, but even in these periods prices did not differ much from the annual averages. There was continuation of the trend, which began in 2012, of steady price reductions, and there is a chance that it will also continue in 2014. It seemed that Polish driver could now forget the time when petrol and diesel prices were at PLN 4 per litre. However, at the end of the year, there were stations in Poland that were selling EU95 petrol at PLN 4.99 per litre. Of course, this did not last long. But it should be noted that there are questions as to where this fuel was sourced. At the tail-end of the year, average prices of EU95 petrol reached PLN 5.29 per litre and were the lowest in 2013. The question arises whether similar price levels will be maintained in 2014 or will we see changes? So far, in periods when economic indicators





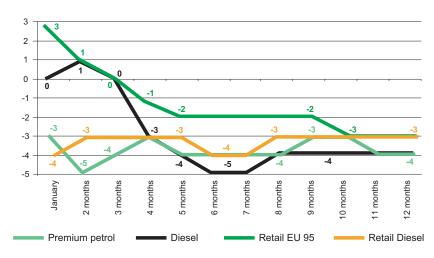
Source: Own calculation based on data from e-petrol.pl and WNP

■ Fig. 34 RETAIL PRICES OF EU 95 PETROL, DIESEL, LPG AND LFO IN 2013 [PLN/1000 litres]



 $Source: \ Own \ calculation \ based \ on \ data \ from \ e-petrol.pl, \ WNP \ and \ ARE$ 

■ Fig. 35 CHANGES IN SPOT PRICES FOR FUELS AND IN RETAIL PRICES OF EU95 PETROL AND DIESEL IN POLAND IN 2013, COMPARED TO 2011 AVERAGE PRICES [%]



Source: POPiHN, epetrol.pl

were rising in the world, the strong zloty was able to defend Poland against price increases. This time, the value of the zloty contributed effectively to price reductions in 2013. In addition, the fairly stable level of prices throughout the year was the result of operators' responses to changes in demand, sometimes at the cost of their margins. The chart below shows the relationship between spot prices on international markets and retail prices of engine fuels in Poland.

Fuel station operators estimate that to maintain a fuel station in the market, the profit margin on the sale of fuels should be at least PLN 0.25-0.35 per litre of fuel sold, depending on the station's location. Unfortunately, from 2013, as in the previous year, few stations were able to achieve this target. There were, of course, periods of time when the situation on the market improved, but these were short. So, additional income was sought from nonfuel sales and services.

As in previous years, in particular regions of the country, sometimes even within the same town, significant price differentials were seen between stations of specific operators. Prices were mainly affected by station location and standard. Price differences approached PLN 0.20 per litre. The factors which determined levels of retail prices in different regions of the country were levels of demand, the scale of competition between different operators, and the comprehensiveness of services offered and thus the level of non-fuel margins achieved.

The number of stations on motorways and expressways is growing. Usually, higher prices apply on such routes, resulting from the standard of provided services. Therefore, the geography of supply is changing and this will certainly affect further differentiation of prices locally and regionally. Traditionally, Poles' weekend and holiday trips mean that high seasonal price differences exist between different regions of the country. Statistically, the most expensive provinces in the country are: Mazowieckie, Malopolskie, Podkarpackie and Zachodniopomorskie. During the summer and winter holidays, prices are much more expensive along the main transit routes and within resorts. EU fuel tourists contribute to higher prices being maintained at stations near borders with other EU countries.

In 2012, the average tax burden on engine fuels in the country were the following (Fig. 36).

In 2013, there were no changes to the main tax components (VAT, excise duty) for liquid fuels. There was only an increase

### ■ *Fig. 36* COMPARISON OF TAX BURDENS ON ENGINE FUELS IN 2012 AND 2013

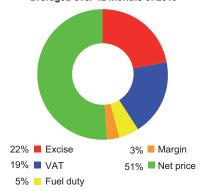
Description	2	012	2	013	Reference 2013 to 2012		
	Value	Units	Value	Units	2012=100		
1	2	3	4	5	6		
Total taxes for EU95							
(VAT+excise+fuel duty)	2 732	PLN/1000	2 694	PLN/1000	99		
Total taxes for diesel							
(VAT+excise+fuel duty)	2 511	PLN/1000 I	2 484	PLN/1000 I	99		
% share of taxes							
in retail price of EU95	48	%	49	%	103		
% share of taxes							
in retail price of diesel	44	%	45	%	102		

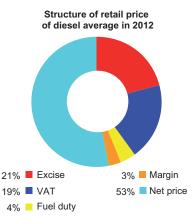
Source: POPiHN's own calculation

#### Fig. 37 STRUCTURE OF RETAIL PRICE OF ENGINE FUELS IN 2012 AND 2013

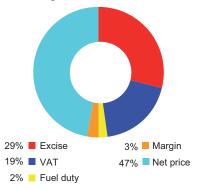


Structure of retail price of diesel averaged over 12 months of 2013

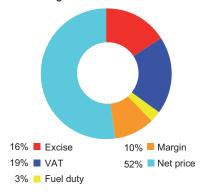




Strukture of retail price of EU95 averaged over 12 months of 2013



Strukture of retail price of autogas averaged over 12 months of 2013



Source: POPiHN's own calculations

of 4% in the fuel levy. Despite this increase, the tax burden in the price of fuels decreased compared with 2012. The main reason was the reduction in the net price of fuels and therefore a lower amount of VAT (23%) charged on this lower price. The end result was that for both EU95 petrol and diesel, the sum of

countries with domestic prices at the end of December 2013.

As in previous years, during the whole of 2013, fuel prices in Poland, after conversion into euros, were among the lowest in the entire European Union. At the end of December 2013, domestic retail prices of EU95 petrol were 11% and those year, these rates were raised in several countries. At the end of December the difference between amount of VAT paid on EU95 petrol, compared to the EU average, was (-4%), therefore 2 percentage points lower than in the year before. For diesel, this ratio exceeded the European average by 1%, therefore 3 percentage points low-

■ Fig. 38 STRUCTURE OF RETAIL PRICES | OF ENGINE FUELS IN 2012 AND 2013 [PLN per litre]

		Eur	osupe	er 95 Pe	trol		Diesel			LPG								
	Retail	Excise	VAT	Fuel	Margin	Net	Retail	Excise	VAT	Fuel	Margin	Net	Retail	Excise	VAT	Fuel	Margin	Net
	price			duty		price	price			duty		price	price			duty		price
Avarage																		
in 2012	5,71	1,57	1,08	0,10	0,16	2,80	5,69	1,20	1,08	0,25	0,16	3,00	2,79	0,39	0,53	0,07	0,21	1,29
Avarage																		
in 2013	5,49	1,57	1,04	0,10	0,15	2,63	5,50	1,20	1,05	0,26	1,15	2,85	2,51	0,39	0,48	0,08	0,24	1,32
% change	-3,9	0,0	-3,9	4,0	-7,6	-6,1	-3,3	0,0	-3,3	4,0	-8,5	-5,0	-10,0	0,0	-10,0	14,3	15,8	-17 <i>,</i> 0

Source: POPiHN's own calculations

taxes paid on the retail prices of these fuels decreased by 1% – in monetary terms this was PLN 38 per 1000 litres for EU95 petrol and PLN 27 per 1000 litres for diesel.

As a result of the lower retail prices of both main fuel types than in 2012, there was also a change in the percentage share of taxes in these prices. It rose slightly, mainly because both excise duty and the fuel levy are fixed quota and not percentage levies – as is the case with VAT. In 2013, taxes constituted 49% of the price of EU95 petrol, whereas in 2012 this share was 48% (a rise of 3%). For diesel, in 2013, this was 45%, compared to 44% in the year before (a rise of 2%).

The composition of annual average retail prices for EU95 petrol and diesel fuel, when comparing average prices for 2013 to those for 2012, is shown in the following diagrams (Fig. 37).

In value terms, the structure of prices is as follows (Fig 38).

The table below (Fig 39) compares prices of engine fuels in European Union

of diesel 7% lower than average European prices. This is 1 percentage point less for EU95 petrol and 2 percentage points less for diesel than in the previous year.

At the end of 2013, after conversion into euros, domestic net prices (excluding taxes) of EU95 petrol and diesel were lower than European average prices by 3% and 4%, respectively. Net prices in all EU countries are quite similar, and the differences in retail prices are mainly caused by taxes in different countries and levels of margins. At the end of December 2013, the difference between the highest and lowest net price was EUR 126 (EUR 41 less than in the year before), and between the highest and the lowest retail price: EUR 509 per 1000 litres (EUR 17 more than in the year before). Therefore, in 2013, there was a slight decrease in the spread in net prices, but the difference between the highest and the lowest retail prices was extended.

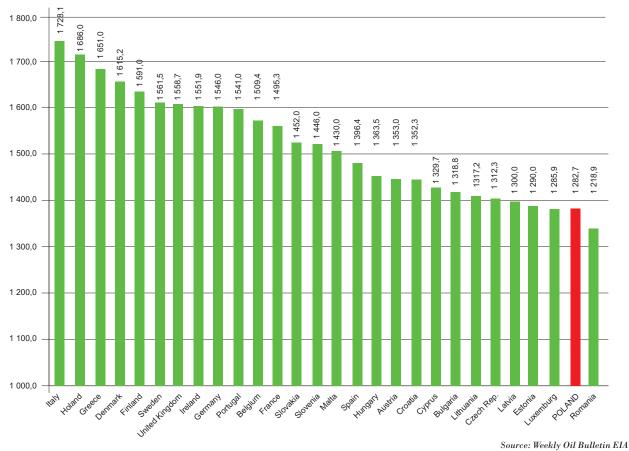
Poland is one of the countries with the highest applicable rate of VAT for fuels, although it should be noted that, during the er than in the year before. The amounts of excise tax paid (after conversion into euros and accounting for the fuel levy) were 25% and 16% lower respectively for EU95 petrol and diesel than the European average, and therefore the ratios from 2012 were maintained.

In December 2013, only in Romania could EU95 petrol be bought more cheaply than in Poland. Diesel was cheaper in 4 countries, including Lithuania and Latvia. Poland's immediate EU neighbours all had higher prices, with the exception of diesel in Lithuania. This, therefore, encouraged fuel tourism to Poland's border areas, while at the same time it assisted the growth of individual exports of other products bought and taken out of the country, which helped the balance of payments. As before, fuels on the other side of Poland's eastern border, in non-EU member states, were much cheaper than in Poland, which in turn encouraged Polish motorists to buy in those countries - often to make a profit, not just for own needs.

<b>Fig. 39 AVERAGE PUMP PRICES AND TAXES IN EU MEMBER STATES AND IN POLAND</b>	
AT THE END OF DECEMBER 2013	[in EUR per 1000 litres]

		Eurosup	er 95 Petr	ol	Diesel (EN 590)							
1	2	3	4	5	6	7	8	9	10	11		
	Sale	Price without	Excise	VAT		Sale	Price without	Excise	VAT	VAT [%]		
	price	taxes		amount		price	taxes		amount			
POLAND	1 283	637	402	244	POLAND	1 300	702	351	247	23		
European					European							
average	1 446	655	536	254	average	1 392	728	419	245			
Price in Poland					Price in Poland							
against average					against average							
European price	89%	97%	75%	96%	European price	93%	96%	84%	101%			

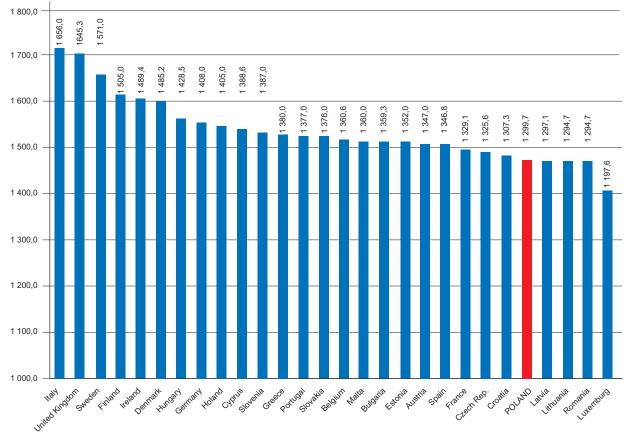
1 EUR = 4,4168 PLN Source: Weekly Oil Bulletin EIA



# ■ Fig. 40 PUMP PRICES OF EU95 PETROL IN EU MEMBER STATES AND IN POLAND AT THE END OF DECEMBER 2013

[EUR/1000 litres]

■ Fig. 41 PUMP PRICES OF DIESEL IN EU MEMBER STATES AND IN POLAND AT THE END OF DECEMBER 2013 [ EUR/1000 litres]

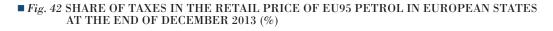


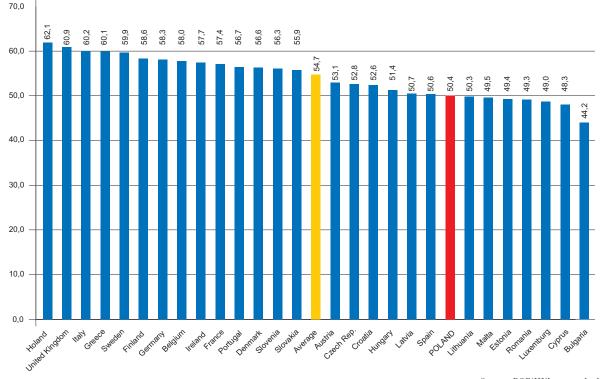
Source: Weekly Oil Bulletin EIA

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It is widely claimed that the Poles are paying high taxes in the price of fuel. Indeed, their level is at about 50% of the price, yet, as can be seen in the charts, the situation in Poland is better in this respect than in most other EU Member States. A comparison of total tax burdens on engine fuels in European countries at the end of 2013 is shown in Fig. 42 and 43.

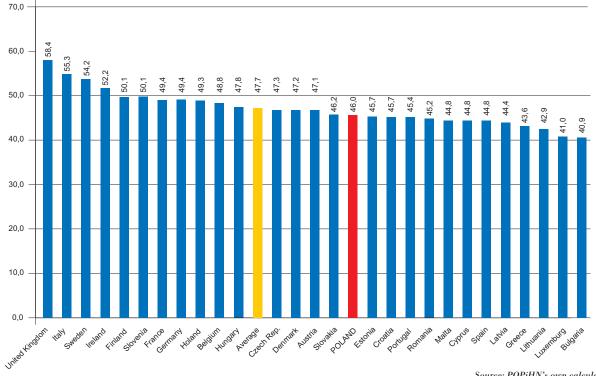
In 2013, fuel prices in Poland fell with respect to levels in 2012 and therefore it remained a country which was worth visiting to refuel one's vehicle. Almost all drivers fully refuelled their vehicles before crossing the Polish border to the west, north or south. However, motorists who were heading east, would leave just enough fuel in their tanks to get to the nearest Ukrainian, Belarussian or Russian fuel stations.





Source: POPiHN's own calculation

■ Fig. 43 SHARE OF TAXES IN THE RETAIL PRICE OF DIESEL IN EUROPEAN STATES AT THE END OF DECEMBER 2013 (%)



Source: POPiHN's own calculation

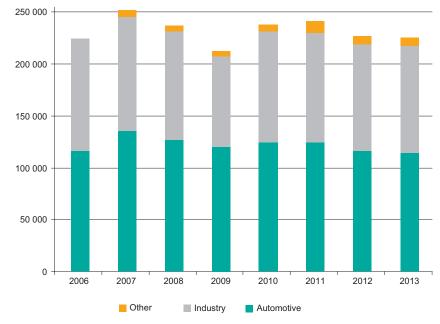
# LUBRICATING OILS MARKET

# LUBRICATING OILS MARKET OVERALL

In 2013, the Polish lubricants market reached approximately 224,500 tonnes, which means practically no change on the previous year. The industry is still feeling a recession, but it is of some consolation that the market as a whole has moved well away from the downturn in faced in 2009.

The situation looks different in the two main market segments: automotive and industrial. The second year of the prolonged stagnation of the oil market as a whole has resulted in the lowest, since 2006, recorded level of sales in automotive oils: 114,401 tonnes sold in Poland of lubricants. However, the industrial segment had a surprisingly high level of sales at 102,328 tonnes, which allowed the whole market, this time, to avoid the forecasted deeper slump.

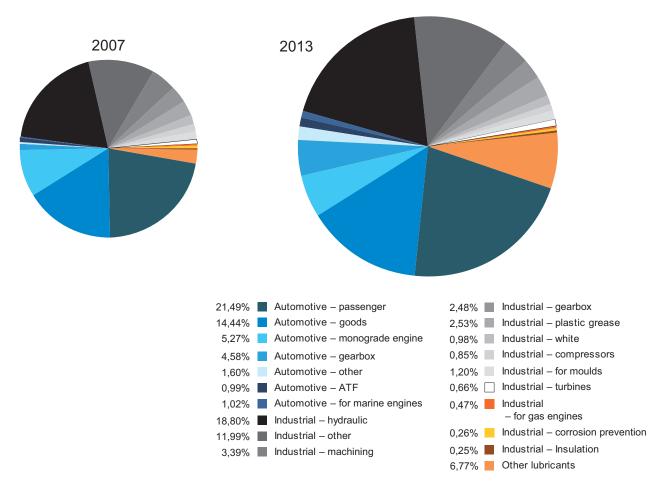
The positive news is that the observed declines in the previous year did not worsen significantly in 2013. There was



#### ■ Fig. 44 TOTAL MARKET FOR LUBRICATING OILS IN 2013

Source: POPiHN's own calculation

# ■ Fig. 45 COMPARISON OF THE STRUCTURE OF THE ENTIRE MARKET FOR LUBRICATING OILS IN 2013 AND 2007



Source: POPiHN's own calculation

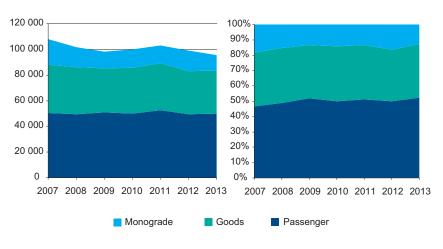
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a tendency of deceleration and stabilisation of the market at a relatively low level of sales, i.e. " bouncing along the bottom", characteristic for the stagnation phase. Within narrower product groups, in principle, only the segment of goods vehicle oils and the group of "other products not elsewhere classified" recorded changes which were above the 3% statistical error threshold, compared to the previous year.

Over the last seven years, economic upheavals have not significantly affected the structure of the market, nor on its main trends. The overall structure of the market has seen only minor shifts between different groups of lubricants. In terms of its structure, therefore, the market gives the impression of being fairly mature, stable and resistant to turbulence. The only clearly perceived long-term trend is the increase in the "other products not elsewhere classified" category. This probably has to do with the progressive specialisation in oils use, because all unusual products, which have been difficult to classify under other categories, are classified under this group. There is, however, an equilibrium in terms of the basic division of the oils market into industrial and automotive oils. From this point of view, the market remains permanently divided more or less equally, with a persistent small advantage in terms of quantity on the side of the automotive segment.

#### ■ Fig. 46 CHANGES IN THE STRUCTURE OF THE AUTOMOTIVE ENGINE OILS SEGMENT AGAINST SALES IN ANNUAL TERMS

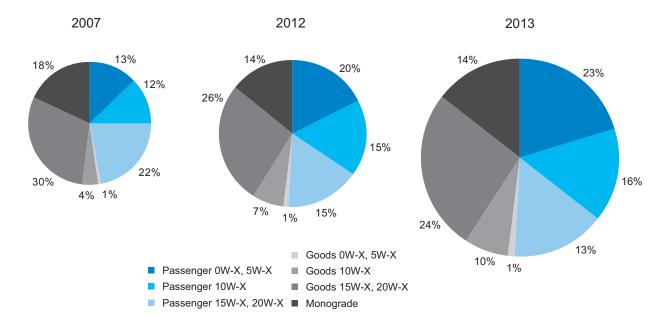


Source: POPiHN's own calculation

# **AUTOMOTIVE ENGINE OILS**

Within the automotive segment, a special place is occupied by engine oils for vehicles, which account for about 80% of this segment, and it is this group of products which was most affected in the current slowdown. The decrease in sales of engine oils by more than 3.5%, compared with the previous year, means that in 2013, 95,415 tonnes of these products were in Poland, which is the worst result in the last 7 years. For comparison, in 2009, 98,362 tonnes were sold, while in the previous record year of 2007, the market achieved a volume of 107,733 tonnes (a difference of more than 11%). The slowdown was spread evenly. Both the passenger vehicle oils segment (49,773 tonnes) and the goods vehicle segment (45,642 tons - including monograde oils) were below their levels in the crisis year of 2009 (respectively, 51,049 and 47,314 tonnes). In addition, there was a continued significant fall in market share and sales volume of monograde oils, which, except in certain product applications, are becoming increasingly obsolete, as they offer too little in comparison with newer solutions. It is this group of products which shrank particularly hard between

#### ■ Fig. 47 CHANGES IN THE AUTOMOTIVE ENGINE OILS SEGMENT AND COMPARISON OF STRUCTURES BETWEEN 2013 AND 2007



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2007 (19,682 tonnes) and 2013 (12,199 tonnes ) – which was close to 39%.

Among the main reasons for this state of affairs, one must certainly identify not only macroeconomic reasons and the shadow economy, but – perhaps primarily – the growing market share of synthetic and semi-synthetic oils, which require less frequent replacement than mineral oils.

Despite the economic slowdown, Polish drivers and company fleet managers are continuing to rapidly move away from high viscosity mineral and monograde oils in favour of more expensive, but better quality, synthetic and semi-synthetic oils of low and medium viscosity.

2013 was another year in which this trend was again very strongly felt. Particularly strong (by 3 percentage points year-on-year) was the rise of synthetic oils' share for passenger vehicles and of semi-synthetic oils for goods vehicles.

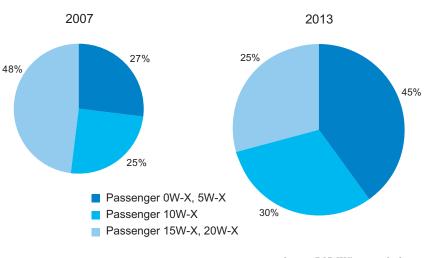
#### PASSENGER VEHICLE ENGINE OILS

In the case of passenger vehicles, the expansion of synthetic oils of the lowest viscosities (0W and 5W) is particularly visible. In 2013, already a guarter of passenger vehicle engines in Poland were filled with mineral oil of high viscosity (15W or 20W). Meanwhile, the share of synthetic oils is very quickly approaching the level of 50%, and to eventually dominate the segment of passenger vehicle oils. The dynamics of this change is best illustrated by the fact that only in 2007 this share was just 27%. Much less dynamically, but clearly also expanding, is the share of semisynthetic oils. In the case of passenger vehicles, this share increased from 25% in 2007 to 30% in 2013. Also, the share of mineral oils, which only 7 years ago constituted nearly half of this segment, has in the past year, once again, reached its historically lowest share of only 25%.

#### ENGINE OILS FOR GOODS VEHICLES AND AUXILIARY MACHINES

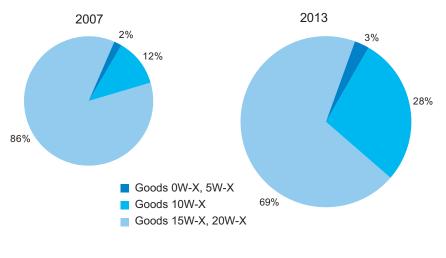
In 2013, already a third of goods vehicle engines were being filled with other than mineral oil. Only in 2007, this was only a quarter. The retreat of goods vehicle drivers from mineral oils to semi-synthetic products is not, admittedly, as dynamic as in the case of passenger vehicles, but it is also a strong and durable market trend, which will certainly continue in further years. In recent years, it seems to be even strengthening: in 2013 alone, the share of mineral oils declined, year on year, from 75% to 69%.

#### ■ *Fig. 48* PASSENGER VEHICLE OILS WITH REFERENCE TO VISCOSITY CATEGORIES (EXCLUDING MONOGRADE OILS)



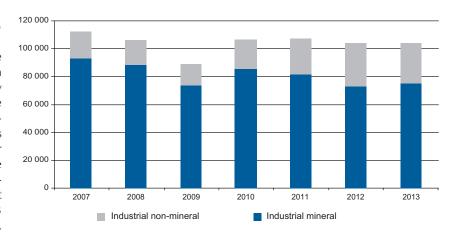
Source: POPiHN's own calculation

#### ■ Fig. 49 GOODS VEHICLE OILS WITH REFERENCE TO VISCOSITY CATEGORIES (EXCLUDING MONOGRADE OILS)



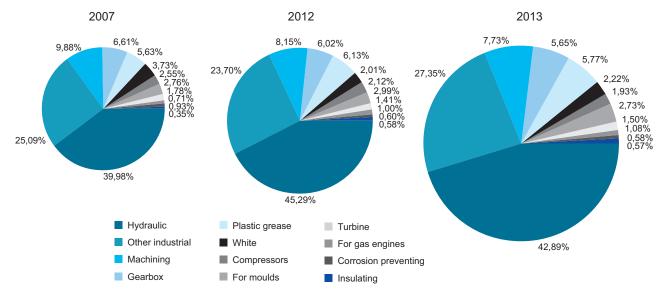
Source: POPiHN's own calculation

#### ■ Fig. 50 CHANGES IN THE INDUSTRIAL OILS SEGMENT WITH REFERENCE TO CHEMICAL COMPOSITION (FORMULATION)



Source: POPiHN's own calculation

# ■ Fig. 51 INDUSTRIAL SEGMENT IN 2013: STRUCTURE WITH REFERENCE TO APPLICATION



Source: POPiHN's own calculation

# **INDUSTRIAL OILS**

In 2013, the industrial oils segment reached a level of 102,328 tonnes, which represents virtually no change compared with the previous year. It is worth emphasising, here, the surprising resilience of domestic industry to the economic slowdown. Although sales of industrial oils have been for two years at below their potential, there can be no talk of the collapse that occurred in 2009.

Unlike in the automotive engine oils segment, in the last few years, there have been no clear and lasting changes in the structure of oil sales to industry. This confirms that the market is fully formed, mature, and stable. Polish industry consumes most hydraulic and machining oils. Gear oils and greases retain an over 5% share, and the Ministry of the Environment is recently trying to burden them with the responsibility of collecting and recycling the used material. The remaining portion, and thus the other half of the segment, are very varied products with multiple applications. Increasingly, these are highly specialised products, designed even for specific devices.

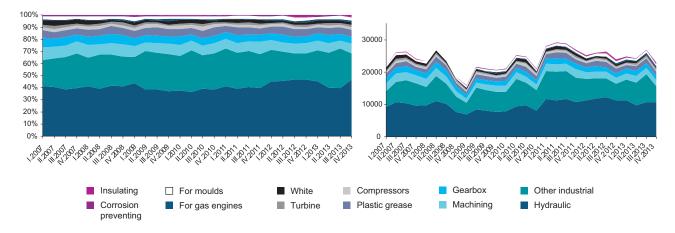
The macroeconomic disturbances which have sometimes affected the economy, sometimes even quite violently, have not left any visible marks on the structure of this segment.

# EXPORT OF MOULDING, METALWORKING, MACHINING, AND BASE OILS

Polish industry consumes annually only 2,600 tonnes of moulding oils and 7,500 tonnes of metalworking oils, which should

lead to a reflection in the light of the 85,000 tonnes of oils exported from Poland in 2012 which fall within CN code 27 10 19 91, (oils for metalworking and foundry moulding), which correspond to this product. Poland's export strength in moulding and metalworking oils has been established in only the last three years and is based mainly on exports to Hungary (more than 32,000 tonnes and a 43% share), Germany (close to 20,000 tonnes and a 25% share) and to Slovakia and the Czech Republic (each, more than 5,500 tonnes and with a 7% share). In 2012, Hungary which was experiencing an economic slump (-1.7 % decline in GDP), received just from Poland, 8.5 times more moulding and metalworking oil than the annual demand of Polish industry and this Polish "export success" has resulted

#### Fig. 52 STRUCTURAL CHANGES IN THE INDUSTRIAL OILS SEGMENT IN TERMS OF QUARTERLY SALES

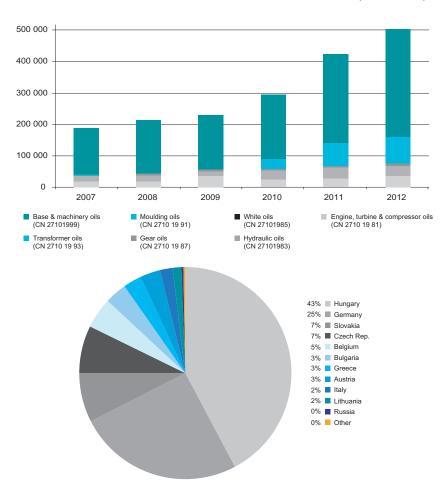


Source: GUS, POPiHN's own calculation

in the introduction there, starting from January of this year, of significant limitations in trading in oils and in the importation and intra-Community acquisition of base oils and lubricants. The last 2-3 years, have seen the growth of similar problems in Germany, the Czech Republic and Slovakia, prompting their governments to react similarly. The observed scale of the problem indicates that this is probably only the tip of the iceberg. The scale of "successes" in exporting lubricating oils may be much greater, if consideration is given to base and machine oils that are jointly classified under CN code 27 10 19 99. The problem then rapidly expands to about 450,000 tonnes a year, and therefore double the annual consumption of all types of lubricating oils in Poland. In the opinion of POPiHN, these developments are most probably being caused mainly by the "shadow economy" which is being spawned by taxing lubricating oils in Poland with excise duty, which is not - and should be - consistent for all products (for example, at the uniform "zero" rate). A uniform rate would, to a large extent, eliminate the price differences which are an incentive for machinations involving purchasing diesel with an exemption from excise duty, reclassifying it as "lubricating oil" and shipping it abroad, where it is used as an additive to diesel or even as a fuel itself. The introduction of a uniform rate would not, at the same time, lead to loss of control over the product, as this role would continue to be performed by the EMCS.pl system.

# SUMMARY AND FORECAST FOR THE LUBRICATING OILS MARKET

Compared to predictions made a year earlier, only the automotive segment of the oil lubricants market performed as anticipated. As predicted, its sales reached a record low, for the time since POPiHN began monitoring the market, in 2006. The following potential causes of this decline may be identified: first, a psychological effect of the economic slowdown which has caused changes in consumer behaviour (emphasis on value for money, seeking optimal quality in terms of price, seeking promotions and bargains);



Source: POPiHN's own calculation based on data from the Ministry of Finance

■ Fig. 53 SIZES AND STRUCTURE OF EXPORT DESTINATIONS FOR BASE AND LUBRICATING OILS FROM POLAND (2007 – 2012) second, the growing grey market resulting from excise duty on oil in Poland; thirdly, a strong trend away from mineral to synthetic oils, which require to be replaced less frequently. In addition, the real deterioration in the country had an impact, in particular, the more than 13% unemployment rate reflected in low private consumption and high fuel prices discouraging travel by car. Recently, the combination of these causes has been strong enough to even offset the effect of the dynamic growth in numbers of vehicles on Polish roads.

However, the developments in the industrial segment are a big surprise. In view of the announced record fall in Polish GDP, it was expected that this segment would slump again, even more deeply than in the previous crisis of 2009, when it declined about 15% (even 30 % in the first quarter of 2009). In contrast to predictions, this time the market remained stable. Instead of a short-term but very deep collapse ("V" shaped) as in 2009, this time there was a quite mild, stretched in time slowdown in the shape of a "U". This difference may be explained more by psychological factors than by any fundamentals. Polish businesses clearly did not respond to the crisis signals as nervously as in its first wave. At that time, there were real needs to reduce stocks of raw materials, to radically decrease production and employment, and generally to urgently seek cost reductions.

This behaviour shows how much the crises, triggered by speculation on financial markets, are detached from the fundamentals of the Polish economy. It may also provide evidence for the continuing large growth potential slumbering in Polish industry and, therefore, also in the industrial oils segment.

### MARKET FORECAST: AUTOMOTIVE OILS SEGMENT

The automotive segment is expected to break the two year downward trend and to achieve a level of 118,000 tonnes. Next year, with GDP growth rising, the trend should continue ending in a level of 122,000 tonnes. However, taking into account the risks mentioned in this report, in particular, the growing share of synthetic oils and the influence of the shadow economy, it is doubtful whether the market will ever be able to achieve the level of 2007 or even 2011. There is more and more evidence that in the long term the automotive segment has already reached its peak and despite the sharp increases in the numbers of cars per 1,000 inhabitants, the segment is already experiencing a permanent shrinking trend, which in time may transmute into the stagnation that markets are seeing in developed EU countries. All the more so, because in a few years' time a whole new factor affecting the size of the domestic market will gradually begin to remerge: the demographic factor.

# MARKET FORECAST: INDUSTRIAL OILS SEGMENT

In the case of industrial oils, if economic growth at 3% is assumed, the market will remain stable with a possible transition to a small upward trend, which may, however, accelerate in the coming months and years, if the economy also speeds up. This should result in the segment achieving sales volumes of about 103,500 and 105,500 tonnes in 2014 and 2015.

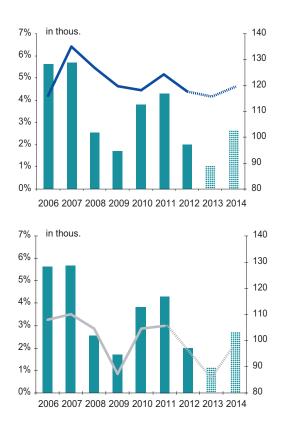
In POPiHN's opinion, 2014 may be expected to be a year of improvement in the market, as well as in the whole economy, while in subsequent years the economy has a chance for pronounced growth of around 4%, or more. This may be due primarily to the continuous process of catching up on the economic gap, synergies with the growing German economy and the influx of a further tranche of EU funds.Among obstacles one may include the fragility of the economic recovery in the euro zone (especially in Germany), the growth of the shadow economy, the increasing costs to enterprises of fiscal and regulatory burdens (mainly from excise and product levy provisions). Other threats involve rising debt, increasing debt service costs resulting in further a burdening of the Polish oil and petroleum industry.In this context, it is very important to consider the need to look for all possible ways of optimising legal provisions so that that they may achieve the objectives of combatting the shadow economy or of protecting the environment, with the minimum possible burdens on business.

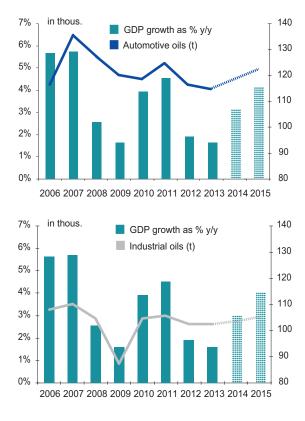
In the case of the lubricating oils market, the most important issue at the present time should be the inclusion of those products within a uniform "zero" rate of excise duty and exempting greases from collection and recycling obligations.

The "zero" excise duty rate is just such an optimal solution when compared to the current situation. The introduction of a "zero" rate will provide protection against the "shadow economy", as products will continue to be covered by the EMCS movement control system. In turn, reducing the rate and making it uniform will, on the one hand, reduce imbalances in prices which encourage private and parallel imports of oil from abroad, and on the other, eliminate differences which are one of the main causes of the observed practice of reclassifying diesel as lubricating oil.

The above optimisation of regulations seems to be necessary also in view of the observed changes in the shadow economy, which are followed by new, further regulations which partly burden businesses with costs of combatting the shadow economy. In the absence of parallel actions going in the opposite direction, there will be a stacking up of further burdens which will erode the competitiveness of the sector and deteriorate further the relationship between costs of products and the purchasing power of consumers.Products such as greases are practically "uncollectable", due to their physical and chemical properties. Their recovery is, therefore, that much more difficult - even physically impossible - that the costs involved far outweigh any environmental benefits, making this proposal particularly inefficient economically. The addition of extra obligations on them should therefore be viewed as an unjustified increase in the already substantial burdens on the industry in Poland.

■ Fig. 54 AUTOMOTIVE AND INDUSTRIAL SEGMENTS IN TERMS OF POLISH GDP TOGETHER WITH FORECAST (last year's forecasts shown on the left)





Source: GUS, POPiHN's own calculation

# EXPLANATIONS OF TERMS

**PASSENGER VEHICLE OILS** – this group includes engine oils for passenger motorcars, as well as motorcycles, vehicles and other auxiliary equipment. This category does not include single season (monograde) oils.

**GOODS VEHICLE OILS** – this group includes engine oils for goods vehicles and working machines. This category does not include single season (monograde) oils.

**OTHER OILS EXCLUDING GAS ENGINES** – these are all other types of oils commonly used in the automotive industry and not used in industry. The main groups of products in this category are: oils for marine engines, single season (monograde) engine oils, gear oils, automatic transmission fluids and all other lubricating products for the automotive industry not elsewhere classified.

**MINERAL OILS** – in accordance with CN (Common Nomenclature), these are lubricating products, in which the content by weight of mineral oil, or of oils obtained from bituminous minerals (but not as a basic constituent) is greater or equal to 70%. In the automotive segment, most of such oils are used in the production of older type oils characterised by higher viscosities (mainly oil groups 15W and 20W). These products are obtained mainly from traditional base oils obtained by refining crude oil, mainly base groups I, II and partly III.

**NON-MINERAL OILS** –these are other lubricating oils, which are defined under excise rules as lubricating preparations (including cooling and lubricating fluids, bolt and nut loosening preparations, rust and corrosion prevention preparations, lubricant-based mould release preparations) with the exclusion of preparations containing, as basic constituents, 70% or more by weight of petroleum oils or oils obtained from bituminous minerals. In practice, this is mainly concerns semi-synthetic oils (e.g. 10W SAE viscosity class engine oils) and synthetic oils (e.g. 0W and 5W SAE viscosity class engine oils). These products are mainly derived from synthetic bases (poly-alpha-olefins or PAO) or also from mineral base oils of the highest quality (Group III in API classification).

SAE (SOCIETY OF AUTOMOTIVE ENGINEERS)

**CLASSIFICATION** – SAE classification divides oils based on operating parameters and distinguishes 11 classes of viscosity: - 6 winter classes marked with a number and the letter W: 0W, 5W, 10W, 15W, 20W, 25W;

- 5 summer classes 20, 30, 40, 50, 60

For the purposes of this report, oils were divided into three groups (0W/5W, 10W and 15/20W) – a simplification which allows the structure of the market to be shown in terms of viscosity of lubricating oils used.

**SINGLE SEASON (MONOGRADE) OILS** – these are older-type oils intended for use in certain, relatively narrow, temperature ranges. This distinguishes them from more modern

multigrade (multi-season) oils which can be used in more varied temperatures, making them suitable for use, for example, throughout the year. For the purposes of this report, monograde oils were treated as a separate group in relation to multigrade oils (groups 0W/5W, 10W and 15/20W) as well as a separate group in terms of application (relative to groups of oils for passenger and goods vehicles), even though they are used within those groups.

**MACROECONOMIC DATA** – used in this report, unless otherwise specified, are based on information available at the website of the Central Statistical Office.

**ABSOLUTE VALUES** – absolute values given in this report include sales figures from seven members of POPiHN: BP/Castrol, Fuchs, LotosOil, OrlenOil, Shell, Statoil and Total and were collected by the organisation as part of the ongoing monitoring of the lubricating oils market. Market data for 2013 have been adjusted upwards, as a statistical correction, by 25% (for the automotive segment) and by 15% (for the industrial and other oils segment) to take into account the rest of the market which is outside the firms which are covered by the monitoring. The organisation's view is that this estimate reflects the current market share of firms which are not affiliated to POPiHN. It should be noted that for the period 2006-2011, the statistical adjustment of data was by 10% equally for both segments of the market. The changes introduced in 2012 arise from a review of the estimate of the market outside POPiHN.

**DOUBLE REPORTING** The methodology used of data collection and processing eliminates the problem of double reporting. POPiHN member companies only report sales "outside" POPiHN (directly to the domestic market and to small independent producers, whose total market share has been estimated at around 10%), and therefore sales between POPiHN member companies are not reported.

**ESTIMATED DATA** For legal reasons related to European regulations on sensitive data, at the time of publication of this report, POPiHN did not possess data for the fourth quarter of 2013, as it is aggregated after three months. For this reason, the data for the fourth quarter presented in this report were based on estimates prepared by the POPiHN office with the participation of member firms and on an analysis of historical data and current market trends.

**IMPORTS AND EXPORTS** For the purposes of this report, in relation to lubricating oils, the above concepts include both the Intra-Community Acquisition of Goods (WNT) in the case of "imports", and the Intra-Community Supply of Goods (WDT) in the case of "exports".

# THE LOGISTICS MARKET FOR CRUDE OIL AND LIQUID FUELS The feedstock supply pipeline network

The PERN "Przyjazn" SA crude oil pipeline network consists of three sections: Eastern, Western and Pomeranian. The eastern section of the Przyjazn pipeline links the depot in Adamowo, near the border with Belarus, with the crude oil depot in Miszewko Strzalkowskie near Plock. The eastern section transports oil through the Miszewko Strzalkowskie depot to PKN ORLEN and indirectly to other clients of the company. The western section connects the Miszewko Strzałkowskie depot to German refineries, TRM and PCK. The Pomeranian section connects the Miszewko Strzalkowskie depot with a depot in Gdansk. Russian crude flows along this route to the LOTOS Group refinery and for export via NAFTOPORT. The Pomeranian section is reversible, allowing pumping in both directions.

#### **EASTERN SECTION**

The eastern section of the Przyjazn pipeline links the Adamowo depot with the one in Miszewko Strzałkowskie using two conduits of route length about 234 km and nominal capacity 43 million tonnes of crude oil per year.

■ Fig. 55

The eastern part of the pipeline network owned by PERN "Przyjazn" SA is a link of key importance in the Polish crude oil transport system. In order to increase throughput capacity, a substance is used to reduce flow resistance, which allows temporary increases in capacity of the eastern part of the Przyjazn main feeder from 43 to 50 million tonnes of crude oil per year.

Since 2002, construction of a third conduit is under way on the eastern section. The 82 km Adamowo – Zawady section was put into operation in April 2009, the section from the town of Zawady to the border of the Strachowka and Korytnica districts of 16 km length, was brought into operation in March 2010, the section from Orzechowo to the depot in Miszewko Strzałkowskie of 71.5 km, started operating in July 2009. Currently, the last middle section of the pipeline is being completed from Orzechowo to the border of the Strachowka and Korytnica districts. This investment is intended to increase the capacity of the eastern section, which should facilitate optimisation of the remaining segments of pipelines and allow an increase in the capabilities of crude transit through Poland.



#### WESTERN SECTION

The western section of the main pipeline feeds crude to the German refineries TRM and PCK. This section of the Przyjazn pipeline links the Miszewko Strzałkowskie depot with the PCK refinery in Schwedt and the MVL crude oil depot in Heinersdorf using two strands of pipelines: the length of this route is about 416 km and nominal capacity 27 million tonnes of crude oil per year.

In the section between the Miszewko Strzałkowskie and the Zolwieniec depots, one conduit works in reversible mode allowing crude oil to be pumped in both directions. PKN ORLEN owns the section connecting Zolwieniec with the Underground Oil and Fuel Storage Facility at Gora, owned by Inowrocławskie Kopalnie Soli (IKS Solino).

The western section links the Przyjazn pipeline network with PGNiG's storage depots located in the towns of Wierzbno and Debno. The company transports Polish crude extracted in the Debno area.

# **POMERANIAN SECTION**

Crude oil flows over the Pomeranian section to LOTOS Group and for export via NAFTOPORT. The section works in reversible mode which enables pumping of crude in both directions. In conjunction with NAFTOPORT's infrastructure, this arrangement facilitates the export of crude oil transported over the Przyjazn pipeline, as well as the import of feedstock by sea routes and its further pumping through the pipeline system owned by the company. This section connects the Miszewko Strzałkowskie depot with the Gdansk depot through a single pipe, with route length about 240 km and a nominal capacity of 27 million tonnes or 30 million tonnes of crude oil per year (respectively, in the northerly and southerly directions).

# **PRODUCT PIPELINES**

PERN "Przyjazn" has a network of product pipelines for the transport of petroleum products (petrol, diesel and heating oil) in three directions:

**Płock – Nowa Wielka Wies – Rejowiec** 207.1 km length, nominal capacity 2.1 million tonnes and 1.4 million tonnes

of fuel per year (respectively, Plock – Nowa Wielka Wies and Nowa Wielka Wies - Rejowiec).

### Płock – Mosciska – Emilianow

147.7 km length, nominal capacity 1 million tonness of fuel per year.

#### Plock – Koluszki – Boronow

261.5 km length, nominal capacity of 3.8 million tonnes and 1.0 million tonnes of fuel per year (respectively, Plock – Koluszki and Koluszki – Boronow).

# **CRUDE OIL STORAGE TANKS**

Oil storage tanks are an integral part of the PERN "Przyjazn" pipeline network. The company has three crude oil storage depots:

Adamowo depot (15 storage tanks of approx. 770,000 m<sup>3</sup> total capacity)

 Miszewko Strzałkowskie depot (29 storage tanks of approx. 1,464,000 m<sup>3</sup> total capacity)

Gdansk depot (18 storage tanks of approx. 900,000 m<sup>3</sup> total capacity)

Feedstock storage depots act as stabilisers in the flow of crude oil. In addition, the company utilises storage capacity to provide a crude oil storage service.

The company has tanks with capacities of 30,000, 32,000, 50,000 and 100,000 m<sup>3</sup>. The 100,000 m<sup>3</sup> capacity tanks are the largest of their kind in Poland.

# LIQUID FUELS STORAGE LOGISTICS

OLPP owns a network of fuel depots located throughout Poland, which store petrol, diesel, light fuel oil, biocomponents and aviation fuel. The total storage capacity of the depots is about 1.8 million m<sup>3</sup>. The company has tanks of varying capacity, the largest of which can store 32,000 m<sup>3</sup>. The company operates using modern infrastructure which meets all legal requirements for fuel depots, particularly connected with the environment.

The five largest depots: Koluszki, Nowa Wies Wielka, Boronow, Rejowiec and Emilianow are connected by long-distance fuel pipelines with the refinery in Plock. The depots located at the eastern border of the country have terminals for handling fuel, gas and other petroleum products. The depot in Debogora allows diesel to be exported and imported by sea through the Port of Gdynia.









The company owns accredited petroleum product laboratories, which in addition to comprehensive supervision of the quality of fuel held and stored in OLPP's depots, also provide services to third parties. In its testing work, OLPP's accredited laboratories use the most modern equipment and standards which

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#### ■ Fig. 58 OLPP'S FUEL DEPOTS

are approved by the Polish Committee for Standardisation, which ensure the best possible tools for conducting quality controls of fuels in the course of trade.

#### UTILISATION OF CAPACITY

OLPP has about a 50% share of the fuels storage market. The company plays an important role in the country's energy security. OLPP's tanks hold stocks for the state's Material Reserves Agency. Up to 2012, there was a steady increasing trend in utilisation of fuels depots' storage capacities. However, in 2013 there was fall in demand for storage capacity due to reduced fuel consumption in Poland.

### LOADING FROM OLPP FUEL DEPOTS ONTO ROAD TANKERS

As a result of an increase in the consumption of liquid fuels in the market, in 2011, OLPP reported a record amount of road tanker fuel loadings, which was about 8.3million m<sup>3</sup>. However, in 2012 and 2013, due to changes in economic conditions, which led to reduced fuel consumption in Poland, there was a fall in the number of loadings onto road tankers at OLPP's fuel depots.

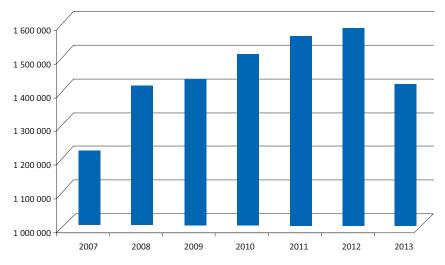
# BLENDING WITH BIOCOMPONENTS

The biocomponents blending service has a key role in creating conditions for businesses to achieve the National Indicative Target (NCW). In trying as much as possible to meet clients' expectations, OLPP has extended this service to blending bioethanol to petrol. In 2013, terminals despatched in total over 3 million m<sup>3</sup> of fuels containing biocomponents, which had been blended at OLPP's depots.

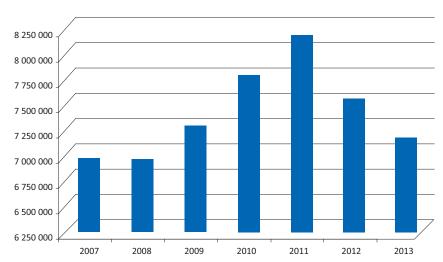
The decrease in market consumption of liquid fuels, which is continuing since 2012, is the main cause of a decrease in demand for storage capacity for compulsory stocks, as this follows directly from the volume of fuels coming onto the domestic market.



### ■ Fig. 59 UTILISATION OF CAPACITY AT OLPP'S FUEL DEPOTS IN [m<sup>3</sup>]

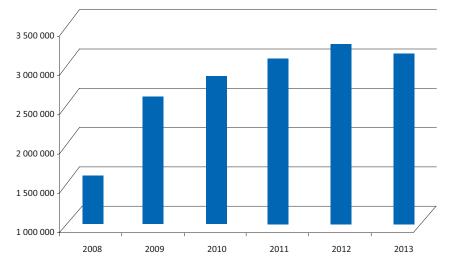


### ■ Fig. 60 ROAD TANKER LOADINGS AT OLPP'S FUEL DEPOTS IN [m<sup>3</sup>]

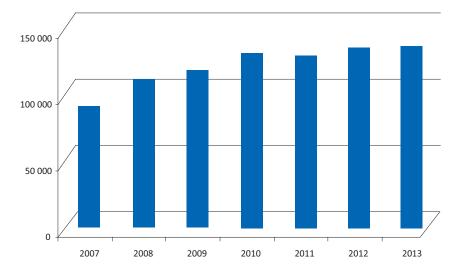


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# ■ Fig. 61 BLENDING OF BIOCOMPONENTS AT OLPP'S DEPOTS IN [m<sup>3</sup>]



# ■ Fig. 62 STOCK TICKET RESERVES IN [m<sup>3</sup>]



# THE MOST IMPORTANT INVESTMENT PRIORITIES IN 2013 WERE:

• 1.Construction of two general storage tanks of 10,000 m<sup>3</sup> capacity at Fuel Depot 4 in Rejowiec Poznanski

• 1.Adaptation of a tank of capacity 10,000 m<sup>3</sup> to store JET A-1 aviation fuel at Fuel Depot 5 in Emilianow

• 1.Construction of an alcohol dosing system for petrol in the Fuel Depot 3 in Boronow and Fuel Depot 4 in Rejowiec Poznanski

• 1.Sealing of tank trays at Fuel Depot 6 in Skarzysko Koscielne. Within this project, the reservoir plots were adapted to meet legal requirements pursuant to the regulation of the Minister of the Economy of 21 November 2005, on the technical conditions to be met by liquid fuels depots, stations and transmission pipelines





# **POPIHN MEMBERS**

BP Europa SE Oddział w Polsce, FUCHS Oil Corporation Polska (PL) Sp z.o.o., Grupa LOTOS S.A. LUKOIL Polska Sp. z o.o, OLPP Sp. z o.o, PERN "Przyjaźń" S.A., PKN ORLEN SA, Shell Polska Sp. z o.o SLOVNAFT Polska S.A., Statoil Fuel & Retail Polska Sp. z o.o., TanQuid Polska Sp. z o.o, TOTAL Polska Sp. z o.o

# STRUCTURE OF THE ORGANISATION:

**GENERAL MEETING** 

**BOARD OF DIRECTORS** 

- supervisory body appointed by the General Meeting for a three year term of office. Current term of office is 2013-2015.

Piotr Pyrich	BP Europa SE	Chairman of the Board of Directors
Maciej Szozda	Grupa LOTOS S.A.	
Robert Nowek	LUKOIL Polska Sp. z o.o	
Daniel Betke	OLPP Sp. z o.o	
Sławomir Jędrzejczyk	PKN ORLEN SA	
Marcin Moskalewicz	PERN "Przyjaźń" S.A.	
Piotr Dziwok	Shell Polska Sp. z o.o	
Tomasz Rybczak	Slovnaft Polska S.A.	
Krzysztof Starzec	Statoil Fuel & Retail Pols	ka Sp. z o.o.

MANAGEMENT BOARD

- appointed by the Board of Directors for a three year term of office. Current term of office is 2013-2015. Leszek Wieciech **Chairman & Director General** 

#### OFFICE

Krzysztof Romaniuk	Director of Fuels Market Analysis
Marcin Szponder	Director for Market Regulation
Agata Dobrołęcka	Office Manager

#### COMMITTEES

Committee for wholesale and retail trade in liquid fuels Committee for lubricating oils Committee for fuels infrastructure and the refining sector Committee for corporate affairs

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